A. J. JACOBS

AUTOMOTIVE FDI IN EMERGING EUROPE

Shifting Locales in the Motor Vehicle Industry

Automotive FDI in Emerging Europe

A. J. Jacobs

Automotive FDI in Emerging Europe

Shifting Locales in the Motor Vehicle Industry

palgrave
macmillan

A. J. Jacobs
Department of Sociology
East Carolina University
Greenville, North Carolina, USA

ISBN 978-1-137-40781-8 ISBN 978-1-137-40786-3 (eBook)
DOI 10.1057/978-1-137-40786-3

Library of Congress Control Number: 2017937902

Printed on acid-free paper

This Palgrave Macmillan imprint is published by Springer Nature
The registered company is Macmillan Publishers Ltd.
The registered company address is: The Campus, 4 Crinan Street, London, N1 9XW, United Kingdom

This book is dedicated to Dr. Petr Pavlinek, whose scholarly publications on the auto industry in Post-Socialist Europe and dedication to excellence have inspired my own research.

Contents

List of Tables

1

Introduction and Overview

In the first ten years following the fall of the Berlin Wall in 1989, Western automakers commenced passenger car production at 16 sites in the former Socialist Central European (CE) nations of Czechoslovakia, East Germany, Hungary, Poland, and Slovakia. Four more were taken over in the former Socialist Southeast Europe (SEE) nations of Romania and Yugoslavia. Passenger cars were defined here as cars, sport and crossover utility vehicles (SUV or CUV), multi-purpose vehicles/microvans (MPVs), minivans/vans, and light pickup trucks utilized for private transportation and not commercial purposes.

The first sooners, Fiat (now FCA) and General Motors (GM) in Poland, Suzuki in Hungary, and Volkswagen (VW) in East Germany and Czechoslovakia, originally established joint ventures with state-run organizations. Whereas the labor savings accrued by building cars bound for Western Europe in CE grew more important over time, inflated projections of new cars sales in the Eastern Bloc and gaining duty-free entry to these markets were the most decisive factors provoking the establishment of most early plants. In fact, 13 of the 20 plants launched in CE and SEE by 2000 were officially announced before

A.J. Jacobs, *Automotive FDI in Emerging Europe*,
DOI 10.1057/978-1-137-40786-3_1

November 1, 1993, the day when the Treaty of Maastricht making the European Union (EU) a reality came into effect (See Chapter 2).

The success of these initial factories attracted scores of foreign components suppliers to these areas, and then more foreign car plants. This second wave of car factories was motivated by the growing influence of other forces. Most important among them was the impending major enlargement of the EU on May 1, 2004 which incorporated all four CE nations into the single market. This enabled foreign automakers to truly take advantage of the CE's strategic geographic proximity to Western European markets and their relatively inexpensive, yet sufficiently skilled labor forces. CE governments also became more involved, competing aggressively for these plants by adopting extensive foreign direct investment (FDI) focused incentive programs and then offering larger and larger subsidy packages to lure foreign carmakers. In sum, the situation went from automakers chasing markets to firms chasing cost-cutting labor and States chasing automakers.

As a result of this new environment, ten more foreign car assembly complexes were announced in CE and SEE between 2001 and 2016, and many of the first wave of 20 plants were expanded significantly. Conversely, three facilities from the initial group were closed by 2012 and four others ended car output to concentrate on other activities. As a result, as detailed in Table 1.1, there currently were 22 active foreign car plants and one under construction in CE and SEE in 2016. Among the active plants, 18 and the one in progress were in CE and four in SEE. The CE plants included: four in Czechia; three in Slovakia, with a fourth in Slovakia underway (Czechoslovakia split in 1993); three in Hungary; three in Poland; and five in the former East Germany (East and West Germany unified in 1989). The four in SEE included: two in Romania; and one each in the former Yugoslav republics of Serbia and Slovenia. None of these 22 factories were controlled by firms originally based in Eastern Bloc nations.

Overall, the active 22 plants collectively had the capacity to produce more than 6.2 million light vehicles per year and employed 123,171 persons in 2015. Slightly more than 5.0 million of this available vehicle capacity and 101,783 of these workers were located in CE factories. Finally, these complexes assembled more than 4.7 million passenger cars

Table 1.1 Active and planned foreign car plants in the CE and SEE, 2016

Automaker	Company origin	Place, CE nation	Announced	Production launched	Emp. 31 Dec, 2015	Passenger car output 2015	Vehicle capacity 2016
Total					**123,171**	**4,732,545**	**6,207,000**
CE					101,783	4,124,074	5,047,000
SEE					21,388	608,471	1,160,000
1. FCA	Italy	Tychy, Poland	Sep-1987	Jun-1991	3,270	302,639	600,000
2. Renault Revoz	France	Novo Mesto, Slovenia	Jun-1988	Dec-1989	3,178	129,405	210,000
3. VW	Germany[a]	Zwickau, Germany[b]	Dec-1989	Oct-1996	8,820	301,301	300,000
4. Suzuki	Japan	Esztergom, Hungary	Jan-1990	Oct-1992	3,100	185,533	300,000
5. GM Opel	USA	Eisenach, Germany[b]	Mar-1990	Sep-1992	1,850	116,248	160,000
6. VW Skoda	Germany	Mlada Boleslav, Czechia	Dec-1990	Apr-1991	21,299	537,621	600,000
7. VW Skoda	Germany	Kvasiny, Czechia	Dec-1990	Apr-1991	3,374	142,286	180,000
8. VW	Germany	Bratislava, Slovakia	Mar-1991	Dec-1991	9,762	358,776	400,000
9. VW[c]	Germany	Poznan, Poland	May-1993	Jul-1994	7,765	62,656	175,000
10. GM Opel	USA	Gliwice, Poland	Dec-1995	Aug-1998	2,890	169,405	207,000
11. Audi	Germany	Gyor, Hungary	May-1996	Apr-1998	11,411	160,206	160,000
12. VW	Germany	Dresden, Germany[b]	Jun-1998	Dec-2001	525	3,254	10,000
13. Renault Dacia	France	Mioveni, Romania	Jul-1999	Sep-1999	11,108	339,204	450,000
14. Porsche	Germany	Leipzig, Germany[b]	Sep-1999	Aug-2002	3,667	164,968	165,000
15. BMW	Germany	Leipzig, Germany[b]	Jul-2001	Mar-2005	6,000	233,656	240,000

(*continued*)

Table 1.1 (continued)

Automaker	Company origin	Place, CE nation	Announced	Production launched	Emp. 31 Dec, 2015	Passenger car output 2015	Vehicle capacity 2016
16. Toyota-PSA	Japan-France	Ovcary-Kolin, Czechia	Dec-2001	Feb-2005	3,464	219,054	300,000
17. PSA	France	Trnava, Slovakia	Jan-2004	Jun-2006	3,500	303,025	360,000
18. Kia	S. Korea	Teplicka nad Vahom, Slovakia	Mar-2004	Dec-2006	3,646	338,200	360,000
19. Hyundai	S. Korea	Nosovice, Czechia	Sep-2005	Nov-2008	3,440	342,200	350,000
20. Ford	USA	Craiova, Romania	Sep-2007	Sep-2009	4,002	47,967	300,000
21. FCA	Italy	Kragujevac, Serbia	Apr-2008	Mar-2009	3,100	91,895	200,000
22. Mercedes-Benz	Germany	Kecskemet, Hungary-1	Jun-2008	Mar-2012	4,000	183,046	180,000
— Mercedes-Benz	Germany	Kecskemet, Hungary-2	Jul-2016	Mar-2012	+2,500	NA	+150,000
23. JLR	India	Nitra, Slovakia	Aug-2015	Late-2018	+2,800	NA	+300,000

Sources: Compiled and adapted by the author from Tables 3.1 to 8.3 of this book.
[a] All German automakers were based in the former West Germany.
[b] All five plants listed in Germany were located in the former East Germany.
[c] Also produced 108,144 LCV in 2015.

in 2015, of which CE produced 4.1 million. By comparison, CE and SEE plants assembled 1.7 million cars in 2001 and slightly less than 1.1 million in 1989. Including East Germany, CE facilities built 1.5 million of these cars in 2001 and 702,819 in 1989.

As output in CE and SEE expanded after 2001, many of these same automakers, with the exception of the Japanese and Korean firms, mothballed and/or downsized one or more of their existing plants in Western European. France, Belgium, and Italy were hit hardest, but even the former West Germany was not immune to such actions. The result was that after declining slightly from 14.9 million in 1989 to 14.8 million in 2001, total car production in Western Europe's ten largest producing nation fell to 11.8 million in 2015. In other words, as annual car output in CE increased by 2.6 million in 2015 as compared with 2001 and 3.0 million including SEE, it contracted by 3.1 million or one-fifth in Western Europe during this frame. Chapter 2 supplies more details on this shift.

Overall, in the eight chapters following this introduction, this book seeks to provide the first relatively in-depth historical overview of the development of foreign car plants in all four current Post-Socialist CE nations, plus the often ignored East Germany. In doing so, it also sheds light some of the factors driving the growing shift in European car production eastward. To accomplish this, separate chapters are dedicated to each CE nation's foreign car production histories. A bonus chapter then chronicles the much smaller scale activities in the next ring of European car production, the SEE Auto Zone, an area encompassing Romania, Serbia, and Slovenia. These six nation chapters are bookended by one chapter that provides some basic background data as a foundation for these historical developments, and a conclusion that speculating on the near-term prospects for car production in CE and SEE (next five to ten years).

What is presented then represents a fairly detailed account of initial factory announcements, production launches, vehicle output, and other relevant facts for every known foreign car plant operated in the CE. This includes a plethora of data tables and histories tracing the origins of these facilities back to their inceptions. What also is unique is that almost all of the production data presented was directly obtained from the automakers themselves, rather than from third party sources. I achieved this through

correspondences with more than 20 corporate representatives, who graciously responded to email inquiries by providing me with spreadsheets, pdf files, and links to production figures and other plant information. These contacts were complemented by interactions with quasi-government organizations, such as Investment Promotion Agencies and automobile manufacturing associations, which helped fill in gaps.

Next, my own actual site visits and factory tours served as critical sources of information. During this field work, I took copious notes of my surroundings, collected pamphlets and documents, and spoke informally with plant officials. After leaving each plant, I toured the surrounding area and took notes and photographs of existing supplier factories and infrastructure. The internet also was a fantastic source of automaker annual reports and/or of some published by factories themselves (most factory reports were not published in English). Finally, each history was enhanced by a review of scores of scholarly articles and books and enumerable news reports from an assortment of English and non-English publications, both local and international focused.

Some expert readers may find slight discrepancies in the production data presented here for certain assembly plants from those published by governments and the highly credible third-party sources, Organisation Internationale des Constructeurs d'Automobiles (OICA) and Ward's Communications. One additional reason for this is that I made great efforts to not double count output, attributing complete knockdown (CKD), semi-knockdown (SKD), and partial knockdown (PKD) kits to only one plant, the facility completing final assembly of the cars. National reporting agencies often take credit for this production as their own, whether preparing the KD kits or assembling them. This results in double counting and distortions in final figures. Both OICA and Ward's have made great efforts to harmonize these figures in recent years, but noticeable data discrepancies between the two organizations and national agencies exist before 1999, when OICA began publishing data by manufacturer.

A few final remarks are necessary before proceeding to the forthcoming summaries of the chapters. Although multiple cross references and connections are made throughout these chapters, much of what is presented is a critical historical anthology, and fact checked to the 'Nth' degree. Critical commentary is only sprinkled in where necessary to clarify a point and

otherwise left to Chapter 2 and the Conclusion Chapter 9. Even these essays are less critical than some may like. This was done to preserve the historical narrative and significance of the rapid growth of car production in CE after the Fall of Socialism. Lastly, the research for this book began in March 2011 and continued unabated until December 15, 2016, the day in which I submitted the first draft to the publisher. In other words, each chapter, instead of just this introduction, should rightly contain a citation denoting my field work (i.e., Jacobs 2011–2016). They do not.[1]

Following this introduction, the book proceeds with Chapter 2, 'From Two Blocs to One Market: The Shift East of Auto Production in Post-Socialist Europe.' This brief chapter sets the scene for the nation-specific chapters by providing a short synopsis of passenger car production in CE during the Socialist Era (1949–1989). It then provides a chronology of foreign car plant production launches in CE and SEE and a summary of car production data by nation for CE, SEE, and Western Europe. These figures are broken up into two distinct periods: 1989–2001 or Post-Socialist Phase I; and 2001–2015 or Post-Socialist Phase II.

Once this necessary preparatory background information is provided, Chapter 3, 'Foreign Passenger Car Plants in Poland,' traces the lineage of Poland's three current and four former foreign car plants. This complicated saga demonstrates the initial chaos of the early Post-Socialist Period privatization process. Whereas the active plants FCA Tychy, VW Poznan, and GM's Opel Gliwice all evolved within this context, Poland's sometimes poor decisions on which automakers to depend upon, Daewoo of Korea, resulted in the failures of its state-run car plants in Warsaw and Lublin. The chapter concludes by summarizing Poland's car production data since the fall of Socialism and by briefly discussing Toyota's powertrain facilities (engine and transmission) and Mercedes-Benz's engine factory and rumored car plant in southern Poland. Due to the sheer number of plants to be covered, this chapter is easily the longest in the book.

Chapter 4, 'Passenger Car Plants Before and After the Former East Germany,' chronicles the legacies of the five current car factories located

[1] See Jacobs (2011–2016).

in the former East Germany, back to Auto Union's (the forerunner to Audi) early-twentieth century plants in Saxony. To help guide the discussion, specific factories are reviewed together along grouped with their respective current automaker group, that is: VW Zwickau (former Auto Union); the pre-war BMW Eisenach is coupled with the current BMW Leipzig factory; and GM's takeover of the former BMW Eisenach Works and its subsequent construction of today's Opel Eisenach.

Chapter 5, 'Foreign Carmakers in Czechia,' reviews Czechia's four current car plants. This discussion begins with Skoda's early-twentieth century formation, including the now Vrchlabi components plant, and follows these plants through their takeover by VW in the early Post-Socialist Period. It also examines Toyota of Japan and PSA Peugeot-Citroen of France's joint venture TPCA Kolin factory and Hyundai of Korea's Nosovice plant near Ostrava. Similar to all other country-specific chapters in the book, the discussion concludes with a summary of foreign-led auto production in Czechia since the Fall of Socialism.

Chapter 6, 'Foreign Automakers in Independent Slovakia,' offers an overview of Post-Socialist Slovakia's three existing and one planned car factories. This begins by tracing the origins of today's VW factory in Bratislava under Socialist Czechoslovakia through the German automaker's takeover and subsequent numerous expansions of the complex. This is followed by sections on PSA Peugeot Citroen's (PSA) Trnava complex, Kia's Zilina plant, and Tata Motors' under construction Jaguar Land Rover (JLR) facility in Nitra. Its conclusion brief summarizes the now independent nation's rise to become the most prolific vehicle producer per capita in the world.

Chapter 7, 'Foreign Car Plants in Hungary,' examines Hungary's three active and one former foreign car plants. This begins by providing some background on Hungary's pre-war Socialist commercial vehicle industry and its connections to its now booming car and engine production. It then chronicles GM's decision to end its small car assembly operation at its Opel Szentgotthard powertrain complex after the opening of its Opel Poland Gliwice. This is followed by reviews of the nation's three present car plants, Suzuki Esztergom, Audi Gyor, and Mercedes-Benz Kecskemet. The Kecskemet factory's tumultuous expansion is also discussed.

Chapter 8, 'The Next Ring: The Emerging Southeast Europe Auto Zone,' outlines the Socialist and Post-Socialist car industry developments in Romania and the former Yugoslav Republics of Serbia and Slovenia. The discussion begins with the histories of Renault's Dacia Pitesti and Ford's Craiova in Romania, including Daewoo's brief failed ownership of the Craiova factory. It then traces the similar paths of FCA Kragujevac complex in Serbia and Renault's Revoz plant in Slovenia. The review of FCA Kragujevac includes some background on the violent breakup of Yugoslavia and a chronicle of Fiat's long relationship with the state-run Zastava. The latter built the temporary smash hit Yugo brand of cars. The Slovenia discussion also introduces possible entrance of a new automaker, Magna of Canada, whose rumored plant in Hoce-Slivnica would be a major breakthrough for the SEE Nation. These discussions then set the stage for the analysis presented in the book's final chapter.

Chapter 9, 'Conclusions and Future Auto FDI Prospects for CE and SEE Nations,' provides near-term outlooks for passenger car production in each of the CE nations and speculates on the role SEE nations will play in this future. For this purpose, Bosnia-Herzegovina, Bulgaria, and Croatia also are brought into the discussion. In order to evaluate these prospects, a back-of-the envelope scoring system is presented that rates the likelihood for expansions of existing plants and the potential for each of the ten nations and East Germany of attracting a new full-fledged car factory (manufacturing 150,000 to 300,000 cars per year). The chapter and book then closes with some thoughts regarding the future geography of auto production in Europe.

Finally, before moving on to Chapter 2, it should be noted here that the currency figures cited in the book for assembly plant investments, government subsidy packages, and company financial profits/losses were gleaned directly from news stories, annual reports, and other sources reporting at the time. Since the Euro was not in circulation until 2001, for consistency purposes throughout the book all figures are reported in US Dollars. Unless otherwise specified, exchange rates were obtained from oanda.com and based upon the actual date in which the event occurred.[2] Conversely, since new investments and incentives arise at

[2] See Oanda.com (2016).

different points in time and were converted from specific dates of occurrence, in some cases the total reported for a given investment or incentive may not always perfectly match exchange rates on the final date the sum was reported.

I also would like to thank here the staff of Palgrave Macmillan and my family for their patience and support during this project, as well as the many corporate and government officials that provided me with information and insights. My Graduate Assistant Randall Spence deserves a special acknowledgement for reading each chapter and providing me with his excellent editorial comments on the book.

References

Jacobs A J (2011–2016) Author's factory visits, data collection, and other correspondents with company and government officials in CEE, conducted March 2011 and September 2016.

oanda.com (2016) Historical Currency Converter, http://www.oanda.com, last 15 December.

2

Two Blocs to One Market: The Shift East of Auto Production in Post-Socialist Europe

Introduction

The data presented in this chapter lays the foundation for the remaining of the book. It begins by providing a brief overview of automobile industry developments in CE and SEE during the Socialist Period (1949–1989). It then utilizes national-level data to chronicle two distinctive stages in European-based passenger car production. To help illustrate some of the chapter's key points, figures for Germany are disaggregated into East and West Germany in all data tables.

In the section on Post-Socialist Phase I (1989–2001), the chapter chronicles how following the fall of Socialism, eight European, American, and East Asian automakers launched passenger car output at 20 assembly plants in CE (16) and SEE (4). It shows how these developments initially had only a slight impact on total passenger car output in Western Europe through 2001.

The section on Post-Socialist Phase II (2001–2016) outlines how ten automakers, including eight new entrants, opened ten more assembly plants in CE (9) and SEE (1) after 2001; two from the first phase also changed hands. It also shows the distinct differences between of the two

A.J. Jacobs, *Automotive FDI in Emerging Europe*,
DOI 10.1057/978-1-137-40786-3_2

phases of Post-Socialism. Whereas most of the plants utilized in the first stage were outdated existing facilities taken over by foreign firms, almost all the plants launched in the second stage were large, modern, new car factories built by foreign carmakers.

As a result of these developments, nearly three times as many cars were built in the CE and SEE in 2015 as compared with 2001. Conversely, Western Europe experience a major contraction in its total car output during this period. In other words, in concert with the plants launched in the first phase and other factors (e.g., a major EU expansion), these later factories have enabled automakers to dramatically shift eastward the location in which they produced cars for the European market.

Socialist Passenger Car Production Under the Soviet-led CMEA (1949–1989)

In the years leading up to World War II (WW-II), Auto Union in eastern Germany and Skoda and Tatra Motors in Czechoslovakia were essentially the only passenger car manufacturers in what would become Socialist Eastern Bloc (See Chapters 4 and 5). The region's other producers, such as LRL and PZInz in Poland, and Ford Hungary and Romania, primarily assembled small batches of vehicle kits designed and/or prepared by western automakers (See Chapters 3 and 7).[1]

As has been well-documented in countless works, after WW-II, Germany and Europe were hived off into two economic and geographical blocs: Capitalist Western Europe and Socialist Eastern Europe. Under Eastern Bloc State Socialist, industrial enterprises were nationalized and placed under the direction of the Politbureau of the Union of Soviet Socialist Republics (USSR) in Moscow. A new division of labor was then established with the Soviets orchestrating what was produced within the nations within its sphere of influence.[2] This included both defense related and civilian goods manufacturing, such as for private

[1] Georgano (2000); Havas (2000); Pavlinek (2002, 2008); Thompson (2011).
[2] Pavlinek (2002, 2008); Thompson (2011).

automobile production. This centrally-planned system was formalized under what became known as the Council for Mutual Economic Assistance (CMEA or Comecon) on January 25, 1949, and initially encompassed the USSR and its satellite states of Bulgaria, Czechoslovakia, Hungary, Poland, and Romania. The newly established German Democratic Republic (East Germany) was welcomed in 1950.

As historians have detailed, the CMEA was the Soviet's response to Western Europe's establishment of the Organization for European Economic Co-Operation (OEEC) in 1948. The OEEC had evolved out of America's Marshall Plan, which was signed into law by U.S. President Harry Truman on April 3, 1948 and provided more than $12 billion in economic aid to war torn Western Europe. It was believed that by helping to rebuild the economic and industrial base of America's Post-War Allies, it would prevent the spread of Socialism in Europe. As part of this initiative, the OEEC sought to promote collaboration and create a common market among Western European nations. Similarly, the Soviets hoped to use the CMEA as a medium in which to maintain its sphere of influence in the Eastern Bloc, which was potentially fraying after the breakaway of Yugoslavia in 1948 (Today encompassing Bosnia-Herzegovina, Croatia, Kosovo, Macedonia, Montenegro, Serbia, and Slovenia).[3]

From the start passenger car production was neglected within the CMEA system, as privately-owned automobiles were essentially viewed as synonymous with capitalist conspicuous consumption and individualism. Cars were built, but the foremost priority was the production of military-related transportation equipment, such as tanks, ships, planes, and trucks.[4] Civilians were instead offered buses for mass transit and in some areas, subways and trains. As a result, funding for passenger car production facilities was in short supply, and again, what cars where produced in which nation was governed by Soviet prescribed CMEA agreements. This insured that nations did not compete directly against one another for the same customer markets and that Soviet car plants

[3] Thompson (2011); Wolchik & Curry (2011).

[4] Pavlinek (2002, 2008); Thompson (2011).

and models, such as *Gorkovsky Avtomobilny Zavod* (GAZ) and *Volzhsky Avtomobilny Zavod* (VAZ, makers of Lada) were given precedent over all others.

For example, under the initial and ensuing CMEA accords, plants in Czechoslovakia and East Germany were charged with building small, inexpensive 'people's cars' for CE (See Chapters 4 and 5). Both also produced around 10,000 to 15,000 trucks during the 1950s, but the bulk of all trucks utilized in the region during this period were imported from the USSR. Conversely, existing vehicle plants in Poland and Hungary were given different paths to follow by the Soviets.[5]

In 1949, Poland's state-run *Fabryka Samochodow Osobowych* (FSO) was ordered to abandon the small car joint venture it signed with Fiat of Italy just a year earlier. The nation's vehicle makers were then assigned the task of manufacturing commercial trucks for the local market. To fill the gap left by the loss of Fiat, the Soviets provided FSO with a license to build GAZ's newly developed M-20 Pobeda sedan. Later, in 1965, Poland was permitted to enter into another agreement with Fiat that transformed the FSO and its partner plants into the largest car producer in Socialist CE (See Chapter 3). Meanwhile, Hungary was ordered to abandon its fledgling, unsanctioned microcar industry in 1956 and instructed to concentrate only commercial trucks and automotive components. Eight years later, the Soviets also anointed the country the CMEA's base for bus manufacturing.[6] These roles continued until March 1992 when General Motors (GM) launched car production in Szentgotthard (See Chapter 7).

During the late-1950s, Romania and Bulgaria also were given the yellow light to launch their own domestic car plants to accommodate local demand. This enabled Romania to initially create a niche building mini jeeps at the *Intreprinderea Mecanica de Stat* (IMS) motorcycle factory in Campulung (later *Automobile Romanescu* or ARO), but truly bore fruit with Renault-licensed Dacia passenger cars built by *Uzina de Autoturisme Pitesti* (UAP) in the late-1960s (See Chapter 8). In Bulgaria,

[5] Pavlinek (2002, 2008); Thompson (2011).

[6] Georgano (2000), Havas (2000), Pavlinek (2002, 2008) and Thompson (2011).

this began at a former airplane factory in Lovech in 1958, where VW Beetle cars and VW Transporter LCV knockoffs were pieced together. By September 1960, the so-called Rita Factory 14 in Lovech had completed prototypes for the Balkan 1200 two-door sedan. The 1200 never was put into production, but in November 1966, the renamed Balkan Lovech Plant launched KD kit assembly of Soviet Moskvitch-408 small family cars which it marketed in Bulgaria sold as Moskvitch 1300. Joint ventures with Renault and Alpine of France also briefly led to a plant in Plovdiv building a small lot of Bulgarrenault-8 mini and Bulgaralpine A110 sports cars from kits beginning in 1966 and 1967, respectively. Nonetheless, by 1970, both of these cars were out of production and Bulgaria was instructed to concentrate on the Moskvitch. Thereafter, the Balkan factory raised car output from 584 in 1967 to 8,000 in 1972 and then 15,000 in 1974. Production in Lovech peaked at 16,000 in 1984 and continue at that pace until 1988, when output was ended.[7]

Overall, as shown in Table 2.1, passenger car production in the Socialist CE and SEE rose dramatically during the 1960s and 1970s. In 1960, Czechoslovakia, East Germany, Hungary and Poland combined to produce 133,145 passenger cars. This output was primarily in East Germany and Czechoslovakia, which built 64,071 and 56,211 cars, respectively, in that year. The four-nation CE total then jumped to 333,667 in 1970, before more than doubling to 710,761 in 1980. As noted, by that time Poland had become the largest producer in the CE, building 350,525 cars in 1980, followed by Czechoslovakia at 183,123 and East Germany at 176,761.

As also illustrated in Table 2.1, Yugoslavia produced the majority of passenger built in SEE during this period. As output in SEE soared from 11,661 in 1960 to 276,633 in 1980, production in Yugoslavia jumped from 10,461 to 173,000. This rise was primarily led by *Zavodi Crveni Zastava* (Zastava), which began producing cars in Kragujevac (Serbia) through a licensing agreement with Fiat in 1954. Zastava was supplemented by *Industrija Motornih Vozil* (IMV) in Novo Mesto (Slovenia),

[7] Georgano (2000); Thompson (2011).

Table 2.1 Passenger car production in CE and SEE, 1950–1989[a]

Nation	1989	1980	1970	1960	1950	Change 1980–1989	% Change 1980–1989
Total (7)	**1,127,769**	**987,394**	**475,980**	**144,806**	**31,628**	**140,375**	**14.22%**
Central Europe (4)	**702,819**	**710,761**	**333,667**	**133,145**	**31,628**	**–7,942**	**–1.12%**
Czechoslovakia	183,123	183,475	142,856	56,211	24,463	–352	–0.19%
East Germany	213,204	176,761	126,611	64,071	7,165	36,443	20.62%
Hungary	0	0	0	0	0	0	0.00%
Poland	306,492	350,525	64,200	12,863	0	–44,033	–12.56%
SE Europe (3)	**424,950**	**276,633**	**142,313**	**11,661**	**0**	**148,317**	**53.62%**
Bulgaria	23,000	15,401	8,000	0	0	7,599	49.34%
Romania	160,000	88,232	23,604	1,200	0	71,768	81.34%
Yugoslavia[b]	241,950	173,000	110,709	10,461	0	68,950	39.86%

Sources: Data compiled and adapted by author from Ward's (1958–2014, 2014); Pavlinek (2008); and Tables 3.1 to 8.3.

[a] Due to a lack of consistent reliable sources over time, and for continuity throughout chapters, small domestic car producers assembling 500 cars or less were not included in the figures in this or other tables in the book.

[b] Includes, Bosnia, Serbia, and Slovenia.

which assembled Renault-licensed cars and *Tvornica Automobila Sarajevo's* (TAS) in Sarajevo (Bosnia), which assembled some VW KD kits. Another 88,232 Renault-based models were assembled by Dacia at its Mioveni Plant in Romania (See Chapter 8).[8]

Car production in SEE expanded by 148,317 or 53.27% between 1980 and 1989 to 424,950 (See Table 2.1). In the latter year, Romania and Bulgaria both experienced record output of 160,000 and 23,000 cars, respectively. Yugoslavia, however, was not only leading SEE but making a name for itself in the West. In 1989, the nation produced 241,950 cars, led by Zastava's 180,950. Beginning in September 1985, Zastava even began exporting Yugo GV super-minis to America. The automaker sold a record 48,813 Yugo in the U.S. in 1987, before the failure of its American import agent and vehicle quality issues provoked a dramatic reduction in deliveries to 10,576 cars in 1989.

In contrast to growth in the SEE, car production contracted by −7,942 or −1.12% in CE during the last years of Socialism, to 702,819 in 1989. A number of factors prompted this decline, including the political and social upheaval that provoked to the fall of State Socialism in region.

Post-Socialist Phase I: The Entrance of Foreign Automakers in the CE, 1989–2001

Beginning in the mid-1970s and into the 1980s, the Soviet economy suffered through a prolonged period of slow growth that later became known as the 'Era of Stagnation. Since the USSR was the destination for a large share of the industrial goods manufactured in the CMEA, especially military-related products, the other Eastern Bloc nations also suffered.[9] For example, as exports within contracted, Hungary and Poland tried to offset their budgets deficits and improve the

[8] Ward's (1958–2014, 2014); OICA (1999–2016); Thompson (2011).

[9] Thompson (2011); Wolchik & Curry (2011).

international competitiveness of their industrial firms by taking on massive foreign debt. When lenders decided to stop the flows of cash, production contracted, living standards plummeted, and basic goods and services became scare, fostering civil unrest. When this evolved into a union solidarity movement in Poland, protests were brutally suppressed by government martial law, fueling greater popular discontent.

By March 1985, the continued stagnation had even evoked change in the Soviet Politburo, with Mikhail Gorbachev replacing the late-Konstantin Chernenko as General Secretary of the Communist Party. Gorbachev then called for major reforms, including among other things: the democratization of the political system; the thawing of international relations with the West (aka Glasnost); the restructuring and limited privatization of industrial sectors (i.e., perestroika); and major capital investments to promote technological modernization and improved industrial and agricultural productivity. His objectives were to stimulate growth and enable the Soviet economy to make strides toward catching up with the West.[10]

By the late-1980s, Gorbachev's ideas were percolating through the Eastern Bloc nations, most of which were experiencing spiraling debt, rampant inflation, rising unemployment, major trade deficits, contracting industrial output, and declining wages. These conditions were further complicated by the technological backwardness, excessive employment, and production inefficiencies of their own state-run industrial enterprises. Government policies, such as those promoting industrial restructuring and privatization, also were tried, but in most cases only served to worsen the conditions of average citizens. This then further stoked an already growing undercurrent of political and social unrest within the CMEA.[11]

The situation dramatically changed on November 9, 1989, when after a tumultuous year of protests, the East German officials announced that they would allow their citizens to travel to West Berlin in the

[10] Wolchik & Curry (2011).

[11] Myant (1993); Whitney (1993); Amsden et al. (1994); Fogel (1994); Myant et al. (1996); Wolchik & Curry (2011).

neighboring Federal Republic of Germany (West Germany). Nearly three weeks later, on November 28, 1989, West German Chancellor Helmut Kohl proclaimed his cabinet's ten-point collaboration program, an initiative that helped lead to the fall of the Berlin Wall, the reunification of the two Germanys, and ultimately the end of State Socialism in Eastern Europe.[12]

In the midst of the political-economic turmoil and the related desperate attempts by governments to privatize their industrial enterprises, Western automakers pounced on the opportunity and began scooping up Eastern Bloc assets. As presented in Table 2.2, Fiat struck first, strengthening its already deep ties by taking control of the Bielska-Biala and Tychy car factories of Poland's *Fabryka Samochodow Małolitrazowych* (FSM) (See Chapter 3). Renault acted next, taking a minority interest in IMV in Yugoslavia in 1988 before taking full control of the renamed Revoz in 1991 (See Chapter 8). None hit harder, however, than VW, which by March 1991 had established joint ventures for East Germany's infamous VEB Sachsenring Trabant plant in Mosel, and for Czechoslovakia's three *Automobilove Zavody Narodní Podnik* (AZNP) Skoda factories in Mlada Boleslav, Vrchlabi, and Kvasiny, and *Bratislavske Automobilove Zavody* (BAZ) in Bratislava. The German automaker's Audi division then acquired a vacant plant in Gyor, Hungary to produce engines, before VW absorbed the operations of *Fabryka Samochodow Rolniczych* (FSR) in Poznan, Poland (See Chapters 3–7).[13]

GM division also was aggressive, signing deals for its Opel division to absorb East Germany's Wartburg factory in Eisenach and to erect a new joint venture complex with Magyar Waggon's Raba division in Szentgotthard, Hungary. Additionally the American automaker was negotiating a tie-up with Poland's largest vehicle maker *Fabryka Samochodow Osobowych* (FSO) in Warsaw and its partner Suzuki of Japan was launching an assembly plant in Esztergom, Hungary. As the

[12] Wolchik & Curry (2011).

[13] Tagliabue (1989); Franklin (1990); Sadler et al (1993); Havas (2000); Richet & Bourassa (2000); Pavlinek (2002, 2008); Lung (2004); Domanski & Lung (2009); Thompson (2011).

Table 2.2 Foreign passenger car plant takeovers and launches in CE and SEE, 1989–2000

Automaker	Company origin	Place, CE nation	Announced	Production launched	Former owner[a]	Originally opened	Vehicle capacity 2016
1. Fiat	Italy	Tychy, Poland	Sep-1987	Jun-1991	FSM	Sep-1975	600,000
2. Renault	France	Novo Mesto, Yugoslavia	Jun-1988	Dec-1989	IMV	1975	210,000
3. VW	W. Germany	Mosel, East Germany-1	Dec-1989	May-1990	VEB	Apr-1910	c-Oct-1997
		Mosel, East Germany-2	Dec-1989	Oct-1996	None	New	300,000
4. GM	USA	Szentgotthard, Hungary	Jan-1990	Mar-1992	None	New	x-May 1997
5. Suzuki	Japan	Esztergom, Hungary	Jan-1990	Oct-1992	None	New	300,000
6. GM	USA	Eisenach, East Germany-1	Mar-1990	Oct-1990	VEB	1898	c-Apr-1992
		Eisenach, East Germany-2	Mar-1990	Sep-1992	None	New	160,000
7. VW	W. Germany	Mlada Boleslav, Czechoslovakia	Dec-1990	Apr-1991	AZNP	1905	600,000
8. VW	W. Germany	Vrchlabi, Czechoslovakia	Dec-1990	Apr-1991	AZNP	1908	x-Oct-2012
9. VW	W. Germany	Kvasiny, Czechoslovakia	Dec-1990	Apr-1991	AZNP	1934	180,000
10. VW	W. Germany	Bratislava, Czechoslovakia	Mar-1991	Dec-1991	BAZ	Apr-1982	400,000
11. Fiat	Italy	Bielsko-Biala, Poland	Sep-1991	Jul-1993	FSM	Aug-1972	x-Oct-2000
12. Audi	W. Germany	Gyor, Hungary	Nov-1992	Apr-1998	Raba	New	160,000
13. VW	W. Germany	Poznan, Poland	May-1993	Jul-1994	FSR	Dec-1972	175,000

(*continued*)

Table 2.2 (continued)

Automaker	Company origin	Place, CE nation	Announced	Production launched	Former owner[a]	Originally opened	Vehicle capacity 2016
14a. GM	USA	Warsaw-Zeran, Poland	Dec-1993	Nov-1994	FSO	Apr-1951	x-Aug-1998
14b. Daewoo	S. Korea	—	Aug-1995	Mar-1996	FSO	—	x-Nov-2008
15. Daewoo	S. Korea	Craiova, Romania	Nov-1994	Mar-1995	Olicit	Oct-1982	x-Dec-2005
16. Ford	USA	Plonsk, Poland	Jan-1995	Sep-1995	None	New	c-Jun-2000
17. Daewoo	S. Korea	Lublin, Poland	Jun-1995	Nov-1995	FSC	Apr-1951	c-Apr-2001
18. GM	USA	Gliwice, Poland	Dec-1995	Aug-1998	None	New	207,000
19. VW	W. Germany	Sarajevo, Bosnia-Herzegovina	Oct-1997	Aug-1998	Unis	1965	x-Jun-2008
20. Renault	France	Mioveni, Romania	Jul-1999	Sep-1999	Dacia	Aug-1968	450,000

Sources: Data compiled and adapted from Tables 3.1 to 8.3.
[a] For Former Owner Full names, see Chapters 3–8.
x—Ended Passenger Car Production, continues to produce engines and/or components.
c—Closed.

negative impacts of the vicious cycle of government debt, deficits, unemployment, and inflation worsened during, GM's rival Ford joined the fray in Plonsk, Poland in 1995. So did Daewoo, after GM's decision to construct its own new facility in Gliwice, Poland enabled the Korean conglomerate to unexpectedly swoop in and acquire FSO's operations in Warsaw, Lublin, and Nysa factories. This was only after Daewoo already had taken over a factory in Craiova Romania (See Chapters 3, 7 and 8).

Overall, a total of 20 passenger car plants in the CE and SEE had been taken over or launched new by foreign automakers by the end of 1999. As presented in Table 2.3, as a result of these investments, annual passenger car production expanded by 834,252 or 118.70% between 1989 and 2001, from 702,819 to 1,537,071. This area now included the former East Germany and both parts of the former Czechoslovakia, Czechia and Slovakia. Although GM-Opel did end car production at its Szentgotthard, Hungary engine factory in 1997, only Poland did not experience a rapid expansion in output. The failures of Ford and Daewoo, coupled with Fiat's decision to terminate car production in Bielsko-Biala in 2000, hurt that nation's totals. This proved a temporary setback, as Polish plants strongly rebound in the 2000s.

As discussed in more detail throughout the book, foreign automakers were attracted to the CE by the expectation of rapid sales in emerging post-Socialist markets and by the region's skilled, but relatively low-wage industrial labor force. For example, in April 1993 the average worker at VW Skoda's main plant in Mlada Boleslav, Czechia earned about $2,600 per year. In contrast, his/her peers at VW Wolfsburg in West Germany received approximately $48,000 in annual compensation.[14] For similar reasons, foreign automotive suppliers also began locating facilities in CE nearby the final producers. In other words, by the mid-1990s, in anticipation of further European economic integration, foreign firms were investing in CE not only to enter those domestic

[14] Whitney (1993).

Table 2.3 Passenger car production in three areas of Europe, 1989–2001

Nation	2001	1989	Change 1989–2001	% Change 1989–2001
Total (18)	**16,560,807**	**15,972,819**	**587,988**	**3.68%**
Western Europe (10)	**14,843,212**	**14,883,050**	**–39,838**	**–0.27%**
Austria	131,098	6,638	124,460	1,874.96%
Belgium	1,058,656	1,143,711	–85,055	–7.44%
France	3,181,549	3,409,017	–227,468	–6.67%
Great Britain	1,492,365	1,299,082	193,283	14.88%
Italy	1,271,780	1,971,969	–700,189	–35.51%
Netherlands	189,261	134,600	54,661	40.61%
Portugal	177,357	73,181	104,176	142.35%
Spain	2,211,172	1,896,973	314,199	16.56%
Sweden	251,035	384,206	–133,171	–34.66%
West Germany	4,878,939	4,563,673	315,266	6.91%
Central Europe (5)	**1,537,071**	**702,819**	**834,252**	**118.70%**
Czechia	437,186	183,123	254,063	138.74%
East Germany	422,250	213,204	209,046	98.05%
Hungary	142,696	0	142,696	—
Poland	353,295	306,492	46,803	15.27%
Slovakia	181,644	0	181,644	—
SEE Auto Zone (3)	**180,524**	**386,950**	**–206,426**	**–53.35%**
Romania	56,774	160,000	–103,226	–64.52%
Serbia	7,668	180,950	–173,282	–95.76%
Slovenia	116,082	46,000	70,082	152.35%

Sources: Data compiled and adapted by the author from Ward's (1958–2014, 2014); OICA (1999–2016); and Tables 3.1 to 8.3.

markets, but also in preparation for exporting vehicles produced in the region to Western Europe (and America).[15]

In contrast to CE, political-economic instability in Romania and a prolonged civil war leading to the dissolution of the former Yugoslavia led to a precipitous decline in automobile production in SEE between 1989 and 2001. After producing 386,950 cars in 1989, total annual output in Romania and the independent nations of Serbia and Slovenia (heretofore, the SEE Auto Zone) contracted by 206,426 or 53.35% to

[15] Havas (2000); Richet & Bourassa (2000); Pavlinek (2002, 2008); Lung (2004); Domanski & Lung (2009); Jacobs (2016, 2017).

only 180,524 units in 2001. The decline was 244,426 and 57.52% as compared with 1989, if Bosnia and Bulgaria were included. Interestingly, due to Renault's takeover of IMV/Revoz in 1991, car production in Slovenia expanded by 70,082 or 152.35% during the first Post-Socialist phase, from 46,000 to 116,082.

As CE and SEE initially followed different Post-Socialist paths, annual passenger car output in Western Europe's top ten auto producing nations declined relative to 1989 by 39,838 or 0.27%, from 14.88 million to 14.84 million. Whereas six of these ten nations experienced growth, particularly the former West Germany and Spain, four saw their annual car output contract as compared with 1989, most notably Italy. The shift east of European production would accelerate after 2001. Perhaps foremost among the influences provoking this trend was the expanding scale of the European Union (EU), which allowed lower-wage CE and SEE nations become duty-free export bases for production bound for Western Europe.

Post-Socialist Phase II: Reshaping Europe's Car Production Footprint, 2001–2016

The EU owes its roots to the Rome Treaties of March 25, 1957 and the creation of the six-nation economic collaboration among Belgium, France, Germany, Italy, Luxembourg, and the Netherlands known as the European Economic Community (EEC) in 1958. By 1973, Denmark, Ireland, and Great Britain had joined and the EEC had established a customs union and common agricultural policy program. Over the next 13 years, Greece, Portugal, and Spain were incorporated and the Single European Act was promulgated on July 1, 1987. This was followed by the implementation of the European Single Market on January 1, 1993, which sought, among other things, to remove any remaining tariffs and informal barriers to free trade among member states.[16]

[16] European Union (2016).

The EEC and the European Single Market officially became part of the EU on November 1, 1993, when the Treaty of Maastricht came into effect. Among the founding principles of the now legitimized EU was the free movement of people, goods, services and capital among nations within the zone or what has become known as the 'four freedoms.' Other important tenets were the establishment of a common currency and the creation of an assistance fund to aid in the development of less developed/declining areas within the EU. These and other social provisions also were to serve a framework in which to spread democracy and capitalism to the Post-Socialism Eastern Bloc.[17]

Austria, Finland, and Sweden were integrated in 1995 and by 1999, when the European Monetary Union came into effect (the Eurozone), the EU encompassed 15 member states, all within Western Europe, except for Greece. The European Central Bank (ECB) also was established in Frankfurt, Germany to administer monetary policy within the Eurozone. It also was charged with overseeing the zone's Stability and Growth Pact, which regulates the national debts and deficits of member nations. This would become an important determinant in which countries were grant to accession to the EU and into the Eurozone.[18]

On March 31, 1998, Czechia, Hungary, Poland, and Slovenia, along with Estonia and Cyprus began negotiating with the EU Council regarding the steps necessary for entrance into the EU. Slovakia followed on February 15, 2000, accompanied by Bulgaria, Latvia, Lithuania, Malta, and Romania. Realizing that the further enlargement of the EU into the CE was inevitable, VW greatly expanded its Skoda operations in Czechia. As shown in Table 2.4, it also opened a new luxury car plant in East Germany's Saxony Triangle (in Dresden), as did its partner, the sports car manufacturer Porsche, and its rival BMW (both in Leipzig).

Meanwhile, Asian automakers, namely Toyota and Hyundai-Kia, began investigating possible sites for their first car plants in the region. Toyota acted first among the Asian newcomers, revealing plans in December 2001 for a joint venture factory with PSA Peugeot Citroen

[17] European Union (2016).

[18] Dicken (2015); European Union (2016).

Table 2.4 Foreign passenger car plants launched or planned in the CE and SEE, 2001–2016

Automaker	Company origin	Place, CE nation	Announced	Production launched	Former owner	Originally opened	Vehicle capacity 2016
1. VW	W. Germany	Dresden, East Germany	Jun-1998	Dec-2001	None	New	10,000
2. Porsche	W. Germany	Leipzig, East Germany	Sep-1999	Aug-2002	None	New	165,000
3. BMW	W. Germany	Leipzig, East Germany	Jul-2001	Mar-2005	None	New	240,000
4. Toyota-PSA	Japan-France	Ovcary-Kolin, Czechia	Dec-2001	Feb-2005	None	New	300,000
5. PSA	France	Trnava, Slovakia	Jan-2004	Jun-2006	None	New	360,000
6. Kia	Korea	Teplicka nad Vahom, Slovakia	Mar-2004	Dec-2006	None	New	360,000
7. Hyundai	Korea	Nosovice, Czechia	Sep-2005	Nov-2008	None	New	350,000
*UkrAVTO	Ukraine	Warsaw-Zeran, Poland	Sep-2007	Nov-2007	FSO	Apr-1951	c-Mar-2011
*Ford	USA	Craiova, Romania	Sep-2007	Sep-2009	Oltcit	Oct-1982	300,000
8. Fiat	Italy	Kragujevac, Serbia	Apr-2008	Mar-2009	Zastava	1853	200,000
9. Mercedes-Benz	W. Germany	Kecskemet, Hungary-1	Jun-2008	Mar-2012	None	New	180,000
		Kecskemet, Hungary-2	Jul-2016	+2020	None	New	+150,000
10. JLR	India-Britain	Nitra, Slovakia	Aug-2015	+2018	None	New	+300,000

Sources: Data compiled and adapted by the author from Tables 3.1 to 8.3.
* See numbers 14 and 15 in Table 2.2.

(PSA) of France near Kolin, Czechia. A month later, on January 5, 2002, the ECB and the national banks of existing EU member states began issuing 'Euro' bank notes. Then, on May 1, 2004, ten of the 12 aforementioned nations, including Czechia, Hungary, Poland, and Slovenia, achieved accession to the EU. Bulgaria and Romania were added on January 1, 2007, with Croatia welcomed in to the then 28-member EU on July 1, 2013.

Pre-empting its entrance into the EU by less than four months, PSA and Kia announced plans to build car plants in Trnava and near Zilina in Slovakia in 2004. The next year, Hyundai agreed to open a factory in Nosovice, Czechia and by 2008 Mercedes-Benz had made plans to produce in Kecskemet, Hungary. In SEE, Ford took over the once-owned Daewoo Romania factory in Craiova and Fiat the old Zastava complex in Serbia. In contrast, the former Daewoo-FSO operations in Warsaw, then jointly run by GM and UkrAVTO of Ukraine was closed in 2011 and VW-Skoda's Vrchlabi facility was in Czechia was transitioned to gearboxes. As a result, the number of active car assembly plants in CE and the SEE Auto Zone stood at 22 at the end of 2016 (again, see Table 1.1). A total of 18 of these were in CE and four in SEE. Jaguar Land Rover (JLR) was expected to bring the CE total to 19 in late-2018, with Mercedes-Benz adding a second assembly hall or factory in Kecskemet by 2020.[19]

While fewer passenger car plants were launched CE during Post-Socialist Phase II (2001–2016), these facilities have been more technologically advanced and expanded their output to 300,000 at a much faster rate than the factories taken over or constructed during the first phase of Post-Socialism. Concurrently, VW erected brand new assembly halls on the site of the original Socialist factories it acquired in Czechia and Slovakia. Fiat did the same in Poland and essentially Serbia.

As a result and as presented in Table 2.5, a total of 3,304,647 passenger cars were produced in CE minus East Germany in 2015, or nearly triple the 1,114,821 cars assembled in the area in 2001. Including East Germany, CE production was 4,124,074 in 2015, or 2,587,303 and 168.31% greater than it was in 2001 when 1,537,071 cars were

[19] Pavlinek (2008, 2015); Domanski & Lung (2009); Julien & Pardi (2013); Jacobs (2016, 2017).

Table 2.5 Passenger car production in three areas of Europe, 2001–2015

Nation	2015	2001	Change 2001–2015	% Change 2001–2015
Total (18)	**16,491,529**	**16,560,807**	**–69,278**	**–0.42%**
Western Europe (10)	**11,758,984**	**14,843,212**	**–3,084,228**	**–20.78%**
Austria	131,380	131,098	282	0.22%
Belgium	369,172	1,058,656	–689,484	–65.13%
France	1,553,800	3,181,549	–1,627,749	–51.16%
Great Britain	1,587,677	1,492,365	95,312	6.39%
Italy	663,139	1,271,780	–608,641	–47.86%
Netherlands	41,870	189,261	–147,391	–77.88%
Portugal	115,468	177,357	–61,889	–34.90%
Spain	2,218,980	2,211,172	7,808	0.35%
Sweden	188,987	251,035	–62,048	–24.72%
West Germany	4,888,511	4,878,939	9,572	0.20%
Central Europe (5)	**4,124,074**	**1,537,071**	**2,587,003**	168.31%
Czechia	1,241,161	437,186	803,975	183.90%
East Germany	819,427	422,250	397,177	94.06%
Hungary	528,785	142,696	386,089	270.57%
Poland	534,700	353,295	181,405	51.35%
Slovakia	1,000,001	181,644	818,357	450.53%
CE minus E. Germany	3,304,647	1,114,821	2,189,826	196.43%
SEE Auto Zone (3)	**608,471**	**180,524**	**427,947**	**237.06%**
Romania	387,171	56,774	330,397	581.95%
Serbia	91,185	7,668	84,227	1,098.42%
Slovenia	129,405	116,082	13,323	11.48%

Sources: Data compiled and adapted by author from Ward's (1958–2014, 2014); OICA (1999–2016); and Tables 3.1 to 8.3.

produced in the region. Once the political-economic situation began to stabilize in Romania, Serbia, and Slovenia, annual car output steadily grew there as well in the 2000s, before rapidly expanding in the 2010s. Led by Romania, a total of 608,471 cars were assembled in the SEE Auto Zone in 2015, an increase of 427,947 and 237.06% as compared with 2001.

Combined with the 12 remaining and upgraded first phase/pre-2001 complexes, the foreign car plants launched in Post-Socialist Phase II have enabled automakers targeting the EU market to dramatically

reshuffle the location of their production. As again illustrated in Table 2.5, Western Europe's ten largest auto producing nations built 11.76 million in 2015. This meant that annual final assemblies was 3,084,228 or 20.78% less than it was in developed Europe in 2001, when 14.84 million cars were built. More importantly, six of these ten nations experienced declines in annual car output in 2015 as compared with 2001. Among the four countries experiencing growth, only Great Britain increased output by more than 1%. Conversely, car production in Belgium, France, and the Netherlands had halved from 2001. Meanwhile, output in Belgium, France, and in Italy contracted by more than 600,000, the equivalent to two complete assembly plants.

In sum, the rapid expansions in CE and the SEE Auto Zone effectively offset the massive downsizing that took place in Western Europe after 2001. In other words, at 16.49 million overall, annual passenger car output in Europe's three major automotive production spheres in 2015 was just slightly less (69,278 or 0.42%) than it was in 2001, when 16.56 million cars were built (See Table 2.5). As discussed in the Chapters 3–8 to follow, various factors have facilitated these trends. Some of this has had to do with the aftermath of the 2009 Great Recession and the increasingly more rabid competitive environment of the global auto industry. Of course these events also greatly affected CE and SEE car plants, but most of these have since rebounded, with a number of them surging to record or near record output levels in 2015 (e.g., VW Bratislava, Skoda Mlada Boleslav, Audi Gyor, and Dacia Pitesti).

For example, these two factors forced America's two largest automakers, GM and Ford, to close and/or downsize their operations. Both filed for bankruptcy in 2009 and subsequently shuttered plants in Belgium, with GM also mothballed facilities in Portugal and West Germany. Similarly, despite taking over Chrysler of America, constant red ink has pushed Fiat to shift the production of some of its economy models to Poland and acquired its historical partner Zastava of Serbia. On the other hand, as part of the implementation of its grand expansion plans to become one of the world's three largest automakers, Renault, allied with Nissan of Japan, absorbed Dacia, and then has cut costs by closing and downsizing plants in France while greatly expanding its new operations in Romania. Conversely, the continued

international expansions of Hyundai and Kia also has spurred growth in the CE. To eliminate European import tariffs, these Korean automakers, like Suzuki and the failed Daewoo before them, established their first assembly plants in Europe in CE. This also may become the model followed by Chinese and Indian automakers seeking to expand their sales in the EU.

As emphasized throughout the remainder of book, two other straightforward factors were influential in promoting the eastward shift in European-bound car production: The persistently wide chasm between wage rates in Western Europe and the CE and the substantial subsidy packages utilized by CE Governments to lure automakers to their nations. Many of these incentives schemes would have been even larger, if not for the intervention of the European Commission's (EC) Competition Committee. As chapters in the book chronicle, wages and subsidies have provoked VW to greatly expand Skoda car output in Czechia and Audi production in Hungary while scaling back plants in Belgium and Spain. It also has led the German auto group to turn its Bratislava factory into its main production base for an assortment of luxury SUV models bound for Western Europe and America and more recently, for its Europe-focused new UP! small car line. Finally, despite major financial difficulties that have forced closings and cutbacks in output at its factories in France, PSA has opened new facilities in Czechia and Slovakia, and has contemplated further expansions in CE.

Now that some background has been presented, Chapters 3–7 provide expanded histories of the Post-Socialist CE passenger car factories introduced in this chapter. This analysis proceeds chronologically beginning in Chapter 3 with Poland, followed by separate chapters on East Germany, Czechia, Slovakia, and Hungary. Through a licensing agreements with Fiat in 1965 and in 1987, Poland became the first Socialist nation in the CE to truly open its doors to Western automakers. It also has had by far the most extensive and diverse foreign automaker activity among the CE nations.

With the book primarily focusing upon CE, Chapter 8 reviewing the plants in the Romania, Serbia, and Slovenia is essentially a bonus chapter. As the 2001 to 2015 demonstrates, the SE Auto Zone is positioned to serve as a new core of low-wage car production in Post-

Socialist Europe, if it remains politically stable and greatly improves its infrastructure. The book then concludes with Chapter 9, which not only provides an evaluation of the near-term future prospects for passenger car production in CE and SEE, but also includes some discussion on the possible role Bosnia-Herzegovina, Bulgaria, and Croatia may play in Europe's future automobile supply chain.

References

Amsden A, J Kochanowicz, and L Taylor (1994) *The Market Meets Its Match: Restructuring the Economies of Eastern Europe* (Cambridge, MA: Harvard University Press).

Dicken, Peter (2015) *Global Shift: Mapping the Changing Contours of the World Economy*. Seventh Edition (New York: Guilford).

Domanski B and Y Lung (2009) The Changing Face of the European Periphery in the Automotive Industry. *European Urban and Regional Studies*, 16 (1), 5–10.

European Union (2016) *The European Council and the Council of the EU Through Time* (Brussels: European Council).

Fogel D, eds (1994) *Managing in Emerging Market Economies: Cases from the Czech and Slovak Republics* (Boulder, CO: Westview Press).

Franklin, Daniel (1990) Hungary Is Winning the Free-Market Race. *Toronto Globe & Mail*, 14 December, 73.

Georgano N (2000) *The Beaulieu Encyclopedia of the Automobile* (Chicago: Fitzroy Dearborn).

Havas A (2000) Changing Patterns of Inter- and Intra-Regional Division of Labor: Central Europe's Long and Winding Road, in J Humphrey, Y Lecler, and M Salerno (eds), *Global Strategies and Local Realities: The Auto Industry in Emerging Markets* (Cheltenham: Edgar Elgar), pp. 234–62.

Jacobs A J (2016) Automotive FDI and Dependent Development: The Case of Slovakia's City-Regions in the Bratislava-Zilina Corridor. *The Open Urban Studies and Demography Journal*, 2 (1): 1–19.

Jacobs A J 2017 Nested Dependent City-Regions: FDI, Uneven Development, and Slovakia's Bratislava, Nitra, Trencin, Trnava, and Zilina City-Regions. *Journal of Urban Affairs*, 39 (5), http://dx.doi.org/10.1080/07352166.2017.1282768.

Julien B and T Pardi (2013) Structuring New Automobile Industries, Restructuring Old Automobile Industries and the New Geopolitics of the

Global Automotive Sector. *International Journal of Automotive Technology and Management*, 3 (2–3), 137–65.

Lung Y (2004) The Changing Geography of the European Automobile System. *International Journal of Automotive Technology and Management*, 13 (2), 96–113.

Myant M (1993) *Transforming Socialist Economies: The Case of Poland and Czechoslovakia* (Aldershot, UK: Edward Elgar).

Myant M, F Fleischer, K Hornschild, R Vintrova, K Zeman, and Z Souckek (1996) *Successful Transformations? The Creation of Market Economies in Eastern Germany and the Czech Republic* (Cheltenham, UK: Edward Elgar).

OICA (1999–2016) Annual Automobile Production Statistics by Nation and Manufacturer for 1999 to 2015. Paris: Organisation Internationale des Constructeurs d'Automobiles, http://www.oica.net/, last 15 December.

Pavlinek P (2002) Restructuring the Central and Eastern European Automobile Industry: Legacies, Trends, and Effects of Foreign Direct Investment. *Post-Soviet Geography and Economy*, 43 (1), 41–77.

Pavlinek P. (2008) *A Successful Transformation? Restructuring of the Czech Automobile Industry* (Heidelbeg: Physcia-Verlag).

Pavlinek P (2015) Foreign Direct Investment and the Development of the Automotive Industry in Central and Eastern Europe, in Bela Galgoczi, Jan Drahokoupil, and Magdalena Bernaciak (eds), *Foreign Investment in Eastern and Southern Europe after 2008: Still a Lever of Growth* (Brussels: ETUI), pp. 209–55.

Richet X and F Bourassa (2000) The Remergence of the Automobile Industry in Eastern Europe, in Christian von Hirschhausen and Jurgen Bitzer (eds), *The Globalization of the Industry and Innovation in Eastern Europe: From Post-Socialist Restructuring to International Competitiveness* (Basingstoke: Macmillan), pp. 59–94.

Sadler D, A Swain, and R Hudson (1993) The Automobile Industry and Eastern Europe: New Production Strategies or Old Solutions? *Area*, 25 (4), 339–49.

Tagliabue J (1989) Poland's Foreign Fix: Warsaw Is Working Hard to Attract Western Investment. *New York Times*, 13 August, F1, F11.

Thompson A (2011) *Cars of Eastern Europe: The Definitive History* (Newbury Park, CA: Haynes).

Ward's (1958–2014) *Ward's Automotive Yearbook, 1958 to 2014* (Detroit: Ward's Communications).

Ward's (2014) *Ward's World's Vehicle Data 2014* (Southfield, MI: Ward's Communications).

Whitney C (1993) East Europe Still Waits For the Capitalist Push. *New York Times*, 30 April, A9.

Wolchik S and J Curry, eds (2011) *Central & East European Politics: From Communism to Democracy* (Lanham, MD: Rowman & Littlefield).

3

Foreign Passenger Car Plants in Poland

Introduction: Setting the Scene for Foreign Car Assembly Plants in Poland

Poland's automobile industry has a long and winding history that dates back to 1925. This includes the Socialist Period, when the Soviet-led CMEA permitted its manufacturers to produce cars along with commercial trucks. Beginning with the small pre-World War II (WW-II) Fiat and GM endeavors in Warsaw, this chapter focuses upon Poland's current and former foreign car assembly plants.

The current factories include: (1) Fiat Tychy, which was formerly the state-owned *Fabryka Samochodow Małolitrazowych* (FSM) Plant-II 1; (2) VW Poznan, which was formerly the state-owned *Fabryka Samochodow Rolniczych* (FSR); and (3) GM's Opel Gliwice. The former facilities include three originally state-owned plants: (1) *Fabryka Samochodow Osobowych* (FSO) Zeran in Warsaw, which was fleetingly owned by Daewoo of Korea and then by UkrAVTO of Ukraine, and at various times built Fiat, GM, or Daewoo, and; (2) *Lubelska Fabryka Samochodow Ciezarowych* (FSC Lublin), which assembled Peugeot and then was briefly also owned by Daewoo; and (3) Fiat Bielsko-Biala—the former FSM

A.J. Jacobs, *Automotive FDI in Emerging Europe*,
DOI 10.1057/978-1-137-40786-3_3

Plant-I that until 2000 assembled Fiat before transitioning to engines; and (4) Ford Plonsk.

The chapter conclusion summarizes Poland's car production since the Fall of Socialism and briefly mentions Toyota's powertrain factories in southern Poland and Mercedes-Benz's new engine and rumored car plant in Jawor.

Early Links to Poland's Post-1989 Foreign Carmakers

CWS and the Original Polski Fiat

Poland's foundation for its automobile industry was launched in 1918, when the newly re-established Republic of Poland launched its first vehicle works in Warsaw, *Centralne Warsztaty Samochodowe* (CWS). The 'Central Vehicle Works' initially refurbished motor vehicles and tanks left behind by the former occupying forces of Germany and Russia. By the 1920s, it was experimenting with cars, completing its first prototype in 1925. Serial production of the CWS T-1 built under license from Berliet of France but containing mostly locally fabricated parts commenced in 1927.[1]

In 1928, CWS was absorbed into the state-controlled, *Panstwowe Zaklady Inzynieryjne* (PZInz). Under 'National Engineering Works' the vehicle line was expanded, including the assembly of a small car utilizing a chassis manufactured by Skoda of Czechoslovakia. Approximately 3,800 vehicles were produced between 1925 and 1931, when it was decided that the essentially craft produced CWS were too costly to build relative to imported cars. The government then sought out a foreign partner to jointly develop automobiles in the country. This occurred on September 21, 1932, when PZInz signed an accord with Fiat of Italy and established Polski Fiat SA.

[1] Georgano (2000); Thompson (2011).

As part of the arrangement, PZInz was forced to end CWS brand output in favor of Fiat 508 and 508C models.[2]

At first, the Warsaw CWS only assembled parts, but in 1934, its workers began assembling the first-generation Fiat 508. This was followed in June 1935 by the launch of serial production of the Polski Fiat 508 II. Initially built mainly from Italian-made components, by late-1938 the 508 III (aka Junak) contained 95% Polish parts. Vehicle production rose to 4,500 in 1937, when it also included the Fiat 518 Mazur sedan; 618 light-duty truck; 621 2.5-ton truck; and 621R Bus. Output ended with the outbreak of WW-II and the Nazi invasion of Poland on September 1, 1939. CWS, along with PZInz's Ursus truck factory in Szamoty (now Warsaw), was then dismantled by the Nazis and its workers either killed or sent to German slave-labor camps. In total, between 1935 and 1939, CWS built approximately 10,000 Polski Fiat plus a small number of PZInz 403 luxury cars, Fiat 500 Topolino, and Fiat 1100 (the 508 successor).[3]

After the Warsaw Uprising of August 1 to October 2, 1944, PZInz's operations in the city were razed. Nonetheless, through CWS, Poland would establish connections with Fiat that would be renewed in the Socialist Era and last until this day.

Chevrolet Wola, LRL, and GM in Pre-War Poland

On November 6, 1928, GM opened a small plant at 103 Woloska Street in Warsaw. The first Chevrolet Poland existence was fleeting, however, building approximately 6,000 vehicles before becoming a casualty of the Great Depression. Following Poland's loosening of restrictions on private automobile production in 1936, the Polish the railway manufacturer Lilpop, Rau i Loewenstein (LRL) began building licensed Chevy, Buick, and Opel cars at its Wola Plant on the City of Warsaw's west side. To prepare for production, local workers were sent to GM's Denmark plant for training. Located on Copenhagen's

[2] Georgano (2000); Thompson (2011).
[3] Georgano (2000); Thompson (2011).

southern harbor, the Danish facility had become GM's first factory outside of North America when it launched output of Chevrolet on January 7, 1924.[4]

Assembly of GM vehicles was expanded to LRL's second plant in Lublin in 1937 and continued until the German invasion in 1939. During their short run, the two LRL facilities produced vans, buses, and cargo trucks, plus a variety of car models including: three four-cylinder Opel—the P4, Olympia, and its successor, the original Kadett subcompact; three six-cylinder Chevrolet—the Standard Six, its successor the Master, and the Imperial; and two eight-cylinder Buick—the entry-level luxury 41 and ultra-luxury 90.

Although its output was modest, LRL's GM models accounted for the majority of the roughly 7,000 vehicles assembled in Poland between January 1938 and September 1939. Moreover, while most of these vehicles were utilized for government and commercial purposes, demand was large enough to warrant LRL employing 3,900 workers at its automotive plants in 1938. It also prompted the company to commence construction on a components factory in the outskirts of Lublin. Unfortunately, the plant that was scheduled to open in 1940 was never completed, LRL Warsaw was dismantled by the Nazis, and its workers also sent to German labor camps.[5]

After the war, on January 1, 1951, Poland's Soviet-backed Ministry of Industry re-established what was left of LRL's Lublin operations as the state-owned FSC Lublin. Then, on November 7, 1951, the 25,000-capacity 'Lublin Truck Factory' launched production of a Soviet GAZ licensed LCV badged as the Lublin-51. Most of the 88 Lublin-51 assembled in 1951 were military vehicles. By 1959, however, output was switched to FSC Zuk commercial vans and pickups, most of which were utilized by government agencies.[6] As will be discussed later, FSC Lublin would ultimately assemble Peugeot cars during the 1990s, before being acquired by Daewoo in 1995.

[4] PAIiIZ (2007); GM (2005, 2008b); Thompson (2011).
[5] PAIiIZ (2007); GM (2005, 2008b); Thompson (2011).
[6] GM (2005, 2008b); Wernle (2008); Thompson (2011); Honker (2016); Opel (2016a).

Fiat's Socialist Links with FSO and FSM

In July 1948, the newly installed Socialist Government in Poland sought to re-launch the country's automobile industry by signing a new pact with Fiat to build Fiat 1100. On August 1, 1948, it established the state-owned FSO, and began construction of its so-called 'Passenger Car Factory' along eastern banks of the Vistula River in Zeran, a community situated on the northern outskirts of Warsaw in the Village of Bialoleka. Scheduled to open in 1950, the project hit a roadblock in 1949, when the Soviets pressured Poland to tear up its agreement with the capitalist automaker. In its stead, the Soviets offered a free license to build their newly developed GAZ M-20 *Pobeda* (Victory) car. This arrangement helped turn FSO into Poland's largest automaker during the Socialist Period.[7]

On November 6, 1951 the first Pobeda knockoff, the FSO Warszawa, rolled off the 25,000-capacity FSO Zeran assembly line in Bialoleka (by then a district of the City of Warsaw). The Warszawa was initially assembled with a Polish-made chassis and an engine and car body manufactured by GAZ in Gorky. This changed when the second-generation Warszawa 200 was introduced in 1957. Also in March 1957, the Zeran Plant commenced output of its first front-wheel drive (fwd) car, the FSO Syrena 100 supermini. Although ideologically opposed to private car ownership, the Polish Government hoped that the launch of the Syrena would alleviate the nation's significant undersupply of cars and spare parts. Among other things, this situation had further limited the mobility and housing options of urban residents, by greatly inflating new car prices and creating a black market for used vehicles.[8]

To help further address these issues, FSO developed a prototype for Warszawa 210, the replacement for the rugged, but underpowered and gas-guzzling Warszawa 200. It then searched for a partner to build a smaller model that could compete in export markets. This culminated in

[7] Georgano (2000); Havas (2000); Thompson (2011); The 'M' in M-20 came from the plant in which the Pobeda was built: The Vyacheslav Molotov GAZ factory in Gorky.

[8] Georgano (2000); Havas (2000); Thompson (2011).

a new Soviet-permitted accord with Fiat, which was signed in December 1965, but not released to the press until May 1966. Initial reports stated that the Italian automaker had agreed to produce between 35,000 and 40,000 Fiat 1300 and 1500 models annually in Warsaw by 1970. In exchange, the Polish Government was to award Fiat $30 million to $40 million in subsidies for the project. It was later revealed that Fiat was to expend its monies upfront, in order to re-tool FSO Zeran and provide its staff with the technical knowledge needed to produce 70,000 cars annually. The Poles then were to repay Fiat for its financial outlay within four years. The Italian automaker viewed Poland as an important piece in its Eastern European expansion plans, which by 1966 also included production or technology tie-ups with *Volzhsky Avtomobilny Zavod* (VAZ) in Togliatti, USSR (Lada) and Zastava in Kragujevac, Yugoslavia (now Serbia, see Chapter 8).[9]

In November 1967, the first Polski Fiat 125p, rolled off the assembly line at FSO Zeran, with serial production commencing in January 1968 (See Table 3.1). The car resembled the Fiat 125, but utilized the power-train and mechanical components from the 125's predecessor, the Fiat 1300/1500. Interestingly, some of these components were manufactured by Stoewer Werke AG at its factory in Szczecin, a port city situated on the Baltic Sea in northwest Poland (today's West Pomerania Province). Stoewer had been an early pioneer in the German automobile industry, producing vehicles in the city, then known as Stettin, between 1899 and 1939.[10]

Upon the introduction of the 125p, the Warszawa was gradually phased out, with the last of 254,471 ever made being assembled in March 1973 (Warszawa 223). Meanwhile, with demand far outstripping output, the 125p fetched far more on the open market than its sticker price. This was exacerbated by the car's immediate success in under-served foreign markets, especially developing Asia, which resulted in

[9] AP (1966); Kamm (1966); *New York Times* (1966); Reuters (1966); Georgano (2000); Thompson (2011).

[10] Georgano (2000); Thompson (2011).

Table 3.1 Active and former foreign car plants in Poland

Firm	Origin	Place, province	Announced	Production launched	Emp. 31 Dec 2015	Car output 2015	Vehicle capacity 2016
		Poland			**13,925**	**534,700**	**982,000**
FSM-Fiat #2 Fiat	Italy	Tychy, Silesia	Oct-1971 Sep-1987	Sep-1975 (Polski) Jun-1991 (Fiat)	3,270	302,639	600,000
VW[a]	Germany	Poznan, Greater Poland	May-1993	Jul-1994 (VW LCV) Dec-1994 (VW cars)	7,765	(170,800) 62,656	175,000
GM Opel	USA	Gliwice, Silesia	Dec-1995	Aug-1998	2,890	169,405	207,000
Former foreign car plants							
FSO-Fiat[b]	Italy	Warsaw-Zeran, Masovia	Dec-1965 (Fiat)	Nov-1967 (Fiat)			
GM-FSO[c]	USA		Dec-1993 (GM)	Nov-1994 (Opel)			
Daewoo-FSO	South Korea		Aug-1995 (Daewoo)	Mar-1996 (Daewoo)			
UkrAVTO-GM	Ukraine		Sep-2007 (GM)	Nov-2007 (Chevy)	Closed	x-Mar-2011	x-250,000
FSM-Fiat #1[d] Fiat	Italy	Bielsko-Biala, Silesia	Oct-1971	Nov-1971 (FSM)			
			Sep-1991	Jul-1993 (Fiat)	1,100	x-Oct-2000	x-100,000

(*continued*)

Table 3.1 (continued)

Firm	Origin	Place, province	Announced	Production launched	Emp. 31 Dec 2015	Car output 2015	Vehicle capacity 2016
FSC-PSA[e]	France	Lublin, Lublin	Apr-1992 (PSA)	May-1993 (Peugeot)			
Daewoo	South Korea		Jun-1995 (Daewoo)	Nov-1995 (Daewoo)	NA	x-Apr-2001	x-15,000
Ford	USA	Plonsk, Masovia	Jan-1995	Sep-1995	Closed	x-Jun-2000	x-25,000

Sources: Compiled and adapted by author from Pavlinek (2002, 2006: Thompson (2011); FCA Poland (2016); Opel (2016a); VW Poznan (2016b).

[a] Vehicle output at the Antoninek Works in Poznan was originally launched by FSR in December 1972. Of the 7,765 employed at the Poznan complex 1,500 work on automobile production. Figure in parenthesis includes LCV.

[b] Originally announced in August 1948 and launched by FSO on November 6, 1951.

[c] Known as GM Warsaw, this encompassed only one of FSO Zeran's assembly halls.

[d] Has built Fiat engines since 2000.

[e] Originally announced in August 1948 and launched by FSC on November 7, 1951; since May 2002, the plant has been operated by various local firms who have sporadically produced LCV and/or 4×4.

x—Ended car production.

approximately one-quarter of the 7,101 units manufactured in Poland in 1968 being exported abroad.[11]

Foreign orders for the 125p expanded further in 1969, when FSO Zeran began shipping KD kits of the vehicle to Kragujevac for finally assembled, where Fiat's local partner stamped the car the Zastava 125pz. To keep up, output of the 125p at FSO was increased to 14,735 in 1969 and then 47,450 by 1971. In the latter year, nearly two-thirds of production was exported, primarily to CE. In contrast, the percentage of the car's domestically-made content was gradually expand over time.[12]

These efforts, nonetheless, failed to expand car buying opportunities for the average Polish worker. In 1971, with the average industrial wage only around $1,284 a year, and a skilled worker earning but $1,800 annually, the $7,285-price 125p and the $3,000-stickered FSO Syrena both remained well beyond the reach of the masses. Imports offered almost no relief, with waiting times for the only affordable 'people's car' available in Poland, the East German-made Trabant 600, stretching longer than one year (See Chapter 4).[13]

After also negotiating with Citroen, Ford, Renault, and VW, on October 29, 1971, the government again turned to Fiat, signing a new and greatly expanded $400 million deal to jointly produce small cars at the state-run automotive components complex known as *Wytwornia Sprzetu Mechanicznego* (WSM), Polmo in Bielsko-Biala (in today's Silesia Province). The selection of Fiat to build cars at the 'Mechanical Equipment Factory' was actually viewed as a surprise to some, as the Renault 5 had been rumored as the favorite to become Poland's new people's car. As part of the pact, Fiat also committed to: (1) steadily increase the domestic content of the cars it built at WSM over time; (2) promote the car's export to other markets, except Italy, for ten years; (3) operate a joint research center in Warsaw to help FSO enhance its own technological capacity; and (4) to build a second factory in just 41 km

[11] *New York Times* (1969); Georgano (2000); Thompson (2011).
[12] Georgano (2000); Thompson (2011).
[13] Feron (1971a); Thompson (2011).

(25 miles) north of WSM Bielsko-Biala in Tychy (also now in Silesia Province).[14]

In addition to the lower relative cost of labor in the country, Fiat officials later stated that they had chosen Tychy for its second plant for two significant reasons. First, because its site offered large and flat expanses of undeveloped land that could easily accommodate additional production halls. Secondly, because the site's road, rail, and utility infrastructure were more developed as compared with the other parcels the government offered in the area. In addition to these factors, Fiat hoped that the new factories would enable the enlarged FSO-Fiat plant network to: (1) accommodate rising orders for Polski Fiat 125p; (2) continue to produce FSO Syrena; and (3) increase projected output of a planned new model, the Polski Fiat 126p, from the original agreed upon 150,000 to 200,000, in order to better cover the costs of its production.[15]

Preparation for vehicle production at the renamed FSM #1 Bielsko-Biala commenced immediately thereafter, with transfer from FSO Zeran of Syrena 104 assembly occurring in time for 'Car Factory' #1 to build 117 Syrena by the end of 1971. Seven months later, on August 21, 1972, FSM #1 launched serial output of the newly developed FSM Syrena 105, with 9,002 built in that year. In the interim, on January 1, 1972, construction commenced on FSM #2 in Tychy.[16]

FSO Zeran produced 177,234 Syrena between 1957 and 1971. With the shift of the car to FSM and the discontinuation of the Warszawa, output of 125p at the factory jumped to 72,343 in 1973. More than half of these finished automobiles were exported. Another 10,584 CKD kits were packed and shipped abroad, including to Colombia and Egypt. Two years later, more than 100,000 Polski Fiat 125p cars and kits were produced, and sales of the model commenced for the first time in Great Britain.[17]

[14] Balect & Enrietti (1998); Thompson (2011); FCA Poland (2016).
[15] Feron (1971b); Balect & Enrietti (1998); Thompson (2011); FCA Poland (2016).
[16] Thompson (2011); FCA Poland (2016).
[17] Georgano (2000); Thompson (2011); FCA Poland (2016).

As FSO Zeran remained busy with the 125p, on June 6, 1973, the FSM #1 began assembling kits of the slightly longer successor to the Fiat 500 micro-mini, the Polski Fiat 126p mini. Six and one-half weeks later, on July 22, 1973, serial production of the car commenced on the factory's brand new second production line. A combined 35,487 vehicles were assembled in Bielsko-Biala there in 1973, consisting of 33,987 Syrena and 1,500 of the new 126p. This rose to 49,262 in 1974 and to 57,334 in 1975.[18]

The Fiat-FSO relationship reached its next milestone achievement on September 18, 1975, when the first 126p sedan rolled off the assembly line at the just completed FSM #2 (See Table 3.1). At that time, the Tychy operations encompassed 22 ha/54 acres of its 160-hectare (395-acre) site. A total of 11,512 Polski Fiat 126p were built in Tychy in 1975, jumping to 58,429 in 1976. This would mark the last year it was out-produced by FSM #1 Bielsko-Biala (60,211). Thereafter, FSM Tychy never looked back, assembling 132,314 cars (all 126p) in 1977, or equivalent to more than twice FSM #1 output in that year (61,038). The main reason for this was the Tychy Plant's production machinery, which was vastly superior technologically to Bielsko-Biala, where manual operations were still utilized to assemble the Syrena.[19]

Not to be forgotten, FSO Zeran also made significant strides during this period. In 1977, the Warsaw factory gained automated production equipment in preparation for the assembly of its own new car model. After six months of testing, this arrived in the form of the FSO Polonez in May 1978. Developed by the Polish automaker in collaboration with Fiat, the car was in many ways the mechanical twin to the Polski Fiat 125p. On the other hand, the Polonez was fitted with a greatly enhanced driver's console, steering, and a brand new hatchback body created by Italy's famed car designer, Giorgetto Giugiaro.[20]

These improvements, however, were not what made the Polonez significant. What was most noteworthy was the car's safety equipment,

[18] Thompson (2011); FCA Poland (2016).
[19] Thompson (2011); FCA Poland (2016).
[20] Thompson (2011); FCA Poland (2016)

which made it the first vehicle built in Eastern Europe that could pass even America's stringent crash test standards. This enabled its export to more markets than any other FSO vehicle ever built before. The original Polonez was replaced by the re-styled FSO Polonez Caro in June 1991, which was assembled at Zeran until 2002. It also spawned a commercial pickup truck that was built between 1988 and 1995 at FSO's *Fabryka Samochodow Dostawczych* (FSD) 'Delivery Vehicle Factory' in Nysa, Opole Province.

Aided by these expansions, Socialist Era output in Poland peaked at 351,000 cars in 1980. This included: 182,323 Polski Fiat 126p at FSM Tychy; approximately 100,000 FSO Polonez, Polski Fiat 125p, and CKD at FSO Zeran; and 68,202 FSM Syrena and Polski Fiat 126p at FSM Bielsko-Biala. By comparison, FSO Zeran produced only 24,800 cars in 1965. FSO-FSM car production then plunged below 230,000 in 1981 and 1982, before increasing to 276,700 in 1984 and then 306,492 in 1989. In the latter year, Tychy assembled 143,249 Polski Fiat 126p; Zeran 99,187 FSO Polonez and FSO 1500 (the 125p was re-badged as the 1300/1500 in June 1981); and Bielsko-Biala 64,056 Polski Fiat 126p (output of the Syrena terminated in June 1983).[21]

Meanwhile, during the last few years of Polish Socialism, Fiat actively was involved in the central government's deliberations regarding the privatization/future of the FSO and FSM factories. On the other hand, the Italian automaker seemed uninterested in Poland's light truck facilities. By that time, FSC, the state enterprise that had run the nation's three commercial vehicle plants had been broken up and renamed FS Lublin. In turn, FSD Nysa became a part of FSO in 1986 and the state's FSR Tarpan 'Agricultural Vehicle Factory' in Poznan became independent. Confusingly, the Lublin plant was frequently still referred to FSC by some reporting agencies.

Perhaps because of its lack of interest in the truck operations, Fiat, despite is strong position, was now not the only foreign automaker competing for control of the soon to be privatized Polish motor vehicle industry. On July 1, 1987, a consortium of Japanese companies led by

[21] Ward's (1958–2014); Thompson (2011); FCA Poland (2016).

Toyota Motor's minicar affiliate, Daihatsu Motors, offered to contribute $69 million toward the construction of a new 120,000-capacity factory in the country. Not to be outdone, on September 9, 1987, Fiat revealed that it had signed an agreement with POL-MOT—the agency overseeing international trade and production in the motor vehicle industry—to build the successor to the Polski Fiat 126p in Tychy: the Fiat Cinquecento mini.[22] At the time, Fiat also was supposedly competing with Daihatsu, GM, PSA, and VW for a contract to produce a slightly larger model at FSO Zeran. These negotiations proved unpredictable for all parties, however, as they occurred within an evolving political context marked by the rise in democratization movements in the country, led by Lech Walesa's Citizens Solidarity Committee.

Whereas the FSM and FSR factories were to flourish during after the Fall of Socialism as part of Fiat and VW, respectively, the FSO, FSD, and FS plants were to endure multiple ownership changes and production stops that ultimately led to their demise.

The Post-Socialist Demise of FSO

Who Wants FSO Zeran?

During the initial transition from Socialism, Poland was in dire straits, with very little hard currency to invest in anything, let alone industrial endeavors. In contrast, because of its highly underserved car market and average car worker wages of only about $92 per month, the CE nation's manufacturing plants attracted great interest from the world's largest carmakers during this period. Nonetheless, within such tumultuous times, it also was not surprising that the bidding to secure the rights for these assets were rife with uncertainty.

In late-1987, it was reported that Fiat had signed a letter of intent to build its Fiat 500 Topolino micro-mini at the Warsaw plant. This was short-lived, as before the year was out, the Government had cancelled

[22] *New York Times* (1987); WSJ (1987); Thompson (2011); FCA Poland (2016); FSO (2016).

this agreement for one a supposedly $100 million joint venture deal with Daihatsu, in which the Japanese carmaker was to supply the FSO Zeran with the necessary tooling and technology to produce the third-generation Daihatsu Charade. Output was expected to begin at 3,000 in 1988 before rapidly rising to 200,000 annually by 1992. Approximately one-third of the cars produced were to be exported abroad.[23]

By 1989, however, the Polish Government had flip-flopped to Fiat and then back to Daihatsu. This process was then thrown into further turmoil in December 1989, when under pressure from the International Monetary Fund (IMF), the Polish Parliament passed the ten-act Balcerowicz Plan (effective January 1, 1990). The so-called 'Shock Therapy' program called for: (1) the elimination to price controls and trade barriers; (2) an end to government subsidies and the rapid privatization of state enterprises; (3) the re-pegging of the Polish Zloty to Western currencies rather than the Soviet Ruble; (4) restrictions on wage increases; and (5) rapid dramatic financial and monetary reforms. Embracing the government's liberalization efforts, the newly independent management of FSO declared that it would do whatever necessary to reduce costs and improve efficiency at its FSO and FSM plants. This included threatening to lay off one-third of the company's service workers and one-half of its 4,000 administrative staff. Its leadership also even considered slashing health and other worker benefits.[24]

The immediate results of the government's new program were disastrous, provoking a wave of bankruptcies, a rapid rise in unemployment, and a swift decline in GDP, industrial production, salaries, and individual purchasing power. Not unexpectedly these outcomes caused great concerns among automakers aspiring to enter the Polish car market. Pre-empting the worst, on January 11, 1990, Daihatsu announced that it was shelving plans for full production at FSO Zeran in favor of a small operation assembling 5,000 to 6,000 Charade CKD kits beginning in 1991. Output was expected to expand to 10,000 in 1992. Interestingly, Daihatsu officials also suggested that they had not

[23] Ward's (1958–2014); *Japan Economic Journal* (1987); Thompson (2011).
[24] Wolchik & Curry (2011).

ruled out a potential 120,000-unit, long-term joint venture with FSO (i.e., its original rumored plan from 1987). Moreover, they stopped short of blaming the economic situation in Poland for their decision, and instead expressed their dissatisfaction with Japan's Export-Import Bank for its unwillingness to come through with the $69 million in loans it needed for the project.[25]

Although they failed to mention it at the time, another factor was Daihatsu's growing frustration with the tenure of the ongoing bidding war for FSO. By January 1990, the situation had become a game of ping-pong, with the head of FSO, Henryk Oleniak, flying back and forth among Poland, Italy, and Japan in an attempt to extract the best deal for his factory. In return, both companies were obliged to send delegations to Warsaw with counteroffers. Meanwhile, Oleniak played one offer against the other in the press, while claiming that he had not ruled out any form of collaborative arrangement for FSO. Seemingly totally assured of a positive outcome for Zeran, he publicly flaunted his newfound power to determine the plant's fate on his own, without interference from the Central Government.[26]

Acting as they had some inside information, Fiat representatives also seemed confident that they would win the right to operate the 24,000-worker FSO Zeran Plant. According to some reports, if Fiat's new proposal was accepted, the automaker was to invest between $335 million and $500 million in the Warsaw factory, in order to prepare it for production of its newly developed Fiat Tipo. Conversely, PSA and VW, supposedly fed up with Oleniak's antics, pulled their offers off the table. The mystery gained another twist in February 1990, when Fiat acquired a controlling stake in Innocenti Milano from De Tomaso Industries. Since 1982, Daihatsu had supplied the Milan-built Innocenti Minitre with engines and many of the same components that it had installed in the Charade. Thereafter, rumors suggested that the proposed new Fiat Cinquecento built at FSM Tychy would be badged for Western markets as an Innocenti.[27]

[25] *Financial Times* (1990); Thompson (2011).
[26] *Financial Times* (1990); AP (1991); Thompson (2011).
[27] Cornelius (1990); Thompson (2011).

On May 24, 1990, it appeared Fiat had indeed prevailed, when the Polish Government announced that Daihatsu had completely withdrawn from its joint venture with FSO, due to concerns over the economic outlook in CE. Countering this statement, representatives from the Japanese automaker blamed FSO's unsettled management situation for its exit, and still to this day, have never produced cars in Poland.[28]

GM to FSO's Rescue?

Negotiations between Fiat and FSO dragged on for another year. During this period, the Polish Government rebuffed Fiat's $800 million offer to acquire FSM and a combined $2 billion bid for a majority stake in both FSO and FSM. Meanwhile, the Zeran Works assembled a combined 81,592 FSO 1500 and Polonez in 1990, before producing only 39,579 cars in 1991. The latter year was marred by a temporary halt in output in February 1991, and the end of the production run of the outdated 1500 model on June 26, 1991. All told, 1.45 million 125p/1300/1500 were produced at Zeran between November 1967 and June 1991. Amazingly, 60.52% of these vehicles were exported to Europe, mostly to Eastern-bloc nations.[29]

In the meantime, on March 15, 1991, news broke that GM was close to signing a deal contract to produce Opel Vectra or Kadett at FSO Zeran, with all that seemed left being a finalization of the particularly. Industry Minister Andrzej Zawislak, nonetheless, publicly stated that an agreement with GM did not preclude a separate collaboration with Fiat. In contrast, GM suggested a deal was far from imminent. This was perhaps understandable, considering that only a month earlier, on February 7, 1991, the American automaker had commenced construction at a new $675 million, 150,000-capacity car plant in Eisenach, Germany, which was scheduled to launch production of the same two compact cars by late-1992 (See Chapter 4). On top of that, GM Europe

[28] *Journal of Commerce* (1990); Engelberg (1990).
[29] Ward's (1958–2014); Thompson (2011).

was in the process of completing a $295 million plant in Szentgotthard, Hungary that was scheduled to commence output of 25,000 Opel Astra F (the Kadett E successor) and 200,000 engines per year by March 1992 (See Chapter 7).[30]

On June 17, 1991, a deal appeared imminent, when a FSO spokesman leaked to the press that the specifics of the GM-FSO venture would soon be announced. Two days later, GM revealed that it was ready to invest $400 million in FSO Zeran, over a five-year period. This was to include an initial $100 million installment in time to launch production of the Opel Astra F by early-1993. The remainder of the proposed commitment was to be forthcoming in time to commence output of a second Opel car by 1996.[31]

Any related celebration, however, was premature, as by October 1991 negotiations between GM and the government had again stalled, pushing the Polish bureaucracy to approach PSA about a project at the FSO complex. At the time, two important issues between GM and the government were still unsettled. The first was related to GM's desire to secure a 70% controlling stake in any joint venture. The second involved tariffs on cars imported by other manufacturers. Whereas GM pushed for a 35% duty on other imports for seven to eight years, the Poles preferred a 25% tariff on non-GM vehicles.[32]

Four months later, the situation appeared to have been resolved, when on February 28, 1992, both sides revealed that GM had agreed to directly invest $75 million in the now heavily indebted FSO. To help facilitate the process, the American automaker established a new entity, GM Manufacturing Poland (GMMP), to oversee its vehicle production at Zeran. GM Europe's President Robert Eaton stated that GMMP would commence production of Opel Astra at one of Zeran's assembly halls within 18 months of the final agreement's signing, and if demand warranted, build as many as 35,000 cars per year. He also suggested that if the Polish economy stabilized and expanded as expected, the

[30] AP (1991).
[31] WJS (1991).
[32] Donovan (1991); *Journal of Commerce* (1991).

automaker would raise its investment in the factory to more than $300 million.[33]

It was expected that the majority of the Opel cars produced at Zeran would be sold in Poland. This would allow the automaker to avoid import tariffs on the Kadett/Astra that it was then importing into Poland from its GM-Opel Bochum Plant in western Germany. For agreeing to invest more than $50 million to produce in the country, the Polish Government sweetened the deal by allowing GM-Opel to import 10,000 cars a year into the country duty-free.

GM's downsizing of its initial footprint was premediated by several complications. The first was the sheer technological backwardness of the plant's production equipment and processes. A second major point of contention was the American Automaker's plans to dramatically raise productivity at Zeran by drastically shrinking its workforce. At the February 1992 announcement of the joint venture, GM officials declared that they would initially only need 1,000 of FSO's then-19,000 workers to assemble the 10,000 vehicles it annually planned to build there. FSO's Director, Andzej Tyszkiewicz, countered that he was still engaging other firms regarding a venture that would utilize the remainder of the complex and its 18,000 workers to produce 80,000 FSO Polonez per year. Behind the scenes, GM was more than adamant about its position, supposedly threatening to not follow through with the remainder of its original $400 million plan unless FSO cut its workforce in half.[34]

A final complication was the financial position of GM Europe's American parent company. After losing $4.45 billion in 1990, GM's world headquarters in Detroit had already disclosed plans to shutter 21 plants and lay off 74,000 workers at home and abroad. FSO, also had no legs to stand on, as Poland was in the midst of a severe recession that had sent industrial production down by nearly a third between 1990 and 1992. This downturn prevented new car sales from expanding in the country as rapidly as had been predicted. While still noteworthy, the

[33] Engleberg (1992); Pavlinek (2006).

[34] *Journal of Commerce* (1991); Protzman (1992).

pace of growth was far slower than was the case directly following the fall of Socialism.[35]

Mounting red ink, coupled with GM's determination to implement lean production in all its plants, prompted another 22 months of posturing. Finally, after nearly four years of negotiations, on December 13, 1993 the sides announced that they had agreed to an even smaller venture. GM was to invest $25 million in what was to be called the GM Warsaw Works, initially employing just 250 people assembling 10,000 Opel Astra SKD kits annually beginning in the autumn 1994 (See Table 3.1). The potential top-end of the project was now set at only 30,000 cars per year. On the other hand, FSO stated that it would continue to produce Polonez on a separate line at the Zeran complex.[36]

GM commenced output of Opel Astra in Warsaw on November 5, 1994. In the meantime, the automaker continued to investigate the best way in which enlarge its footprint in Poland. Conversely, the failure to work out a deal with GM, Fiat, or another large automaker would send FSO Zeran down a circuitous path, one that would see unexpected new players from Korea and Ukraine swoop in and decide its fate.

The Failed Daewoo-FSO Experiment

As the GM-FSO negotiations trudged on, the Polish Government remained active cultivating foreign collaborators for its other plants. By 1994, the State had secured deals with Fiat to take over FSM Bielsko-Biala and Tychy, with VW for FSR Tarpan in Poznan, and was negotiating with Ford about producing vehicles at a separate facility near Warsaw. Additionally, in April 1992 and April 1994 it signed two licensing deals with PSA.

For the first venture, PSA was to invest $62.5 million in FS Lublin and produce 2,000 CKD kits of its Peugeot 405 compact beginning in 1993, rising to 10,000 annually by 1997. Although few details were

[35] Ward's (1958–2014); Protzman (1992).
[36] Perlez (1993).

released on the 1994 tie-up, it called for FSD Nysa to assemble a small batch of Citroen C15 beginning in 1995. FSD ultimately built the LCV from 1995 until 2001, when the Nysa plant was shuttered. On the other hand, the Peugeot 405 venture was stymied by an impasse between PSA and FS regarding the size of the Lublin Plant's workforce. Similar to GM, the French automaker demanded that FS drastically scale back its 6,000-strong workforce at the facility, but was rebuffed. As a result, only 3,802 Peugeot cars were assembled in Lublin between May 1993 and December 1995, peaking at 1,679 in 1994.[37]

In the meantime, the Polish Government continued scouting around for a collaborator willing to manage or absorb all of FSO's remaining assets. During 1993, PSA, Hyundai of Korea, and Rover of Britain all expressed interest in producing cars at FSO Zeran. Talks with Hyundai quickly stalled over the same issue: the size of the workforce. On the other hand, Rover's involvement was smoke and mirrors, as it was hemorrhaging money and soon to be absorbed by BMW. Nonetheless, the government's persistence eventually paid off, when in 1995, it finally found its desired suitor, Daewoo.

Once partners with GM in a Korea company called Saehan Motors, by 1995 Daewoo, along with Hyundai, LG, and Samsung, had grown to become one of Korea's four largest conglomerates, all hell-bent to expand their international presence. As part of this effort, Daewoo Motors, in concert with other complementary divisions, began acquiring financial unstable state-owned vehicle assembly and components plants in emerging nations. Its goal was to set up a vertically integrated operation in a low-wage, underserved nations that could produce cars for export to Western Europe. Daewoo officials believed that acquiring existing facilities would be both less costly and risky than erecting a new plant. They also felt that such a path would endear the company to State bureaucracies, and thereby, win the automaker significant subsidies from governments all too happy to host them.[38]

[37] Ward's (1958–2014); Bobinski (1992a); Done (1992b); Georgano (2000); Pavlinek (2006); Thompson (2011).

[38] Sigurdson & Palonka (1999); Georgano (2000); Thompson (2011); Jacobs (2016).

Talks with the Polish Government began in January 1994, but never progressed, with Daewoo Group Chairman Woo-Choong Kim essentially concluding that the nation did not offer his automaker any viable options for an integrated setup. Daewoo then turned its attention to Romania, and a tie-up with its state-run Oltcit's Craiova factory (See Chapter 8). It then reversed course in late-1994, when during a trade mission in South Korea, a delegation led by President Lech Walesa made a special visit to Daewoo Motors' main Bupyeong Plant in Incheon Metropolitan City. In response, the Korean carmaker sent a team to Poland, and by January 1995 was in serious negotiations regarding FSO and FS Lublin.[39]

Just two months later, in March 1995, Daewoo and FS signed a letter of intent on a venture, followed by a formal deal on June 27, 1995 (See Table 3.1). Daewoo was to commit an estimated $340-million to the joint venture and annually produce 90,000 vehicles—50,000 passenger cars and 40,000 commercial vehicles—in Lublin. Additionally, the automaker pledged to build these commercial vehicles with 85% Polish components, but promised only 40% domestic content on its passenger cars. Upon the deal's promulgation on October 10, 1995, the Lublin Works was re-incorporated as Daewoo Motor Poland.[40]

Meanwhile, Daewoo continued its negotiations with FSO, with both sides signing a letter of intent of their own deal August 16, 1995 (announced in the Western press on August 21). This accord stipulated that FSO's assets be transferred to a newly established company, the Daewoo-FSO Motor Corporation. Thereafter, Daewoo was to invest an additional $1.1 billion for a 70% stake in the new enterprise. The remaining 30% was to be split equally between FSO's employees and the Polish state treasury, with the workers 15% share being bequeathed to them at no cost. Conversely, Daewoo's stake was to be financed by a combination of loans from: Korean banks (40%), European bank credit (40%); and Daewoo Group profits (20%). Hearing the news GM reacted by stating that the Daewoo investment seriously endangered its

[39] Sigurdson & Palonka (1999); Lee (2001); Thompson (2011); Jacobs (2016).
[40] *New York Times* (1995); Sigurdson & Palonka (1999); Lee (2001); Thompson (2011).

own collaboration at FSO Zeran. This proved no bluff, when, on October 12, 1995, its Opel division announced plans to erect a $280 million plant in Poland (See the Opel Gliwice section).[41]

Officially signed on November 14, 1995, the Daewoo-FSO joint venture gave the Korean automaker managerial control over: the highly-underutilized 250,000-capacity FSO Zeran; the 32,000-capacity FSD Nysa; the rights to produce Tarpan Honker 4×4 off-roaders; and eight of FSO's component suppliers. This included the diesel factory of Poland's largest engine manufacturer, Andoria, situated less than 42 km (26 miles) from both FSM Bielsko-Biala and Tychy in Andrychow (in today's Lesser Poland Province). In consideration for its $1.1 billion investment, Daewoo received an unspecified incentive package that included a seven-year abatement on all tax obligations and a five-year promise from local trade unions not to strike.[42]

At the time of the initial announcement, Daewoo stated that it would produce as many as 220,000 cars per year at FSO's vehicle plants, and maintain the bulk of their 20,000 workers. Behind the scenes, the Daewoo Group's ambitions for FSO were even grander. As part of its Vision 2000 plan, group officials viewed its Polish operations as the centerpiece of a European expansion that would culminate in annual output ultimately expanding to 650,000 by the early 2000s, including 500,000 cars and 150,000 commercial vehicles. This, group officials fallaciously believed, would help transform the Daewoo Motors into one of the world's ten largest automakers.[43]

Production of the FSO Polonez pickup continued at FSD during these negotiations, which thereafter renamed, Daewoo-FSO Motor Company's, Commercial Vehicle Division Nysa Plant (or ZSD for short). Meanwhile, output of Daewoo Nexia compact cars launched at Daewoo Motor Polska in Lublin in November 1995, with serial production commencing that December. This event also signaled the end of Peugeot 405 output at the factory. The Nexia was soon joined by the

[41] AP (1995); Bloomberg (1995a); Sigurdson & Palonka (1999); Lee (2001); Thompson (2011).
[42] Sigurdson & Palonka (1999); Thompson (2011).
[43] Sigurdson & Palonka (1999); Thompson (2011).

revamped Daewoo (FS) Lublin II van, followed in June 1997 by the re-badged Daewoo Honker 4×4. These vehicles were built alongside the pre-Daewoo introduced FSC Zuk and FS Lublin 33 LCV. The Nexia built in Lublin were assembled from CKD kits manufactured in Incheon, where it was sold domestically as the Daewoo Cielo. This meant that the building the Nexia in Poland was both an irritating and profitable for GM. Similar to the Opel Astra F that GM was building in Warsaw and Hungary, the Nexia/Cielo was effectively a updated and rebadged Opel Kadett E. Additionally, between June 1987 and December 1993 some of the Cielo assembled at Daewoo Bupyeong were built directly for GM, with these cars being stamped and sold in America as the Pontiac LeMans.[44]

The Daewoo-FSO Motor Corporation was officially established on March 14, 1996, upon which SKD output of the Daewoo Tico mini and the larger Daewoo Espero commenced at the Zeran Works. Again, both vehicles were GM knockoffs. Assembled at Daewoo's Changwon Plant in Korea, the Tico represented a rebadged third-generation Suzuki Alto, which GM's then partner produced at its Kosai Plant in Japan (See Chapter 7). Meanwhile, the Espero was based upon GM's Vauxhall Cavalier and was equipped with an engine machined at GM Holden in Port Melbourne, Australia.

In March 1997, Daewoo-FSO Zeran launched the new FSO Polonez Caro. Five months later, the plant added FSO Lanos, the replacement for the Lublin-built Nexia hatchback. In contrast to the Nexia, however, the Lanos kits were derived from Daewoo's first independently developed car, the Daewoo Lanos, and equipped with body shells designed by Giorgetto Giugiaro's Italdesign in Turin. That autumn, KD production of two more Daewoo developed models commenced at Zeran: the Nexia sedan successor, the Daewoo Nubira; and the Espero's replacement, the Daewoo Leganza. As a result, combined output at the Zeran and Lublin Works increased from 117,809 in 1996 to 130,780 passenger cars in 1997.

[44] Ward's (1958–2014); Sigurdson & Palonka (1999); Thompson (2011); Jacobs (2016).

The new models not only spelled the end for the Nexia in April 1998, but also for the outdated FSC Zuk in April 1998, after approximately 587,500 were built in Lublin since 1959. In its place, Daewoo introduced the Daewoo Musso and Korando SUVs. Kits for these vehicles were prepared at SsangYong Motor's Pyeongtaek Plant in Korea, a firm Daewoo had acquired in December 1997. Interestingly, both SUV had evolved out of SsangYong's prior joint venture with Mercedes-Benz, with the second-generation Korando representing the shorter wheelbase version of the Musso; the original Korando were licensed knockoffs of American Motors Corporation's Jeep CJ-7 subcompact 4×4, a predecessor to today's Jeep Wrangler.

In the interim, three new developments were taking place at Daewoo-FSO Zeran in Warsaw. First, production of Opel Astra was ended at GM's assembly hall and, in August 1998, shifted to the American automaker's new factory in Gliwice, Poland (See Opel Gliwice). Second, in September 1998, the European content of the FSO Lanos built at the plant surpassed 60% for the first time, enabling their duty-free export in Western Europe. Third, on December 15, 1998, the factory launched output of the Tico replacement, the Daewoo Matiz. Built from kits supplied by Daewoo Changwon, the car was again fitted with a Giugiaro designed body, this time one intended for but never used for the Fiat Cinquecento. Predicting annual sales of 55,000 in Poland alone, company officials believed that the Matiz would jump-start Daewoo's European fortunes.

Light vehicle output at Daewoo's Polish plants peaked at 223,497 in 1999, of which, 212,191 were passenger cars. A total of 197,226 these were built at the Zeran Plant, led by 79,443 Daewoo Matiz and 61,945 FSO Lanos. As of December 31, 1999, Daewoo had whittled down employment at its three vehicle factories to 12,864. Another 2,837 were engaged at the Andoria diesel factory and 8,488 at the group's seven components suppliers in 1998. While the high employment to output ratio may have pleased Polish leaders, by 1999 it was more dead weight for Daewoo Motors, already suffering from a liquidity crisis provoked by the 1997 Asian Fiscal Crisis and its own ill-timed, overseas spending spree.

As a result, by the middle of 1999, Daewoo Motors was $12.9 billion in debt and being run by a committee of creditors. No relief was in sight from its parent, as the 12-company Daewoo Group was teetering on the brink of bankruptcy itself, with $89 billion in collective debts. This situation was compounded by the terms laid out by the IMF, in its $55 billion loan bailout of the Korean economy in the aftermath of the Asian financial crisis. These guidelines implored the Korean State to revamp its financial system, restructure its bloated conglomerates, and open its borders to FDI.[45]

The Daewoo Group ultimately was broken up and much of its assets liquidated to satisfy its creditors. As for Daewoo Motors, as early as January 1998, it ironically was negotiating with GM about a possible partnership or the sale of its European operations. GM moved cautiously, however, in an attempt to secure the best deal possible, not for its European plants, but for the automaker itself. Talks dragged on through the 1999, prompting the receivership committee to place Daewoo Motors up for auction, with a June 26, 2000 deadline for receiving sealed bids. GM, Fiat, and Ford, and a joint DaimlerChrysler-Hyundai made tenders for the Incheon-based automaker, and on June 29, 2000, it was revealed that Ford's bid of $6.9 billion had won it the rights to negotiate for Daewoo. After examining the books, however, Ford walked away from its offer on September 15, 2000, leaving the Daewoo in its top rival's lap. After another year of contentious negotiations, on September 20, 2001, GM announced that it had taken over the Korean automaker. The actual transaction was finally consummated on October 17, 2002, with GM paying just $251 million for 42.1% controlling stake in the re-established GM Daewoo Auto & Technology, with the remaining shares being held by the Korean Development Bank, Suzuki, and China's Shanghai Motor (SAIC).[46]

Despite achieving a production peak and recording its first operating profit in 1999, Daewoo's Poland operations were included in the deal.

[45] Ward's (1958–2014); Green (1999); Pavlinek (2006); Jacobs (2016).
[46] Ward's (1958–2014); Jacobs (2016).

With its own new factory in Gliwice, GM had no desire to finance the renovation of FSO's dated facilities. In the meantime, passenger car output the Zeran Plant fell by more than half to 94,940 in 2000 and then again to 51,994 in 2001; the latter figure included 19,500 Opel Astra SKD kits built on contract for GM. As a result, Daewoo-FSO Motor Corporation suffered a loss of $467 million in 2001. In the interim, more than half of Zeran's workforce was let go, with the remainder receiving drastically reduced pay.

In April 2002, the last FSO Polonez quietly rolled out of the Zeran assembly hall, after more than 1.06 million were built since 1977. By then, a global downturn had tipped Poland into its worst recession in a decade, pushing employment at Zeran to just 3,100. That same month, FSO's management board had a restructuring plan approved by Daewoo's creditors and the Polish Government, enabling the plant to produce Daewoo Lanos and Matiz for another two years. Nonetheless, with demand expecting falling for Daewoo vehicles, the cash-strapped FSO factory assembled only 28,963 cars in 2002.[47]

The situation was even worse in Nysa and Lublin. Facing bankruptcy, and with no buyer on the horizon, output at the Nysa Plant ended in 2001. As for the Lublin Works, negotiations with VW failed in April 2001, and by October 1, 2001, it also was in receivership after building only 23 Honker 4×4 in that year. Local firms would sporadically build a small number of Honker and/or military vehicles in Lublin until 2014, when the plant was closed. While the Daewoo bankruptcy effectively marked the end of passenger car production at the former FSC and FSD, the Zeran Works would gain one final, albeit, futile reprieve.[48]

UkrAVTO-GM and the End of FSO Zeran

The Zeran Works produced just 33,993 cars in 2003, and plant's future looked increasingly bleak.[49] This changed somewhat in in May 2004,

[47] Ward's (1958–2014); Reed (2002); Pavlinek (2006); Thompson (2011); Jacobs (2016).
[48] Ward's (1958–2014); Pavlinek (2006); Thompson (2011); Jacobs (2016).
[49] Pavlinek (2006); Thompson (2011).

when after lengthy negotiations with Daewoo's creditors and GM, plant management was able to secure the rights to continue to assemble the Lanos and Matiz models until the end of 2006 (and sell them until mid-2007). To recognize this new contract, on August 31, 2004, the facility and its affiliates were re-established as FSO. The chances of the new FSO surviving on its own, however, were not good, as by the time of its renaming, the company was working within an entirely different business climate. This new environment began on May 1, 2004, when the EU was enlarged to incorporate Poland and its Central European neighbors into its internal tariff-free market.[50]

Poland entry into the EU fueled a wave of Japanese and Western European imports into country, quickly making FSO's outdated, Lanos and Matiz uncompetitive, even domestically.

Facing another bankruptcy, the company was again saved by a foreign firm, this time *Ukrayinska Avtomobilna Korporatsiya* (UkrAVTO). 'Ukrainian Auto' was no stranger to the situation, as in 2002 it had acquired AvtoZAZ-Daewoo out of receivership. The latter joint venture had assembled Lanos and other Daewoo models at its factories in Illichivsk and Zaporizhia (ZAZ), Ukraine.

The takeover of FSO occurred in stages between October and December 2004, with UkrAVTO aided by Remington Equipment of England gradually purchasing $180 million of FSO's bank debt. It then began negotiating with the Polish Government, which before bequeathing to the Ukrainian firm its remaining 20.36% stake in FSO for the symbolic sum of 100 Polish Zloty ($31), also had entertained a joint bid from SAIC. The official closing of the deal in May 2005 (effective October), gave UkrAVTO 84% of the voting shares of FSO; GM Daewoo retained a minority stake in the Zeran Works.[51]

During this period of uncertainty, vehicle output at Zeran teetered between 43,222 in 2004 and 39,147 in 2005. Nonetheless, UkrAVTO's leadership seemed confident in FSO's future, and boldly declared their plans to steadily raise annual production to 150,000 by 2008. They also

[50] Ward's (1958–2014); Cienski & Warner (2004); Domanski (2004); Thompson (2011).
[51] *PMR* (2007–2012); UkrAVTO (2016).

promised to not cut FSO's labor force, then numbering 2,200, and to build FSO Lanos and Matiz in Warsaw until at least the end of 2007. Company officials stated that the purchase of FSO granted provided ZAZ vehicles with duty-free access into the EU and insured an adequate supply of Lanos for Eastern European customers. This was important as the vehicle consistently sold well in Ukraine and Russia, and key to improving ZAZ's bottom line. Proof of this was the fact that 95% of the Lanos built at Zeran in 2005 were exported directly to Zaporizhia. There the cars were fitted with Ukrainian or GM Daewoo built engines and sold as either ZAZ Sens or Daewoo Lanos.[52]

FSO output rose to 50,846 in 2006, before tripling to 153,910 in 2007. The Zeran Works got a shot in the arm when the first licensed copy of the Chevrolet Aveo was assembled at the factory on November 6, 2007 (exactly 56 years after the plant's production launch and 79 years after the first Chevrolet was built in Warsaw). A total of 2,547 Aveo were completed in that year, representing the culmination of months of tumultuous negotiations between GM Daewoo and UkrAVTO. Initially, in November 2006, the two automakers announced that the arrangement was merely a production contract. These ties grew deeper on September 9, 2007, when the two companies declared their intentions to forge a joint venture in which the once uninterested GM Daewoo was to acquire a 40% stake in FSO for $254.5 million.[53]

Total investment in the joint venture was to exceed $600 million, including the $125 million already invested in FSO's operations in preparation for the car's launch. According to reports, the Zeran Works was to build 60,000 Chevrolet Aveo T250 in 2008, before increasing output to 100,000 annually in 2009. The choice of the T250 was not a coincidence, as it represented the restyled Aveo T200, the 2002 successor to the Lanos iteration still being built at the factory. Aveo assembled through the tie-up were to be marketed in the EU,

[52] Ward's (1958–2014); PAIiIZ (2006, 2010–2013); *PMR* (2007–2012); Thompson (2011).

[53] Ward's (1958–2014); SAMAR (2002–2013); PAIiIZ (2006, 2010–2013); *PMR* (2007–2012); GM (2008a); PZPM (2008–2016).

Ukraine, and Russia, with the initial stage of production projected to create 1,000 new jobs at FSO.[54]

Output remained strong in 2008, with 149,973 vehicles, including 43,707 Chevy Aveo, 46,700 FSO Lanos, and approximately 59,500 KD kits of the two cars, built in Warsaw in that year. With demand for the Aveo projected to continue to rise in Europe, UkrAVTO announced that it would end production of the Lanos and Matiz in Poland by the end of 2008, in order to allocate more space for the Chevy. What the Ukrainian firm did not know at the time was that the fate of FSO's future was already out of its hands. This became evident on September 15–16, 2008, when AIG and Lehman Brothers collapsed, bursting the U.S. and European housing bubbles and plunging the world economy into a Great Recession.

In November 2008, UkrAVTO terminated Lanos and Matiz output in Warsaw. It then dismantled all of the equipment attached to Lanos production and shipped it to ZAZ. Considering that 69% of Lanos content was domestically produced, this move proved costly not only for FSO Zeran, but also to its 85 components suppliers in Poland, 46 of which were native-owned firms. This coupled with the market collapse resulted in exports from Poland to Ukraine essentially drying up in the final weeks of 2008.[55]

Not surprisingly, new cars sales in Western Europe sank by 10.2% between 2008 and 2009, from 19.8 million to 17.8 million. Things were worse in America, where deliveries were down nearly six million from 2007. The totality of situation pushed GM to file for bankruptcy protection on June 1, 2009, and to implement a restructuring plan that shuttered several plants worldwide and almost lead to selloff of its Opel division in Europe. Blaming a collapse in demand for Chevrolet cars, a month earlier, on May 9, 2009, FSO announced that it was suspending production at Zeran until June 22. As shown in Table 3.2, output then declined to 59,695 in 2009 and then to 45,854 in 2010.

[54] Ward's (1958–2014); Pavlinek (2006); PAIiIZ (2006, 2010–2013); *PMR* (2007–2012); PZPM (2008–2016); Thompson (2011).

[55] Also see UkrAVTO (2016); ZAZ (2016).

Table 3.2 UkrAVTO-GM car production at FSO Zeran, 2008–2012

	2012	2011	2010	2009	2008
FSO Zeran	**0**	**5,674**	**45,854**	**59,695**	**149,973**
FSO cars	—	714	0	29,106	106,273
Chevy Aveo	—	4,960	45,854	30,589	43,707

Sources: Adapted by author from Ward's (1958–2014); PZPM (2008–2016).

With FSO's license to build Aveo set to expire on February 28, 2011, rumors circulated that Chery of China and Mahindra of India were both interested in acquiring the Zeran Works, and that Nissan was considering a venture to build cars there. As expected, the last Chevrolet Aveo rolled off the Zeran line on February 28, with only 5,674 units produced in those two months. Over the next nine months, the Polish Government searched for a buyer, holding talks with both Tata Motors of India and Magna of Canada over the plant, whose workforce had been reduced to a skeleton crew of 80. In the meantime, the complex's engine works and foundry were demolished and the test track was sold. Discussions with Magna continued into September 2012, but bore no fruit, most likely signaling the end of FSO Zeran's chaotic history.

FSM Becomes Fiat Tychy and Bielsko-Biala

While FSO Zeran was experiencing a rollercoaster ride, the futures of FSM #1 in Bielsko-Biala and #2 in Tychy were fairly stable. As previously mentioned, on September 9, 1987, Fiat revealed that it had signed a licensing agreement with FSM to produce the successor to the rear-wheel drive (rwd) Polski Fiat 126p in Tychy, the fwd Fiat Cinquecento mini. According to pronouncements, the Italian automaker, its suppliers, and other partners were to provide FSM #2 with $500 million worth of equipment, machinery, and services, in order to re-tool and modernize it for the new vehicle. This investment also was to allow the Tychy Plant to expand its annual capacity to 240,000; the capacity of Plant #1 was to remain at 60,000. Production of the

Cinquecento was scheduled to start in 1991 and increase rapidly to perhaps as high as 260,000 by 1995. In return for its investment, Fiat was to receive the proceeds from the sale of a total of 500,000 of the cars produced at the factory over the next ten years.[56]

The first Cinquecento rolled off the Tychy assembly line in June 1991, with serial production launching in December and a total of 6,020 built in that year. In order to make room for the new model, output of the Polski Fiat 126p was ended in Tychy, after 76,372 were assembled in 1991. Despite being replaced in foreign markets, production of the 126p, Poland's original people's car and affectionately known locally as the *Maluch* (The Little One) continued for another nine years in Bielsko-Biala.[57]

The new Cinquecento was the first of many changes at the FSM plants. The next was more monumental. It occurred on October 11, 1991, when the Polish Ministry for Privatization announced that Fiat and the government had signed a memorandum of understanding granting the Italian automaker permission to acquire a 51% stake in FSM's operations. By May 28, 1992, this had expanded to 90%, with Fiat investing $2 billion for the larger share and the Polish Treasury retaining 10% in the new corporation. In the transaction, Fiat acquired the FSM #1 and #2, and its related powertrain and steering equipment factories. In addition, Fiat Group subsidiaries Magnetti Marelli was awarded a FSM components plant and Teksid gained its casting facility. All told, these divisions employed 19,408 workers, of which, Fiat was believed to retain 18,400.[58]

In contrast to the seemingly good news for FSM workers, at the press conference announcing the deal Fiat Chairman Giovanni Agnelli set a different tone, warning that job cuts were imminent as part of FSM's restructuring. A divided FSM labor force did not take this threat lying down, with 2,500 of them waging a 56-day sit-down strike. The protest lasted until September 14, 1992, when FSM agreed to abide by its earlier

[56] Cornelius (1990); Reuters (1991); FCA Poland (2015, 2016).y
[57] Thompson (2011); FCA Poland (2016).
[58] AP (1992); WJS (1992a, 1992b).

promise to raise wages of production workers by $76.40 per month (one million Zloty). With this settled, on October 16, 1992, the takeover agreement was officially signed.[59]

The ownership transfer and establishment of Fiat Auto Poland were officially consummated on September 18, 1993. At that time, Fiat's initial investment amounted to $1 billion, with the automaker infusing $261 million in new capital in FSM operations, taking on $650 million of its foreign debt, and by Magnetti Marelli and Teksid contributing another combined $113 million to upgrade their respective plants. Fiat also pledged to spend an additional $600 to $800 million by 2002. In exchange, the Polish Government authorized a five-year waiver on tariffs on imported materials and equipment intended for the FSM plant modernization, and allowed duty-free imports on up to one-third of the cars Fiat sold in Poland for eight years.[60]

In the process, the Italian automaker expanded the building footprint of structures on the now 190-hectare (469-acres) Tychy site to 38-hectares (94-hectares). It then totally restructured FSM's organizational chart and instituted centralized control over its 20 former divisions. Additionally, by 1996 it had cut the new Fiat Poland's workforce to 11,532, and retrained half of its labor, including all of remaining management, technicians, and support staff.[61]

As these events transpired, a total of 129,732 vehicles were built at the two FSM plants in 1991, followed by 144,434 in 1992. In latter year, Fiat Tychy built 83,299 Cinquecento and Bielsko-Biala produced 61,135 Polski 126p. This total jumped to 261,843 in 1993 and then to 329,889 in 1997, when 203,589 Cinquecento were built in Tychy. This enabled Fiat Poland to turn its first profit in 1996 of $97 million, a significant improvement from the $427 million loss in its first full year of operation, 1993.[62]

[59] WJS (1992c).
[60] Camuffo & Volpato (2002); Volpato (2003, 2009); Pavlinek (2006).
[61] Camuffo & Volpato (2002); Volpato (2003, 2009); Pavlinek (2006).
[62] FCA Poland (2016).

The year 1997 marked the apex for the Cinquecento, however, as by spring 1998 the car was discontinued and output of its successor, the Fiat Seicento, already in full-flight in Tychy. Buoyed by the Seicento, vehicle production at Tychy increased to 271,920 in 1999 and then declined slightly to 252,284 in 2000. Conversely, during this period, output in Bielsko-Biala slowly was wound down, and in October 2000, was terminated after building 39,813 vehicles in that year. All told, 1.7 million vehicles overall were assembled at the former FSM #1 since 1971. The end of the production run of the 126p in Bielsko-Biala occurred slightly earlier, on September 22, 2000. This meant that output of the Maluch actually outlasted its successor the Cinquecento, by 2.5 years. In total, 3.32 million Polski Fiat 126p were built at the former FSM Plants since the first in June 1973. Approximately 897,000 of these were exported abroad. Similar to the FSO-built 125p, KD kits of the 126p also were prepared at FSM and shipped to Zastava for finally assembly at its plant in Kragujevac, Yugoslavia (See Chapter 8).[63]

The decisions to terminate car output in Bielsko-Biala and expend $343 million to transform the facility into strictly a diesel engine plant were prompted by many factors. Foremost among these were the declining market share and mounting red ink of the Fiat Group's worldwide car operations. Similar to Daewoo, these problems, which gradually worsened after 1996, were exacerbated by the conglomerate's rapid expansions in emerging nations. In response, Fiat management contemplated selling off its passenger car business altogether and focusing its vehicle division solely upon commercial trucks.

By early-2000, rumors swirled that either GM or DaimlerChrysler would acquire Fiat Auto. This proved partially correct, when on March 13, 2000, GM and Fiat revealed that they had forged a strategic alliance to share engines, other components, and purchasing channels for their European, Mexican, and South American operations. As part of the arrangement, GM purchased a 20% stake in Fiat Auto in exchange for $2.3 billion and a 5.15% share in GM. The deal also contained a clause that gave the Fiat Group the option to force GM to buy the remaining

[63] Simonian (1997); Wagstyl (1997); FCA Poland (2016).

80% of its failing carmaker at some point between January 24, 2004 and July 24, 2009; in October 2003, these dates were pushed forward a year.[64]

The alliance officially launched on January 1, 2001, with GM Europe's Russelsheim, Germany complex serving as the venture's headquarters. In turn, the two companies established a joint powertrain base and design center at Fiat's Mirafiori complex in Turin, which was authorized oversight over the alliance's three joint European powertrain collaborations. More specifically it was to direct agreements to jointly produce: 150,000 direct-inject diesel engines annually at GM's Kaiserslautern Plant in Germany; petrol engines at Opel Szentgotthard; and most relevant here, diesel engines at Fiat Bielsko-Biala (See Chapter 7).

After all the pronouncements, the alliance was short-lived. On December 20, 2002, with its car unit suffering from record losses and outstanding debt of $6.8 billion, the nearly bankrupt Fiat announced that it had sold its 5.15% stake in GM to American investors for $1.16 billion. The two sides subsequently negotiated an exit strategy, with an accord reached on February 13, 2005 that saw GM pay the Fiat Group $2 billion to cancel its forced sale option. In addition, as part of the separation agreement, GM gained a 50% ownership rights to Fiat Bielsko-Biala and to its designs for the 1.3-liter diesel engine the factory had produced since April 2003. The plant was then reestablished as Fiat-GM Powertrain Poland, with these arrangements continuing until January 2010. At that time, GM handed back the plant to Fiat in exchange for guarantees that the Italian automaker would produce multi-jet turbo diesel engines for Opel cars.[65]

Although a domestic economic downturn and the transformation of Bielsko-Biala into a diesel engine plant initially led to a contraction in total vehicle production at Fiat Poland during the early-2000s, output at the now 3,800-worker Fiat Tychy quickly rebounded to 306,427 in

[64] Bradshear & Sorkin (2000); Tagliabue (2000); Camuffo & Volpato (2002); Volpato (2003, 2009); Pavlinek (2006); FCA Poland (2016).

[65] Bloomberg (2002); Hakim (2005); WJS (2005); Ciferri (2010).

2004 and 286,900 in 2005 (273,028 cars). On September 9, 2005, the factory received a further shot in the arm when Ford and Fiat announced that they would jointly develop a new small car platform. Ford was to invest $150 million in the project, which was to produce 120,000 cars annually and create 1,000 new jobs at Tychy.[66]

Manufacture of the first of two cars to be introduced, the Fiat 500 mini, commenced in Tychy on March 21, 2007. However, since the new model was to represent the twenty-first century edition of the original 1957 Fiat 500 that spawned the Polski Fiat 126p, the first batch of cars produced was kept hidden until the mini's official world-wide release on July 4, 2007. Volume production of the second-generation Ford Ka, now a supermini, followed on September 25, 2008. Thereafter, output at the 6,300-worker Tychy complex grew rapidly to a still all-time high of 605,797 in 2009 (595,324 cars and 10,473 LCVs). As shown in Table 3.3, nearly half of this output, 298,020, was Fiat Panda MPVs (including 9,660 LCV). Another 184,143 Fiat 500, 112,840 Ford Ka, and 10,794 of the outgoing Fiat 600 also were assembled; similar to the 500, the Seicento was rebranded the 600 in 2005 to mark the 50th anniversary of an earlier model (See Chapter 8, Zastava Fico).[67]

The strong expansion at Tychy, which contrasted dramatically with the ongoing economic malaise in Europe was a direct reflection of the plant's focus on economy models, which had grown more popular during the crisis. This was especially the case in Germany, where car sales were boosted by a government backed car-scrapping scheme. In contrast, the magnitude of Panda production in Poland was significant for different reasons. From December 1979 until May 2003, the original Panda had been built at Fiat Mirafiori in Turin. By that time, tighter emissions and safety regulations had made the once popular minicar 'persona non grata' in Western Europe. Production of the 'New Panda' MPV, then was shifted to Tychy, where it was launched on May 5, 2003. The upgraded Tychy-built version was a smash, rekindling

[66] *Guardian* (2005); FCA Poland (2016).
[67] *PMR* (2007–2012); Revill (2008).

Table 3.3 FCA Tychy light vehicle production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
FCA Tychy	**302,639**	**313,933**	**295,700**	**348,503**	**467,763**	**533,455**	**605,797**
Fiat Brand cars	302,639	313,933	295,700	347,513	446,514	522,647	595,324
Fiat 500	195,986	198,287	182,685	151,364	157,232	185,105	184,143
Fiat 600[a]	—	—	—	—	—	9,152	10,794
Fiat Panda[a]	—	—	—	94,002	205,765	246,064	298,020
Lancia Ypsilon	57,760	61,144	61,361	48,524	37,561	207	—
Ford Ka[a]	48,893	54,502	51,644	54,613	67,205	92,927	112,840

Sources: Adapted by author from FCA Poland (2016).
[a] Includes some LCV.

demand in Europe and winning European Car of the Year in 2004. These events did not go unnoticed by then Italian Prime Minister Mario Monti.[68]

Looking for something to spark his country's troubled economy, Monti viewed the Panda as emblematic of Fiat's weakening commitment to its homeland. These concerns were fueled by Fiat CEO Sergio Marchionne's dogged determination to make the Italian brand a player again in the America car market. This came to a head on June 10, 2009, when Fiat acquired a 20% stake in the bankrupt American automaker, Chrysler Group. Fearing the writing on the wall, Monti, backed by the country's unions, pressed Marchionne to reveal his intentions for Italy.

After several months of discussions and concessions from all sides, Marchionne promised not to shutter any of Fiat's five car factories in Italy, and to save the company's former Alfa Romeo Giambattista Vico Plant in Pomigliano d'Arco. At the time, the 5,200-worker factory near Naples was serious outdated and producing less than half of its 250,000-vehicle capacity. On April 7, 2010, Fiat offered to invest $938 million to renovate the Giambattista Vico operations and thereafter, repatriate the third-generation Panda to the factory. Plant workers signed the accord on June 15, 2010, and after rancorous negotiations with other unions, output of the new Panda commenced in Pomigliano d'Arco in the autumn of 2011. The second-generation version was then gradually phased out in Poland over the next two years as the Panda Classic.[69]

To help compensate for the loss of the Panda, Fiat decided to shift assembly of its Lancia Ypsilon from its Melfi Plant in Potenza Province to Tychy. At between 70,000 and 100,000 units, however, annual production was projected at barely one-third of peak Panda output, potentially threatening many of the 6,500 jobs then at Fiat Poland and 20,000 indirect workers supporting Panda assembly. Output of the Ypsilon, which now utilized the same platform as the Fiat 500 and Ford Ka, launched in Tychy in December 2010. In that year, the factory

[68] PMR (2007–2012); Thompson (2011).
[69] PMR (2007–2012).

assembled 533,455 vehicles, nearly 98% of which were exported (See Table 3.3).[70]

On the other hand, in response to the dramatic recession-related fall in orders for all of its models, Fiat laid off 435 temporary Tychy workers in October 2010. Slumping European orders provoked a further decline in vehicle output and employment to 348,503, and 4,700, respectively, by 2012. A total of 94,002 Panda Classic were produced factory in that year, with the last of nearly 1.13 million Panda assembled in just 9.5 years, rolling off the assembly line in December 2012. In contrast, on August 28, 2012, Ford announced that it had renewed its deal to build Ford Ka in Tychy through the end of 2015. Nonetheless, this marked the last Tychy related agreement between the two automakers, as in 2016 the American automaker would shift European-bound production of the Ka to its factory in Camacari, Brazil.[71]

As these events unfolded, between June 3, 2011 and October 12, 2014, Fiat would spend nearly $3 billion to seize complete control over Chrysler and to re-establish their merged operations as Fiat Chrysler Automobiles (FCA), headquartered in London. By the end of 2014, this transformation had resulted in the slicing of vehicle output at Fiat Poland to 313,933 and in employment to 3,400.[72]

Vehicle production at FCA Poland Tychy Plant declined further to 302,639 in 2015 (all cars). This consisted of: 195,986 Fiat 500 (including Abarth); 57,760 Lancia Yplison; and 48,893 Ford Ka. The last Ka was built in Tychy on May 20, 2016. As of 31 Dec 2015, the 600,000-capacity FCA Tychy complex employed 3,270 workers and consumed 50-hectares (123-acres) of the now 240-hectare (593-acre) site. On that same date, it largest local affiliates engaged 4,650 more, including 1,100 at FCA Powertrain Poland in Bielsko-Biala and 2,500 at Magneti Marelli Poland's five components plants, among others. Employment at FCA Powertrain was buoyed by a $363 million, 450,000-unit expansion which, on June 14, 2010, launched manufacture of Fiat's 900 cc,

[70] FCA Poland (2016).

[71] FCA Poland (2016); Ciszewska (2016).

[72] The rest of this section draws from FCA Poland (2016).

two-cylinder TwinAir engines. Installed in Fiat 500, Ford Ka, and GM small cars, the new motor raised annual engine capacity at the former FSM #2 to 1.2 million in 2015.

Since 2009, FCA has taken over Chrysler's numerous plants in North America and elsewhere, launched operations in Serbia, Brazil, and China, and attempted to force GM into a merger. While most signs point toward a stable future for the 35-year old Tychy Works, Fiat's recent maneuvers and declining Fiat 500 sales have raised doubts among some local observers regarding the extent of its long-term commitment to build cars in southern Poland.

FSR Tarpan Becomes VW Poznan

With FSM sold off, and negotiations underway for FSO, the Polish Government was busy trying to liquidating one final asset: FSR Tarpan in Poznan (today's Greater Poland Province). First established on Warsaw Street in the Antoninek neighborhood of Poznan in 1929, FSR began as a foundry producing components for horse-drawn carriages before being converted into a facility assembling trailers and tractors.

After the WW-II, trailer production resumed until April 1951 when the plant was merged into the state-owned enterprise, *Poznanskie Zaklady Naprawy Samochodow* in July 1951. This association was brief, as in May 1953, the 'Poznan Vehicle Repair Plant' was broken up and the Antoninek Works renamed *Wielkopolskie Zaklady Naprawy Samochodow w Poznaniu* (WZNS). For the next 20 years, 'Greater Poland Vehicle Repair Plant in Poznan' serviced Skoda and Warszawa cars, as well as Jelcz and Tatra Trucks, among others.[73]

Anxious to get into the vehicle business, WZNS commissioned two prototypes in 1971, the Warta service car and the Tarpan light utility truck. It then paraded these vehicles around until September 1972, when the Polish Government finally approved the conversion of the

[73] This and the next three paragraphs based upon Thompson (2011); Auto Swiat.pl (2015).

facility into an assembly plant for agricultural vehicles. A total of 25 of Tarpan were built in that year, convincing the State to further its commitment to the Antoninek Works by placing WZNS under the direction of FSC Lublin in April 1973. This arrangement was brief, however, as on July 1, 1975, the government officially re-established WZNS as the state-owned FSR 'Polmo' in Poznan. Over the next eight months, FSR subsumed five other related facilities in Poznan.

The original Tarpan, dubbed the 233, was assembled from a hodge-podge of parts, containing an engine used in the FSO Warszawa car, a front suspension from the Warszawa pickup, a gearbox from the Polski Fiat 125p, and rear axles and brakes from the FSC Zuk. It was available as regular and sliding can pickups and a fixed-cab SUV like pickup. As the model line expanded, so did output, rising from 250 in 1973 to 6,000 in 1978. By the latter year, the vehicle had piqued the interest of Fiat, which, on June 18, 1979, signed a joint venture to assemble a licensed replacement for the aging 233 at FSR. Prototypes for the so-called FSR Tarpaniello SUV were built, but following the imposition of martial law in Poland on December 13, 1981, the project was scrapped and the vehicle never produced.

FSR Poznan gained a second vehicle line in January 1988, when after more than ten years of development, the Tarpan Honker 4×4 was introduced. Utilized primarily by the military and police, the Honker came in two figurations: the 4012 Jeep and 4022 pickup. Neither vehicle, however, proved competitive against foreign imports, following the Fall of Socialism in 1989. As a result, by 1991 the Tarpan was discontinued and Honker output was reduced to less than 500. By that point, it was apparent that if FSR was to survive, it needed a foreign partner.

In February 1992, reports suggested that the Polish authorities were separately negotiating with VW and Toyota over joint ventures at FSR. There even was talk of a three-way tie-up assembling pick-ups. This was not outrageous, as VW's Hannover commercial vehicle plant had assembled 12,017 licensed Toyota Hi-Lux pickups in 1991, with roughly half of these being re-badged in Europe as the VW Taro. By October 1992, however, VW had decided to assemble delivery vans at the FSR factory, but held back any official commitment in anticipation

of an agreement between Poland and the European Community Council regarding the nation's annual 30,000-vehicle, tariff-free import quota. The delay on this accord also inhibited further investment by GM in Poland.[74]

VW's stance turned more serious in December 1992, when its representatives visited Poznan for direct negotiations with officials from FSR and the Polish Ministry of Trade & Industry. This led to the signing of a joint venture agreement on May 19, 1993, culminating in the official establishment of VW Poznan GmbH on December 1, 1993; by then, the privatized FSR had been renamed the Tarpan Company. According to reports, VW invested $6.3 million for a 25% stake in the venture, with the Antoninek Works, valued at $18.7 million, affording the Tarpan Company a 75% share in the endeavor. VW stated that it would produce 25,000 vans per year at the factory and expand employment there beyond its then 900. In exchange, the Polish Government agreed to waive duties on imported parts installed in vehicles produced in Poznan.[75]

Assembly of SKD kits of the fourth-generation VW Transporter (T4) 'Eurovans' commenced at the Antoninek Works on July 4, 1994. It was followed by the launch of Skoda Favorit and Felicia car kits in December 1994 (See Table 3.1). Whereas the T4 kits were prepared at VW Hannover, the SKD car kits were machined at VW's Skoda Mlada Boleslav in Czechia (See Chapter 5). A major factor prompting VW's decision to produce Skoda in Poznan was the ongoing trade friction between Poland and Czechia. This pushed Poland to enact tariffs of up to 100% on Czechia car imports, which resulted in sales in Skoda's largest export market being cut in half in 1994, as compared with 1993.[76]

Serial production of Skoda Felicia kits commenced at Antoninek on March 8, 1995, with a combined 7,857 Favorit and Felicia built in that year. The last 288 Honker also were assembled at the factory in 1995,

[74] Ward's (1958–2014); Bobinski (1992b); Done (1992a); Pavlinek (2002, 2006).
[75] UPI (1993); Pavlinek (2002, 2006); Auto Swiat.pl (2015).
[76] Brzezinski (1994); Pavlinek (2002, 2006); VW Poznan (2002–2016, 2003, 2016b).

upon which the vehicle's rights were transferred to Daewoo (See Daewoo-FSO). Vehicle output doubled to 16,355 and employment to 1,000 in Poznan in 1996. While assembly of the Favorit ended in March 1995, the Felicia was joined by SKD output of the SEAT Cordoba and VW Polo, in October and December 1996, respectively. In addition, by investing another $6.5 million in Poznan, including building a new foundry, VW was able to upgrade the Antoninek Works to CKD car production in 1997. This allowed the plant to replace some of its cars' imported parts with those made in-house or locally sourced. Meanwhile, VW Poznan GmbH became a 100% affiliate of VW in December 1996, and a part of the Hannover-based VW Commercial Vehicles in September 1997.[77]

The improvements to Antoninek rose final assemblies to 69,031 in 2000, including 45,031 passenger cars and 24,000 LCV. This consisted of: 24,318 Skoda Felicia; 10,980 Skoda Fabia, 8,329 Skoda Octavia; 1,439 Skoda Pickups; one Audi A6; and a combined 24,000 VW T4 and VW LT-2. The following year, VW opening a new $90 million paint shop at Antoninek and a special vehicle body plant in the neighboring Town of Swarzedz. This brought its total investment in the Poznan Area to $241 million by 2001. The improvements also transformed Antoninek into a dedicated light truck manufacturing complex. While preparing for this new function, production of passenger cars was ended in September 2002 and total vehicle output was reduced to 39,600 in that year.[78]

In 2003, VW continued its modernization of the Poznan complex and launched two redesigned models: the Transporter T5 and VW Caddy light commercial and family passenger vans. The introduction of the Caddy at Antoninek was a prime example of VW's shift eastward of certain elements of its vehicle lineup. Production of the Caddy originally commenced in 1978 at the German automaker's Westmoreland Assembly in the American State of Pennsylvania, where it was marketed as the VW Rabbit pickup. When output was

[77] Simonian (1996); VW Poznan (2002–2016, 2003, 2016b); Pavlinek (2016).
[78] VW (2000–2016).

discontinued there in 1984, it was transferred to its joint venture *VW Tvornica Automobia Sarajevo* (VW TAS Sarajevo) in Yugoslavia (now Bosnia), which since 1982 had been assembling kits of the first-generation VW Caddy for the European markets (See Chapter 9). For a brief period, 1997 to 1999, a small batch of second-generation Caddy KD kits prepared by VW's SEAT Martotell factory in Spain were assembled at the Antoninek Works and stamped as the SEAT Inca panel van; Skoda's Kvasiny Plant in Czechia Martotell prepared versions badged as Caddy (See Chapter 5).[79]

The launch of the new vehicle lines led to a more than four-fold increase in total vehicle output at Antoninek between 2003 and 2007, from 41,167 to 167,036. In the latter year, the four plant VW Poznan complex employed approximately 7,000 people. Production increased again to 176,479 in 2008, before backtracking to 138,193 during the Great Recession of 2009. More specifically, as shown in Table 3.4, the Poznan complex produced 127,089 VW Caddy and 11,104 T5 in 2009, among these 82,243 were considered passenger cars and 55,950 were LCV. Also by 2009, VW claimed its commitment to Poznan as being $1.1 billion, with the German automaker having pledged to contribute an additional $350 million by 2012. These funds were to go toward product development, plant machinery upgrades, and area infrastructure improvements.[80]

The new investment helped Antoninek set new plant production records of 176,571 vehicles and 157,976 VW Caddy in 2011. By then, the prolonged European economic stagnation had resulted in a contraction in employment at the Poznan complex to 5,001, with another 2,677 engaged at VW's engine and components plants in Polkowice. While vehicle output declined slightly after 2011, the German automaker's footprint and workforce continued to grow. In 2015, VW Poznan's Antoninek Works manufactured 170,800 vehicles,

[79] VW (2000–2016); Thompson (2011).

[80] VW (2000–2016); VW Poznan (2002–2016, 2003, 2016b); PMR (2007–2012); PZPM (2008–2016); Domanski et al. (2013); Pavlinek (2016).

Table 3.4 VW Poznan light vehicle production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
VW Poznan	**170,800**	**175,521**	**170,875**	**161,997**	**176,571**	**149,200**	**138,193**
VW Cars	*62,656*	82,750	82,743	77,495	95,066	72,022	82,243
VW LCV	108,144	92,771	88,132	84,502	81,515	77,178	55,950
VW T5[a]	20,450	27,422	22,014	17,357	18,595	12,336	11,104
VW Caddy[a]	150,350	148,099	148,861	144,640	157,976	136,864	127,089

Sources: Compiled and adapted by author from VW (2000–2016); PZPM (2008–2016).
[a] Includes passenger cars and LCV.

including 150,350 VW Caddy and 20,450 T5, of which 62,656 were passenger car models (See Table 3.4).[81]

Meanwhile, employment at VW Poznan's multi-plant complex was 7,765, as of 31 Dec 2015 (See Table 3.1). This included 1,500 at the 180,000-capacity Antoninek Assembly Works and another combined 6,215 at its paint and body shops, Wilda casting foundry in Poznan, and nearby Swarzedz-Jasin Special Vehicle Body Plant. An additional 3,051 were engaged at related factories, including: 1,303 at VW Motor Polska's engine factory in Polkowice; and 1,748 at two Sitech seating components plants in Polkowice and Glogow, Lower Silesia Province. This meant that the VW light vehicle facilities in Poland directly employed 10,816 in 2015, an increase of 3,318 or 40.87% from 2011.[82]

VW Commercial Vehicles' MAN, Scania, and VW Heavy Truck and Bus Plants throughout Poland employed another 3,372 in 2015. This total was expected to grow by another 3,000 in the near-term, as on October 24, 2016, VW officially opened its $1.2 billion Wrzesnia Commercial Van Plant. Located on a 220-hectare (543-acre) greenfield situated 40 km (25 miles) east of Poznan in Wrzesnia municipality, the complex was expected to have the capacity to produce 100,000 VW Crafter vans annually by 2018. For locating in southwestern Poland's four-province Wałbrzych Special Economic Zone (SEZ), the State provided VW with significant land, tax and infrastructure subsidies. Additionally, on June 19, 2015, the European Bank for Reconstruction and Development (EBRD) approved a $341 million loan to help finance the plant's development phase. On December 15, 2015, the EBRD put the loan on hold, claiming it needed to re-evaluate the situation in light of the aftermath of the September 2015 'VW Diesel Crisis' (Also see Chapter 4).[83]

Despite the delay in EBRD, the automaker went ahead with the project, which it considered vital to its commercial vehicle division's

[81] VW (2000–2016); VW Poznan (2002–2016, 2003, 2016b); PZPM (2008–2016).

[82] VW (2000–2016); VW Poznan (2002–2016, 2003, 2016b).

[83] VW (2000–2016); VW Poznan (2002–2016, 2003, 2016b); *Automotive News Europe* (2014); Janas (2015); Jones (2015).

future. Since 2005, VW has relied on Daimler to build the Crafter, alongside its Mercedes-Benz Sprinter vans, at plants in Dusseldorf and Ludwigsfelde, Germany. Although as much as two meters longer (80 inches) than the VW Transporter, the new Crafter is being be built on a platform derived from the smaller van series. This vehicle architecture and Wrzesnia's close proximity to Poznan will enable VW to significantly reduce the production costs for both vans. More significantly, the project will dramatically reduce related labor costs by an estimated $41 per hour, from $51 in Germany to under $10 in Poland.[84]

All in all, irrespective of the potential negative impacts that the 'VW Diesel Crisis' will have on output of diesel engines at the Polkowice factory, VW's commitment to its Antoninek Works and Poznan complex appears strong and will most likely remain that way over the next five to ten years.

Ford Plonsk

On January 19, 1995, Ford Motor of America announced that it would invest $54 million to erect a small vehicle assembly facility on a 15-hectare (40-acre) greenfield located in Plonsk (today's Masovia Province). Situated approximately 64 km (40 miles) northwest of Daewoo-FSO Zeran in Warsaw, the Ford Plonsk Plant was expected to launch output in 1995 and initially produce 20,000 Escort hatchbacks and 10,000 Transit LCV per year. The setup was to begin as a simple final assembly operation employing 250 workers, with the potential for expansion to a CKD operation, by adding body-welding and paintings shops. Ford was expected to engage an additional 900 people off-site, in order to double the size of its dealer and service center network in Poland to 125 locations.[85]

Four factors prompted Ford's selection of Plonsk over other areas: (1) the automaker already owned the land and had earlier broken ground for

[84] VW Poznan (2016a); VW CV (2016).
[85] Cohen (1992); Bloomberg (1993).

planned car seat covers plant (announced on July 28, 1993) that was never built; (2) projections for rapid growth in Poland's new car market; (3) Poland's 30% tariff on imported cars, which officials felt had inhibited vehicle sales in the country; and (4) concerns among executives that the world's then second largest automaker was falling behind its competitors in CE. While GM, VW, and Fiat had made substantial investments by early-1995, Ford only had launched two components factories in the region: (1) its $160 million Alba (Visteon) ignition coil and fuel pump factory in Szekesfehervar, Hungary that it opened in April 1992; (2) an Autopal lighting and car climate control plant in Novy Jicin, Czechia, which Ford invested $100 million beginning April 1992 and had taken over in 1993.[86]

Output of Escort hatchbacks commenced at the 20,000 m^2 (215,000 ft^2) Ford Plonsk Plant on September 29, 1995, with Ford Transit LCV following in October 1995. Production expanded slowly to 8,497 in 1996 and then to 11,367 in 1997, with Ford expressing optimism that the facility would ultimately achieve its goals of assembling 100,000 vehicles per year in the long-term. These lofty sentiments, however, soon cooled with demand, resulting in vehicle output rising only modestly to 17,565 in 1998 and then to a peak of 24,584 in 1999. The latter year, also marked the beginning of the end for the Plonsk Works, when on November 9, 1999, incoming Ford Europe Chairman Nick Scheele declared that his company would shutter the then 400-worker facility by mid-2000. The official announcement came eight days later on November 17, when Ford revealed that output in Poland would end in June 2000. A total of 12,913 vehicle kits would be built in the first half of 2000.[87]

The timing of the closure was not a complete surprise to many industry experts. By 2000, as part of its bid for EU accession, Poland had expanded its annual duty-free import quota on cars from 30,000 to 45,000 and had cut tariffs on any remaining automobile imports from 35% to 10%. This was significant, as Ford, similar to other automakers,

[86] Cohen (1992); Kurylko (1995): *Chicago Tribune* (1995a).
[87] *Chicago Tribune* (1995b); Griffiths (1999); Howes (1999b).

was already struggling to sell its CE built vehicles in Western Europe. This meant that Plonsk was now directly competing against Ford's more established plants in Europe, even those preparing kits for the Polish operation. More specifically this was: Saarlouis in Germany, which was manufacturing the European version of the Escort; Genk in Belgium, which was building the Transit; and the massive Valencia Body & Assembly in Almussafes, Spain, which was producing the successor to the Escort, the Ford Focus. The last plant was especially problematic, as although still paying higher wages than Poland, Valencia's workforce was making substantially less Ford factories in more affluent Western European nations.[88]

Finally, working against the Plonsk Plant was the fact that by 2000, Ford was carrying out a major restructuring of its European operations. Its goal was to reverse Ford Europe's rapidly deteriorating financial position by cutting annual costs by $1 billion, downsizing employment by at least 5,000, and by reducing its high fixed costs and chronic overcapacity in the region. Within such a climate, the Polish facility was doomed, especially after Ford officials became concerned with the quality of workmanship of Plonk assembled vehicles. This they believed, coupled with Poland's declining tariffs and the underdeveloped transportation and communication infrastructure, inhibited the viability of a 100,000 vehicle operation in Plonsk, despite the potential labor costs savings.

As mentioned in the Daewoo and Fiat sections of this chapter, Ford would later make two other attempts to produce cars in Poland. The first, was its aborted bid to acquire Daewoo and its Polish operations in 2000; Ford would eventually buy Daewoo's Romanian operations (See Chapter 8). The second was its joint venture with Fiat in September 2008, which saw Ford shift production of the Ford Ka from Valencia to Tychy. The termination of the Tychy arrangement in April 2016 suggests Ford's near-term prospects for building cars in Poland are dim.

[88] This and the next paragraph draw from Burt (2000); Karnitschnig & Turek (2000); Domanski (2004); Pavlinek (2006).

Opel Gliwice

While in the midst of its tumultuous negotiations for FSO Zeran, GM officials decided to move forward with a project of their own. On October 12, 1995, an official from GM Europe's Opel division in Germany revealed that his company had sent a proposal to Poland's Ministry of Industry & Trade offering to invest $280 million and build a 100,000 car plant in the country. Ministry officials responded by encouraging Opel to invest at least part of its funds in the newly created Mielec SEZ in southeastern Poland (in today's Podkarpackie Province). Polish politicians were more reticent, reserving judgment on Opel's plan until further details were forthcoming.[89]

Two months later, on December 12, 1995, the government and automaker announced that GM had committed to build a $350 million, 2,000-worker, 70,000 to 80,000-capacity car factory in Poland. No concrete details were reported on where until May 6, 1996, when a press release suggested that plant would be erected in southwestern Poland and begin producing cars by late-1998. Eight days later, after considering 70 sites in Poland, the tract in Silesia Province was finally identified: A greenfield on National Route 88 in Gliwice, some 50 km (31 miles) northwest of Fiat Tychy (See Table 3.1). For locating in factory within the two-province wide Katowice SEZ, the automaker received a ten-year corporate tax abatement.

Company officials stated that the site's other advantages included its relative proximity to: (1) existing foreign automotive suppliers in CE; (2) existing international rail and projected highway links to these countries; and (3) Gliwice Canal, which provided shipping access to the Baltic Sea via the Oder River and the Port of Szczecin. Local wages also certainly figured into GM's calculus, as despite offering starting salaries at only around $300 per month, Opel Polska's offices were swamped by more than 40,000 applications for the plant's 2,000 openings. Finally, the region's high jobless rates almost assured that there would be little labor

[89] This and the next three paragraphs was based upon Bloomberg (1995b); Reuters (1995); AP (1996); Kurylko (1996); Pavlinek (2006).

unrest; in fact as of 1999, only 10% of the plant's 1,600 workers were represented by the Solidarity Party union.

Construction of the factory commenced on October 13, 1996, and when completed, the 74,000 m^2 (800,000 ft^2) Opel Polska Gliwice was to have an assembly hall, metal stamping and body welding operations, and a paint shop. This new complex was patterned after the Opel Eisenach Plant in eastern Germany, which was built utilizing state-of-the art flexible modular construction techniques and operated based upon the lean production processes GM had learned from its joint venture with Toyota in Freemont, California (See Chapter 4). So confident was GM International Operations' President Lou Hughes that declared at the groundbreaking he declared that the plant's 70,000-vehicle capacity would quickly and easily be enlarged to 130,000 per year. He based this claim on company prognostications which projected Opel sales in Post-Socialist Europe would grow by 80% over the next ten years, led by Poland, Czechia, and Hungary, where combined deliveries would triple from 34,300 in 1996 to more than 100,000 by 2000.

On August 31, 1998, the first Opel Astra F rolled off the assembly line at Opel Polska Gliwice. A total of 23,698 were built in that year, all equipped with engines manufactured at Opel Hungary's Szentgotthard Plant (See Chapter 7). The vehicle launch was significant for several other reasons. First, because the car facility prompted GM Delphi to quickly acquire or erect six components plants in Poland. Second, because the launch of Astra F in Gliwice ultimately spelled the end of Opel production at FSO Zeran's GM Warsaw assembly hall and at Opel Szentgotthard.[90] As mentioned in the Daewoo and UkrAVTO sections of this chapter, the automaker again briefly called upon FSO Zeran to build Opel Vectra in 2001 and Chevrolet Aveo between 2007 and 2011.

Output of Astra F at the 75,000-capacity Opel Polska rose to 45,692 in 1999. In February 2000, the Astra was joined by the Opel Agila micro-mini, a rebadged twin of the Suzuki Wagon R+ designed by GM's then Japanese partner and being assembled at its Magyar Suzuki factory

[90] Tagliabue (1998); GM Europe (2001–2009).

in Esztergom, Hungary (See Chapter 7). The new model helped production at the then 1,800-worker Gliwice complex to 97,400 in 2000.[91]

Interestingly, whereas the Agila models built at Gliwice equipped with 1.3 L diesel engines received their motors from Fiat Bielsko-Biala (later Fiat-GM Powertrain Poland), those Astra F with 1.7 L diesels built in Poland sourced them from Isuzu Motors Poland's one-year old, $24 million, 100,000-capacity engine factory in Tychy (the facility launched production on June 14, 1999). By 2002, GM had secured intellectual property rights to both of these engines and others its then partners Fiat and Isuzu produced for Opel's European car models. In addition to the previously described tie-up with Fiat, GM accomplished this by acquiring a 60% controlling stake in Isuzu Poland from its financially imperiled Japanese partner in August 2002.[92]

Meanwhile, car output at Opel Polska seesawed up and down over the next three years, to 82,100 in 2001, then 88,700 in 2002 and then down to 76,700 in 2003. During this period, the Astra F, by then known as the Astra Classic, was discontinued on June 27, 2002. From that point on, until when the Opel Astra G was transferred from Opel Belgium Antwerp to Opel Polska in October 2003, the Agila was the only vehicle assembled in Gliwice. After launch of the Astra H in Antwerp in January 2004, the Astra G was rebranded as the Astra Classic II.[93]

In 2004, Opel Polska was renamed General Motors Manufacturing Poland (GMMP) and car output rebounded to a new plant record of 116,000 vehicles in that year at the then 1,993-worker GMMP Gliwice. By the end of 2004, sources pegged the GM's investment in Gliwice at between $400 and $535 million. This soon expanded to $830 million, prompting vehicle output to achieve a still plant record of 187,007 in 2007. As was the case in 2000, approximately 95% of the vehicles assembled at the plant in 2007 were exported out of the country.[94]

[91] Howes (1999a); GM Europe (2001–2009).
[92] Belson (2002); GM Europe (2001–2009).
[93] GM Europe (2001–2009).
[94] GM Europe (2001–2009), PAIiIZ (2006); *PMR* (2007–2012).

The year 2007 also represented a changing of the guard at GMMP Gliwice. This turnover included the introduction of the second-generation Opel Zafira (B) MPV on September 12, 2005, and of its platform mate, the Astra H on August 22, 2007. The latter was already being manufactured in Antwerp and Bochum. On their way out were: the Agila I and its twin the Suzuki Wagon R+, which were discontinued in April 2007; and the Astra G/Classic II, which was phased out in the first half of 2009. On the other hand, assembly of the totally re-modeled and re-engineered Agila II/Suzuki Splash, now a microvan, was shifted to Magyar Suzuki in Esztergom, where it launched in December 2007 (See Chapter 7).[95]

Vehicle production in Gliwice remained strong in 2008, when 171,523 cars were built. It then sunk to 96,697 in 2009, in the midst of GM's bankruptcy and the Great Recession (See the discussion on UkrAVTO-GM). When the dust settled, as shown in Table 3.5, output rebounded quickly to 158,584 in 2010. By that time, the model lineup had again been reconfigured, with the new priority: the four-generation Astra J. Also known as the Astra IV, the car was to be dubbed the Astra (letter) I, but that was considered potentially confusing with the original Astra F edition, which was sometimes referred to as the Astra (number) 1. Pre-production of the Astra J commenced on November 4, 2009, with serial output launching in January 2010.[96]

GM invested an additional $143 million in the Gliwice Plant for the new model. In exchange for this commitment, it received a $5 million grant from the Polish Government and $14.3 million in support from the European Regional Development Fund. GMMP then restored 600 jobs lost to the Gliwice factory during the 2009 crisis and added 100 more at its Isuzu engine plant in Tychy, raising staff there to 600. They also induced job growth at several foreign components suppliers in the area. These moves were expected to raise annual vehicle capacity in Gliwice to more than 200,000, and perhaps 250,000 by 2015. The

[95] Opel (2010–2016).
[96] Opel (2010–2016).

Table 3.5 Opel Gliwice car production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
Opel Gliwice	**169,405**	**88,962**	**108,333**	**125,469**	**174,030**	**158,584**	**96,697**
Opel Astra G	—	—	—	—	—	—	19,699
Opel Astra[a]	—	—	—	—	—	—	11,235
Opel Astra H	—	1,617	5,815	12,421	21,169	18,417	13,009
Opel Astra J	132,350	82,208	95,071	112,873	152,861	120,734	—
Opel Astra K	29,750	—	—	—	—	—	—
Opel Cascada	7,305	5,137	7,447	175	—	—	—
Opel Zafira B	—	—	—	—	—	19,433	63,989

Sources: Compiled and adapted by author from GM Europe (2001–2009); Opel (2010–2016).

[a] Includes some LCV.

impending closure of Opel Antwerp (December 17, 2010) and rumors that GM might shutter its Bochum and/or Ellsmere Port, Cheshire, UK factory, further fueled this speculation. At the time, the German works was building Astra H and the British plant was assembling H and J editions.[97]

Car output jumped to 158,584 at GMMP Gliwice in 2010, and then to 174,030 in 2011, before gradually falling to 88,962 in 2014. During this period, the Astra J line came to comprise more than 87% of vehicles assembled at factory and the percentage of vehicle output that was exported out of the country expanded to 98%. Meanwhile, employment at the factory fluctuated between 2,800 and 3,600, with annual December 31 labor force figures generally quoted as 3,000. In the interim, on May 17, 2012, GM announced that it had awarded the production contract for the next generation Astra K to its GMMP Gliwice and Vauxhall Ellsmere Port Plants. Assembly of the car was to begin in 2015, with the two factories to receive a combined $380 million in new investments and their workforces enlarged to three shifts

[97] *PMR* (2007–2012); PAIiIZ (2010–2013).

in order to prepare for the new model. In contrast, Opel Bochum was officially closed on December 5, 2014.[98]

In 2013, GM acquired Isuzu's outstanding 40% stake in their joint venture Tychy engine plant, and the facility was renamed GM Powertrain Poland. The following year, the factory was merged into GMMP, resulting in the renaming of its 731,343 m^2 (7.88 million ft^2), 207,000-capacity car plant as GMMP Opel Gliwice. The Gliwice factory then assembled 169,405 Opel in 2015, consisting of: 132,350 Astra J; 29,750 of its successor, the Astra K; and 7,305 Cascada (See Table 3.5). Pre-production of Cascada convertible commenced in December 2012, with serial production launching simultaneously in Gliwice and in Russelsheim on February 28, 2013.

The Astra K first appeared in time for the September 17–27, 2015 Frankfurt Motor Show, with serial production beginning in Gliwice on October 10, 2015. This included some stamped as Vauxhall Astra. Output of badged Holden Astra bound for Australia followed on September 16, 2016. To accommodate the new model, employment at Opel Gliwice was increased from 2,870 on 31 Dec 2015 to 3,900 by July 2016.[99]

As for the 350,000 m^2 (3.7 million ft^2) GMMP Tychy, on February 11, 2014, GM announced $341 million in new modernization investments in order to launch its latest and entirely aluminum, 1.6 L diesel motor at complex by 2017. GM has historically exported 90% of the 1.7 L diesels manufactured at the plant, primarily to Western Europe. To accommodate the renovations process, engine output at the then 300,000-capacity factory was suspended in 2015. At the time of its suspension, 410 people worked at the factory facility. This was to expand to 550 when output was resumed in 2017, with annual production planned as 200,000 engines per year.[100]

With its recent investments in Gliwice and Tychy, GM's total commitment in Poland has amounted to more than $1.1 billion as of July

[98] Opel (2010–2016).
[99] GM (2013); Opel (2010–2016, 2014, 2016a, 2016b).
[100] GMMP (2016).

2016. These signs suggest a bright future for American automaker's operations in the country over the next ten years. Nonetheless, considering that GM's history of changing production locations on the fly, and its continual over-reliance on more profitable SUVs and pickup trucks for the American market, nothing is for sure when projecting its future prospects in any given European country.

Conclusion and Near-term Outlook for the Poland's Foreign Car Plants

As of 31 Dec 2015, Poland's three active passenger car assembly plants—FCA Tychy, Opel Gliwice, and VW Poznan-Antoninek—collectively employed 13,925 workers and had the capacity to produce 982,000 vehicles per year (See Table 3.1). Overall, approximately 166,000 people were engaged in the manufacture of motor vehicles, bodies, trailers, semi-trailers, parts, and accessories in Poland in that year, a figure that was twice that of 2001 and more than 20% greater than from 137,900 in 2010.

As illustrated in Table 3.6, three car complexes produced a combined 534,700 cars in 2015. This represented a decline of 264,407 or 33.09% from 2010, when four plants, including FSO Zeran, assembled 799,107 cars. In contrast, 2015 output was 181,405 or 51.35% larger than the 353,295 cars assembled by the four factories in 2001. Approximately 98.7% of the vehicles built in 2015 were exported out of the country, as compared with around 95% in 2001.

Output in 2015 was even more noteworthy when compared with 1989, when in the last year of Polish State Socialism, the three former state-owned factories—Zeran and FSM Bielsko-Biala and Tychy—assembled 228,208 or 74.55% fewer passenger cars (See Table 3.6). Only the Tychy factory, now owned by Fiat, continues to build cars. Fiat also owns the Bielsko-Biala Plant, which currently produces engines and not vehicles.

This chapter also chronicled: Daewoo Motor's failed takeover of FSO Zeran and its sister FSC Lublin and FSD Nysa plants; GM, Peugeot,

Table 3.6 Foreign car production in Poland, 1989–2015

	2015	2010	2005	2001	1989	Change 2001–2015	% Change 2001–2015
Total Poland passenger cars[a]	534,700	799,107	528,130	353,295	306,492	181,405	51.35%
Fiat/FSM Tychy	302,639	522,647	273,028	189,247	143,249	113,392	59.92%
VW Poznan[b]	62,656	72,022	87,261	29,954	0	32,702	109.17%
Opel Gliwice	169,405	158,584	128,694	82,100	—	87,305	106.34%
Fiat/FSM Bialsko-Biala	—	—	—	—	64,056	—	—
UkrAVTO/Daewoo/FSO Zeran[c]	—	45,854	39,147	51,994	99,187	–51,994	–100.00%

Sources: Compiled by author from Ward's (1958–2014); VW (2000–2016); GM Europe (2001–2009); PZPM (2008–2016); Opel (2010–2016); FCA Poland (2016).

[a] Does not include domestic carmakers.

[b] 1989–2015 do not include LCV; 2001 includes 23,700 KD kits prepared by Skoda Mlada Boleslav in Czechia.

[c] Includes some Daewoo cars produced at FSC Lublin in 2001.

and UkrAVTO's flirtations with FSO; and Ford's short-lived Plonsk assembly and tie-up with Fiat in Tychy. Not discussed, however, were the lost histories of the licensed BMW and Mercedes-Benz assembled somewhere in southern Poland in the 1930s by a state-owned mining company, and Sobieslaw Zasada Centrum's Mercedes CKD operation in Glowno, Lodz Province. Zasada, a former decorated rally car driver, assembled a few thousand licensed Mercedes Vito LCV during the late-1990s at his small shop in central Poland. Some sources suggest that a handful these were passenger minivans. Zasada's connections with Mercedes-Benz also almost resulted in his company assembling Hyundai vehicles in the 2000s.

More newsworthy has been Daimler's recent machinations regarding its plans to erect engine and automobile assembly plants in Eastern Europe. On March 18, 2016, news reports claimed that Russia's economic slump had prompted the German automaker to rethink its decision to build a car plant there. They then suggested that a tract in Jawor. Lower Silesia Province and within the Wałbrzych SEZ had become the top alternative for the factory that will build vehicles utilizing Mercedes-Benz's new Modular Real Wheel-drive Architecture (MRA). The all-aluminum MRA platform was expected to underpin at least ten new models, meaning that the facility might assemble anything from the company's C-Class, E-Class, or ultra-luxury S-Class cars line, to its GLC and GLE crossovers, or a replacement for its R-Class CUV.[101]

This case became a little stronger on May 4, 2016, when Daimler announced its intentions to invest $575 million to construct an engine plant in Jawor. Scheduled to launch output in 2019, the factory was expected to employ 'several hundred' people and produce four-cylinder petrol and diesel motors for Mercedes-Benz passenger cars. Daimler officials praised the Jawor site, claiming that its location provided the company greater flexibility to handle demand across its production network. In addition, they stated that the facility constituted the first stage in the automaker's Eastern European investment strategy.

[101] The paragraphs on Mercedes draw upon *Automotive News* (2016a, 2016b); Gerden (2016).

In contrast to these positives, Daimler representatives refused to elaborate on the company's plans for a new assembly plant. In addition, they informed the Polish press to temper their excitement, as the Jawor engine project still hinged upon various conditions being met by all parties, including related to the Polish Government's expected incentive package. Daimler has decided to follow through with the project, but it now does not appear that it will launch a Mercedes-Benz car factory in Poland anytime soon. On June 28, 2016, the German vehicle maker announced that it would, after all, launch production in Russia, at a 25,000-capacity assembly plant in the Solnechnogorsk district of Moscow.

It should be noted here that this was not the first time that Jawor lost in the bidding for a foreign auto plant. Before selecting Kolin, Czechia for its car factory in December 2001, Toyota Motor considered the area, as did Jaguar Land Rover, before choosing Nitra, Slovakia in August 2015 (See Chapters 5 and 6). Toyota had particularly reasons for short-listing the area for a car factory, as on October 10, 1999, it already had legally established a powertrain operation in Walbrzych city, Lower Silesia Province. The factory, known as Toyota Motor Manufacturing Poland (TMMP) and located just 37 km (23 miles) south of Jawor, commenced output of transmissions on April 10, 2002. This was followed by the launch of petrol engines in January 2005. As of late-2016, the twin-plant TMMP complex constituted a $532 million, 100,000 m^2 (1.1 million ft^2), 2,000-worker complex with the capacity to produce 371,000 engines and 700,000 transmissions per year. It has supplied components to Toyota's car factories in France, South Africa, Turkey, and the UK, as well as to its joint venture plant with Peugeot in Kolin.[102]

Toyota further expanded its footprint in the Walbrzych SEZ on March 21, 2005, when it inaugurated its now $260 million, 42,000 m^2 (452,000 ft^2) Toyota Motor Industries Poland (TMIP) diesel engine factory in Jelcz-Laskowice. Situated near Wroclaw and just 96 km

[102] The paragraphs on Toyota draw upon PZPM (2008–2016); TMIP (2016); TMMP (2016).

(60 miles) east of both TMMP and Jawor, the 180,000-capacity, 820-worker facility also has supplied Toyota's European and South African plants, as well as Toyota's affiliated Nagakusa Works in Obu city, Japan. All told, including Toyota's October 20, 2016 announced $165 million expansion to add hybrid transaxle production at TMMP and two petrol engines at TMIP by 2019, and the Japanese automaker has invested roughly $1 billion in Lower Silesia.

In sum, the future financial wherewithal and production decisions of Fiat, GM, and VW will likely have the greatest influence on passenger car production trends in Poland over the next ten years. On the other, while its total car output was surpassed by Czechia in 2005 and Slovakia in 2013, and Hungary and SEE nations offer lower wages, Poland's existing supply clusters and proximity to Germany and Czechia should insure that it remains an important player in Europe's automobile industry for years to come. Toyota's and Daimler's powertrain commitments provide further evidence of this. If the bidding for FSO Zeran provides any measure, Chinese and Indian automakers also may be in the mix.

References

AP (1966) Fiat Reaches Accord On Factory in Poland. *New York Times*, 28 June, 6.

AP (1991) GM Near Deal to Make Cars in Poland, Government Says. *Toronto Star*, 16 March, C7.

AP (1992) Fiat Acquires Polish Plants. *New York Times*, 29 May, 16.

AP (1995) Daewoo to Invest in Polish-Auto Maker Deal Worth $1.1-Billion for FSO. *Toronto Globe & Mail*, 21 August, B10.

AP (1996) G.M. Decides on Site for Plant in Poland. *New York Times*, 7 May, D7.

Automotive News Europe (2014) Volkswagen Restructures Production: New Polish Factory to Open in 2016. 18 March, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20140318/ANE/140319843&template=printartANE, last 15 December 2016.

Automotive News Europe (2016a) Daimler May Pick Poland Instead of Russia for New Car Plant, 18 March, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20160318/ANE/160319892&template=printartANE, last 15 December 2016.

Automotive News Europe (2016b) Daimler Plans Mercedes Engine Factory in Poland. 4 May, europe.autonews.com/apps/pbcs.dll/article?AID=/20160504/ANE/160509956&template=printartANE, last 15 December 2016.

Auto Swiat.pl (2015) Historia powstania Tarpana—dobre założenia i . . . , 29 September, http://klasyki.auto-swiat.pl/historia-powstania-tarpana-dobre-zalozenia-i/546bv2, last 15 December 2016.

Balect G and A Enrietti (1998) Global and Regional Strategies in the European Car Industry: The Case of Italian Direct Investments in Poland. *Journal of Transnational Management Development*, 3 (3–4), 197–230.

Belson K (2002) G.M. Moves to Increase Control of Some Isuzu Units. *New York Times*, 15 August, W1.

Bloomberg (1993) Ford Plant in Poland. *New York Times*, 29 July, D7.

Bloomberg (1995a) Daewoo Plans to Invest in Polish Car Plant. *New York Times*, 27 October, D15.

Bloomberg (1995b) G.M. and Poland Agree to Build Opel Plant. *New York Times*, 13 December, D18.

Bloomberg (2002) Fiat Sells It G.M. Stake for $1.2 Billion. *New York Times*, 21 December, C3.

Bobinski C (1992a) Survey of Poland. *Financial Times*, 28 April, 8.

Bobinski C (1992b) Polish Car Investment Delayed. *Financial Times*, 29 October, 4.

Bradshear K and A Sorkin (2000) Fiat Weighs Sale to G.M. of a Stake in Auto Line. *New York Times*, 13 March, C1, C10.

Brzezinski M (1994) East Europe's Car Makers Feel Sting of Capitalism. *New York Times*, 27 April, D1, D7.

Burt T (2000) Under-Fire Burns Can Take a Lead from Ford. *Financial Times*, 19 December, 32.

Camuffo A and G Volpato (2002) Partnering in the Global Auto Industry: The Fiat-GM Strategic Alliance. *International Journal of Automotive Technology and Management*, 2 (3/4), 335–52.

Chicago Tribune (1995a) Pole Car: Ford Motor Co. Said Thursday That It Will Open an Assembly Plant in Poland, Chicago Tribune, 19 January, http://articles.chicagotribune.com/1995-01-19/news/9501200011_1_poland-plant-ford, last 15 December 2016.

Chicago Tribune (1995b) Ford Opens Escort Plant in Poland, 30 September, http://articles.chicagotribune.com/1995-09-30/business/9509300054_1_poland-ford-escort, last 15 December 2016.

Cienski J and T Warner (2004) Poland Set for FSO Sale Talks. *Financial Times*, 6 November, 5.

Ciferri L (2010) GM Hands Fiat Full Ownership of Polish Diesel Engine Plant. *Automotive News Europe*, 28 January, http://europe.autonews.com/article/20100128/ANE/100129862/gm-hands-fiat-full-ownership-of-polish-diesel-engine-plant, last 15 December 2016.

Ciszewska A (2016) Ford Shuts Down Ford Ka Production in Poland. *Warsaw Business Journal*, 21 January, http://wbj.pl/ford-shuts-down-ford-ka-production-in-poland/, last 15 December 2016.

Cohen R (1992) Seeking a Steal of a Deal in Prague? *New York Times*, 21 June, 1992, F1.

Cornelius A (1990) Privatising Poland: Carving Up the Automotive Spoils. *Guardian*, 2 February.

Domanski B (2004) Local and Regional Embeddedness of Foreign Industrial Investors in Poland. *Uniwersytet Jagiellonski*, 11, 37–54.

Domanski B, R Guzik, K Gwosdz, and M Dej (2013) The Crisis and Beyond: The Dynamics and Restructuring of the Automotive Industry in Poland. *Journal of Automotive Technology and Management*, 13 (2) 151–66.

Done K (1992a) General Motors Signs Joint Venture Deal with Poland. *Financial Times*, 29 February, 2.

Done K (1992b) Peugeot Deal for Assembly in Poland. *Financial Times*, 4 April, 2.

Donovan P (1991) GM Set to Take the Wheel of Polish Car Industry. *Guardian*, 23 December, 11.

Engelberg S (1990) Strikes and Lack of Investors Threaten Polish Austerity Plan. *New York Times*, 25 May, A10.

Engelberg S (1992) G.M. Agrees to Build Opel Cars in Poland. *New York Times* 29 February, 37, 49.

FCA Poland (2015) Zakłady Grupy FCA w Polsce, http://fcagroup.pl/fca-w-polsce/zaklady-grupy-fca-w-polsce/, last 15 June 2016.

FCA Poland (2016) FCA Poland—Tychy Plant: World Class Manufacturing (Tychy: FCA Poland).

Feron J (1971a) Warsaw Delays New Car Design. *New York Times*, 31 January, 11.

Feron J (1971b) Many Potholes Ahead for Poland's Auto Industry. *New York Times*, 22 November, 10.

Financial Times (1990) Polish Car Assembly Plant Proposed by Japanese Firm, *Financial Post* (Toronto), 12 January, 8.
FSO (2016). Fabryka Samochodow Osobowych Home Page, http://www.fso-sa.com.pl/1 July.
Georgano N (2000) *The Beaulieu Encyclopedia of the Automobile* (Chicago: Fitzroy).
Gerden E (2016) Russia Lands Mercedes Plant After False Start. *WardsAuto*, 28 June, http://wardsauto.com/industry/russia-lands-mercedes-plant-after-false-start, last 15 December 2016.
GM (2005) Nearly a Quarter of a Million Chevrolets Have Been Assembled in Europe. 27 January, http://media.gm.com/media/intl/en/chevrolet/news.detail.html/content/Pages/news/intl/en/2005/chevrolet/01_26_Assembly_Europe.html, last 22 June 2016.
GM (2008a) The Aveo Is the First Modern Chevrolet 'Made' in Europe. 19 May, http://media.gm.com/media/intl/en/chevrolet/news.detail.html/content/Pages/news/intl/en/2008/chevrolet/05_19_Aveo_company.html, last 15 December 2016.
GM (2008b) GM Central and Eastern Europe. GM Heritage Center, https://history.gmheritagecenter.com/wiki/index.php/GM_Central_and_Eastern_Europe, last 9 June 2016.
GM (2013) Cascada Official Start of Production. 28 February, http://media.gm.com/media/intl/en/opel/news.detail.html/content/Pages/news/intl/en/2013/opel/02-28-cascada-start-production.html, last 15 December 2016.
GM Europe (2001–2009) *GM in Europe: Overview/Facts & Figures*, 2000 to 2008 (Russelsheim: GM Europe Communications).
GMMP (2016) GM General Motors Manufacturing Poland, http://www.opel.pl/poznaj-opla/gmmp-gliwice/fabryka-opla-w-gliwicach/opel-gliwice-plant.html, last 22 June.
Green P (1999) For Daewoo Group, Eastern Europe Remains Mostly in the Red. *New York Times*, 7 November, BU7.
Griffiths J (1999). World News—Europe: Car Chief Wants End to European Tax Anomaly. *Financial Times*, 10 November, 2.
Guardian (2005) Bambino Reborn Fiat and Ford Team Up to Build Small Car, 10 September, 24.
Hakim D (2005) G.M. Will Pay $2 Billion to Sever Ties to Fiat. *New York Times*, 14 February, C1.
Havas A (2000) Changing Patterns of Inter- and Intra-Regional Division of Labor: Central Europe's Long and Winding Road in J Humphrey, Y Lecler,

and M Salerno (eds), *Global Strategies and Local Realities: The Auto Industry in Emerging Markets* (Cheltenham: Edgar Elgar), pp. 234–62.

Honker (2016) Honker and FSC Lublin History, http://www.honker.com.pl/index.php/historia, last 26 May.

Howes D (1999a) GM's Blueprint for the Future. *Detroit News*, 13 June, 1C.

Howes D (1999b) Ford Will Close 2 Plants in Europe to Stem Losses. *Detroit News*, 18 November, B1.

Jacobs A J (2016) *The 'New Domestic' Automakers in the U.S. and Canada: History, Impacts, and Prospects* (Lanham, MD: Lexington Books,

Janas P (2015) EBRD Freezes Funding for New VW Van Plant in Poland. *SAMAR*, 16 December, http://www.samar.pl/strefa-biznesu/eboir-wstrzymal-finansowanie-fabryki-vw-we-wrzesni?locale=en_EN, last 15 December 2016.

Japan Economic Journal (1987) Japan-Poland Auto Venture Moving Nearer to Realization, 11 July, 19.

Jones M (2015) Volkswagen Poland Factory Funding on Hold. *Reuters.com*, 15 December, http://www.reuters.com/article/us-volkswagen-poland-idUSKBN0TY28U20151215, last 15 December 2016.

Journal of Commerce (1990) Daihatsu Co. May Cancel Joint Poland Car Plant Deal, 23 May, 2A.

Journal of Commerce (1991) Trade Briefs: GM Chief Contender for Polish Auto Pact, 15 March, 4A.

Kamm H (1966) Fiat Sees Cold War Over. *New York Times*, 25 October, 92.

Karnitschnig M and B Turek (2000) More Potholes on Poland's Road to the EU in Warsaw. *Businessweek Online*, 12 June, http://www.businessweek.com/2000/00_24/b3685306.htm, last 15 December 2016.

Kurylko D (1995) Ford Plans Assembly Plant in Poland. *Automotive News*, 23 January, http://www.autonews.com/apps/pbcs.dll/article?AID=/19950123/ANA/501230727&template=printart, last 15 December 2016.

Kurylko D (1996) GM to Build Opel Astra in Poland. *Automotive News*, 14 October, http://www.autonews.com/apps/pbcs.dll/article?AID=/19961014/ANA/610140716&template=printart, last 15 December 2016.

Lee Y (2001) *Does Geographical Proximity Matter? The Spatial Dynamics of the South Korean and Japanese Automobile Industry*. Ph.D. Dissertation (Ann Arbor: UMI).

New York Times (1966) Fiat Deal Expected for Cars in Poland, 16 May, 71.

New York Times (1969) Polish Economist Urges Mass Output of Small, Low-Cost Cars, 26 January, 6.
New York Times (1987) Japan-Poland Car Pact Seen, 2 July, D16.
New York Times (1995) International Briefs: In Brief. 24 June, 34.
Opel (2010–2016) *Opel in Europe Facts and Figures: Year in Review*, for 2009–2015 (Russelsheim, Germany: Opel Corporate Communications).
Opel (2014) GM Invests 250 Million Euros in Modern Engine Production in Tychy, 11 February, http://media.opel.com/media/intl/en/opel/news.detail.html/content/Pages/news/intl/en/2014/opel/02-11-gm-production-tychy.html, last 23 June 2016.
Opel (2016a) Gliwice Plant, Facts and Figures, http://media.opel.com/media/intl/en/opel/company_opel/plants/gliwice.brand_opel.html, last 22 June.
Opel (2016b) GM Powertrain Tychy Plant, Facts and Figures, http://media.opel.com/media/intl/en/opel/company_opel/plants/tychy.html, last 22 June.
PAIiIZ (2006) Automotive and Transport Equipment in Poland, 2006 (Warsaw: Polish Information and Foreign Investment Agency).
PAIiIZ (2007) PAIiIZ *Newsletter*, 45, 8 November, www.paiz.gov.pl/files/?id_plik=9152, last 15 December 2016.
PAIiIZ (2010–2013) Automotive Industry in Poland: Reports from the Years 2010 and 2013 (Warsaw: Polish Information and Foreign Investment Agency).
Pavlinek P (2002) Transformation of the Central and Eastern European Passenger Car Industry: Selective Peripheral Integration Through Foreign Direct Investment. *Environment and Planning A*, 34, 1685–1709.
Pavlinek P (2006) Restructuring of the Polish Passenger Car Industry Through Foreign Direct Investment. *Eurasian Geography and Economics*, 47 (3), 353–77.
Pavlinek P (2016) Production Data for VW Poznan, 1994 to 2003. Email Correspondence, 24 April.
Perlez J (1993) G.M. to Assemble Opel Cars at a Plant in Poland, *New York Times*, 14 December, D5.
Protzman F (1992) How G.M.'s Altered Personality Saved Opel: In Europe, the Auto Giant Went for Small and Lean—And It Worked. *New York Times*, 12 April, 115.

PMR (2007–2012) Various Articles on FSO Zeran, VW Poznan, and Opel Gliwice, 5 May 2007 to 3 September 2012, http://www.polishmarket.com/, last 18 June 2016.
PZPM (2008–2016) Polish Automotive Industry Association Report, 2008 to 2016 (Warsaw: Polski Zwiazek Przemyslu Motoryzacyjnego).
Reed J (2002) Protecting Poland: The Country Is Shifting Its Economic Strategy Away from Foreign Direct Investment. *Financial Times*, 24 April, 13.
Reuters (1966) Polish-Fiat Deal Reported. *New York Times*, 20 May, 5.
Reuters (1991) Fiat Poland Pact. *New York Times*, 11 October, 4.
Reuters (1995) Opel Seeks Polish Plant. *New York Times*, 13 October, D7.
Revill J (2008) First New Ford Ka Rolls Off Production Line in Poland. *Automotive News*, 25 September, http://www.autonews.com/apps/pbcs.dll/article?AID=/20080925070347/COPY01/309259956&template=print, last 15 December 2016.
SAMAR (2002–2013) Polish Automotive Market—Facts and Figures: Vehicle Production in Poland. Automotive Market Research Institute SAMAR Website, http://www.samar.pl/, last 15 December 2016.
Sigurdson J and K Palonka (1999) Daewoo in Poland. Working Paper No. 74, September (Stockholm: The European Institute of Japanese Studies).
Simonian H (1996) VW pitches Skoda Against Asian Rivals. *Financial Times*, 9 September, 29.
Simonian H (1997) Fiat Plays to Its Strengths in Poland. *Financial Times*, 30 May, 24.
Tagliabue J (1998) Tilting but Standing as a Big Domino Falls: Ex-Communist Poland Holds Up Well Next to Russia's Staggering Economy. *New York Times*, 6 October 6, C1.
Tagliabue J (2000) Some See Takeover of Fiat in Details of Deal With G.M. *New York Times*, 14 March, C4.
Thompson A (2011) *Cars of Eastern Europe: The Definitive History* (Newbury Park, CA: Haynes).
TMIP (2016) Toyota Motor Industries Poland Website, http://www.toyotapl.com/jelcz-laskowice/2008/index.php, last, 24 June.
TMMP (2016) Toyota Motor Manufacturing Poland Sp. z o.o. Website, http://www.toyotapl.com/walbrzych/index.php?id_kat=143, last, 24 June.
UkrAVTO (2016) Ukrainian Motor Corporation Website, http://www.ukravto.ua/en, last 9 June.
UPI (1993) VW Vans Will Be Assembled in Poland. *UPI Archive: Financial*, 19 May.

Volpato G (2003) Fiat Auto: From 'Forced' Internationalization Towards Intentional Globalization, in M Freyssenet, K Shimizu, and G Volpato (eds), *Globalization or Regionalization of the European Car Industry?* (New York: Palgrave Macmillan), pp. 132–51.

Volpato G (2009) Fiat Group Automobiles: An Arabian Phoenix in the International Auto Industry, in M Freyssenet, A Mair, K Shimizu, and G Volpato (eds), *One Best Way? Trajectories and Industrial Models of the World's Automobile Producers* (New York: Oxford University Press), pp. 287–308.

VW (2000–2016) *Volkswagen AG: Annual Reports*, 1999 to 2015 (Wolfsburg: Volkswagen Group).

VW CV (2016) VW Commercial Vehicles Chronicle, http://www.volkswagen-commercial-vehicles.com/en/company/chronicle.html, last 20 June.

VW Poznan (2002–2016) VW Poznan News Archive, 2002 to 2016, http://www.volkswagen-poznan.pl/pl/news/2015?page=13, last 18 June 2016.

VW Poznan (2003) 1993–2003: Volkswagen Poznan Ma 10 Lat. Poznan, 26 November, http://www.volkswagen-poznan.pl/pl/archiwum-2003, last 18 June 2016.

VW Poznan (2016a). New Plant in Wrzesnia, http://www.volkswagen-poznan.pl/en/new-plant, last 20 June 2016.

VW Poznan (2016b) VW Plants in Poznan, History and Awards, http://www.volkswagen-poznan.pl/en/history, last 20 June 2016.

Wagstyl S (1997) The Vehicle Industry: Survey—Poland. *Financial Times*, 26 March, 5.

Ward's (1958–2014). *Ward's Automotive Yearbook*, 1958 to 2014 (Detroit: Ward's Communications).

Wernle B (2008) GM Began Its Overseas Empire by Buying Established Companies. *Automotive News*, 14 September, http://www.autonews.com/article/20080914/GLOBAL02/309149980?template=print, last 26 May 2016.

WJS (1987) International Corporate Report: Fiat Signs Pact to Produce a New Small Car in Poland. *Wall Street Journal*, 11 September, 1.

WJS (1991) GM Is Said To Be Preparing an Investment in Poland. *Wall Street Journal*, 20 June, A7.

WJS (1992a) Fiat Has Preliminary Pact for Polish Car Factory. *Wall Street Journal*, 21 May, A9.

WJS (1992b) Fiat S.p.A.: Strike at Polish Plant Ends, Clearing Way for Takeover. *Wall Street Journal*, 16 September, C13.

WJS (1992c) Fiat, Poland Sign $2 Billion Pact. *Wall Street Journal*, 19 October, C17.

WJS (2005) Fiat SpA: Deal Is Finalized to Develop Small Cars with Ford Motor. *Wall Street Journal*, 8 November, D6.

Wolchik S and J Curry (eds) (2011) *Central & East European Politics: From Communism to Democracy* (Lanham, MD: Rowman & Littlefield).

ZAZ (2016). ZAZ Company History, http://www.avtozaz.com/en/about/history, 10 June.

4

Passenger Car Plants Before and After the Former East Germany

Introduction: The Changing Context for Car Plants in the Former East Germany

A key producer in the CMEA, the former *Deutsche Democratische Republik* (i.e., East Germany) has a rich automobile industry tradition that predated its Socialist Era split from *Bundersrepublik Deutschland* (i.e., West Germany) by more than 40 years. As discussed in Chapter 2, the this context changed dramatically in November 1989, when after a year of civil unrest, a thaw in the Cold War led to the reunification of the two Germanys on October 3, 1990. As part of this process, East Germany's territory was reconstituted as five *Lander* (federated states): Brandenburg; Mecklenburg-West Pomerania; Saxony; Saxony-Anhalt; and Thuringia, and the two Berlins were joined to create a sixth state.

Even before the unification was official, western automakers were plotting their investments in the new German States. On December 22, 1989, just six weeks after the opening of the Berlin Wall, the VW of Wolfsburg, West Germany had already announced that it had forged a 50/50 joint venture with *IFA-Kombinat Personenkraftwagen* (IFA PKW) to build a new car plant in Mosel, Saxony (today's Zwickau city). By

A.J. Jacobs, *Automotive FDI in Emerging Europe*,
DOI 10.1057/978-1-137-40786-3_4

March 11, 1990, GM's Opel Division also had forged a tie-up time with *Automobilwerk Eisenach* (AWE) in Eisenach, Thuringia.[1]

Beginning with the early-twentieth century VW-Audi legacy plants in the Saxony municipalities of Chemnitz (Wanderer), Mosel (Audi), Zschopau (DKW), and Zwickau (Horch), this chapter reviews the history of the five passenger car plants launched by Western automakers in the former East Germany after the Fall of Socialism. In addition to (1) VW Zwickau (formerly Mosel) and (2) Opel Eisenach, this includes three other Saxony operations: (3) VW Dresden; (4) Porsche Leipzig; and (5) BMW Leipzig.

To help guide the discussion, specific factories are grouped with their respective current automaker group. As a result, the historical and contemporary plants of Audi/Auto Union, Porsche, and the Volkswagen brand are presented chronologically together. This is followed by an examination of GM's Opel Eisenach Plant, including its link to the original early twentieth century Eisenach Works which was once also owned by BMW, and a segment on BMW Leipzig. The chapter concludes by summarizing car production in the former East Germany since the Fall of Socialism and with some thoughts regarding its prospects for the future.

The VW Group in East Germany

Audi Origins and VW's Legacy in East Germany

Currently a division of VW, Audi AG's, date back to five early-twentieth century car companies known as: Audi, Horch, Neckarsulm (NSU), Wanderer, and Zschopauer. All except NSU were established in the

[1] IFA and AWE usually had the acronym VEB in front of their names. This connotes *Volkseigener Betrieb* or Publicly-owned Enterprise. VEB IFA-Kombinat, however, was actually short for *Industrie Vereinigung Volkseigener Fahrzeugwerke Kombinat* (Industrial Association of the People's Vehicle Works Group). In addition to PKW/Passenger Cars, IFA had three other divisions: *Zweiradfahrzeuge* (Motorcycles); *Nutzkraftwagen* (Commercial Vehicles); and *Weitere* (Other vehicles, trailers, parts, and sales).

Saxony. Originally established in Chemnitz as a bicycle repair shop, in February 1885 Wanderer became the first of the Saxony firms to incorporate, before building its first car in September 1906. Horch, on the other hand, was the first four to launch vehicle production. Founder August Horch assembled his first car—a two-cylinder 5-hp model—in Cologne (West Germany) in January 1901, but in March 1902 he moved and set up shop in Reichenbach im Vogtland, Saxony. There he produced 18 four-cylinder cars in 1903, before again shifting his location, this time to the City of Zwickau, where on May 10, 1904 he established *August Horch Motorwagenwerk*. In its first year of operation, Horch 'Motor Works' employed 100 people and by 1908 was building 100 cars per year.[2]

Despite its growing success, a disagreement with the company's management board prompted Horch to resign his namesake firm in June 1909. Thereafter, he set up another company in Mosel, a town in Zwickau County just north of the city. On April 25, 1910, he officially registered the Mosel plant as Audi Automobilwerke. That summer, he introduced his first Audi 10/22-hp model, which quickly became known for their auto racing prowess. Over the next four years, annual vehicle output and employment at the now re-christened Audiwerke AG surpassed more 200, before both effectively doubling again during World War I (WW-I, 1914–1918) to support Germany's military efforts.

In 1920, Horch left Audi for a job with the German Economy Ministry, with Ernest Baus taking charge of the company. During the 1920s, Audiwerke restored civilian motor vehicle production to its pre-war levels and built its first left-hand drive car, the four-cylinder Audi Type K in September 1921, before adding six- and eight-cylinder models in 1924 and 1927, respectively. Although the expansion seemed promising, the company was suffering major financial difficulties stemming from years of rapid inflation in post-WW-I Germany. As a result, on August 20–21, 1928, Jorgen Skafte (J.S.) Rasmussen acquired a majority interest in Audiwerke and then the remaining stake in 1929.

[2] The Audi Origins section draws upon: Audi (1996, 2013); Georgano (2000); Thompson (2011).

A Danish-born engineer, J.S. Rasmussen began his rise to German industrialist in 1916, when he established a steam fittings factory in Zschopau, Saxony, southeast of Chemnitz. It was there that he began experimenting with a *dampfkraftwagen* (steam-powered car) and a motorcycle, which he called the *Das Kleine Wunder* ('Little Wonder'), both of which he legally registered under the acronym of DKW. To oversee DKW-brand motorcycle production, he incorporated his interests as Zschopauer Motorenwerke J. S. Rasmussen in 1921. Two years later, he and his partners expanded further in Saxony by opening a motorcycle components factory north of Zschopau in Frankenberg. This production was later shifted to a larger plant in nearby Hainichen, which during the 1930s also built Framo brand vehicles.

In 1928, Rasmussen's company produced its first DKW passenger car. This vehicle, however, was not built in Saxony, but rather in a factory in the Spandau borough of Greater Berlin, an area that later was within West Berlin, West Germany. Nonetheless, by that time, DKW was the world's largest motorcycle manufacturer, and it was from this point of strength that Rasmussen's firm, financed by the Bank of Saxony, was able to seize control of Audiwerke in that same year.

By the early 1930s, Auto Union's Audiwerke Zwickau in Mosel was producing the DKW *Sonderklasse* (Special Class), Germany's most popular small car during the pre-WWII period. In the meantime, the Wall Street Crash of 1929 and the ensuing world economic crisis was wreaking havoc on Germany's motor vehicle industry. To appease their creditors, on June 29, 1932, Rasmussen's DKW, Audi, the original Horch Motor Works, and Wanderer's car division were amalgamated to create Auto Union AG headquartered in Chemnitz. As part of the merger agreement, the company came under the control of its new majority owner, the Bank of Saxony, which previously had held a 25% stake in Zschopauer Rasmussen and a sizeable portion of Horch.

At the outbreak of WW-II in 1939, the four-brand Auto Union had become Germany's second largest vehicle maker behind Daimler-Benz. At that time, it consisted of five production plants: (1) Audiwerke Zwickau manufacturing DKW in Mosel; (2) Horch Motor Works assembling Horch and Audi in Zwickau; (3) Wanderer Siegmar producing Wanderer in the then Siegmar-Schonau section of Chemnitz; (4)

DKW Zschopau producing engines and motorcycles; and (5) DKW Spandau manufacturing rear-wheel drive cars and bodies in Berlin. The war, however, would dramatically change this group of plants forever.

Auto Union Under IFA in Socialist East Germany

When the dust settled from WW-II, not much remained of Auto Union's operations in eastern Germany. The Wanderer Siegmar and Berlin plants were leveled by the Allied bombing raids of 1944 and 1945, and the other three plants were severely damaged. In addition, on July 12, 1945, Saxony and its surrounding states were incorporated into the Soviet Occupation Zone of Germany, and any remaining machinery within the still standing factories was dismantled and shipped to Moscow and points east as war reparations. Amid the chaos, Auto Union's management team fled south to Ingolstadt, Bavaria, now West Germany, where on December 19, 1945 they re-stablished Auto Union.[3]

Saxony's other vehicle makers suffered similar fates, particularly: (1) Framo, i.e., J.S. Rasmussen's vehicle factory in Hainichen that had not become part of Auto Union; (2) Phanomen Gustav Hiller, a truck producer based in Zittau, Saxony, near the Polish border and which was renamed VEB Robur during the Socialist Era; and (3) Vogtland (VOMAG), a truck and bus producer turned tank builder based in Plauen, Saxony, near the border with Bavaria.

After the war, the Auto Union facilities were placed under the control of the *Sowjetische AG Maschinenbau Awtowelo*, which in turn, on July 1, 1946, established a holding company, IFA, to oversee the vehicle factories in Soviet-occupied Germany.[4] IFA selected Auto Union's headquarters in Chemnitz for its base (on July 1, 1950, the city formerly

[3] Except where otherwise noted, the Audi Union section draws upon: Audi (1996, 2013); Georgano (2000); Thompson (2011).

[4] *Sowjetische AG Maschinenbau Awtowelo* can be translated as Soviet Mechanical Engineering Avtovelo, Ltd., with the Russian word *Awtowelo* representing a portmanteau derived from *avtomobil* for automobile and *velosiped* for bicycle.

known as the 'Saxony Manchester,' was renamed Karl Marx City). It then nationalized as Publicly-owned Enterprises (*VEB)*: Audiwerke Zwickau in Mosel as *Automobilwerk Zwickau* (AWZ); Horch Zwickau as *Kraftfahrzeugwerk Horch Zwickau* (Horch Vehicle and Engine Works); and DKW Zschopau as *Motorradwerk Zschopau* (Zschopau Motorcycle Works). In addition, Framo became VEB Barkas Werke Hainichin, and thereafter, produced LCV and 4×4 *kubelwagen* (military trucks/jeeps). On October 7, 1949, these factories were bequeathed to the newly established German Democratic Republic (East Germany)

Since AWZ was spared major damage by the war, so in 1948, AWZ in Mosel re-commenced car output, beginning with the IFA F8, a model that was derived from the DKW F8 'Masterclass' sedan built by Auto Union between 1939 and 1942. A total of 26,267 F8 were assembled at AWZ between 1948 and its discontinuation in 1955. Meanwhile, in October 1950, AWZ Mosel also began building the fwd IFA F9 mini. The F9 was based upon prototypes of the DKW F9 that were developed by Auto Union in 1939, but never produced. This lasted until March 1953, when after only 1,616 F9 were assembled, production of the car was transferred to IFA's motorcycle factory in Eisenach. Thereafter, the F9 was redubbed the IFA 309 (See Opel Eisenach this Chapter).

At the Horch Works, IFA launched production of the Sachsenring P240 luxury sedan in 1956. This made it the first car model built at the factory since September 1940, when the war forced Auto Union to cease output of the Horch 951A Pullman size luxury sedan; the factory initially only assembled trucks after the war. The P240 was mechanically similar to the BMW/EMW 340 produced by IFA's affiliate in Eisenach (i.e., AWE), but fitted with outer shells built by VEB *Karosseriewerk* (Car Body Works) in Dresden, Saxony. Plans called for the production of 9,000 P240 in the first year rising to 15,000 annually in 1956. The following year the Horch Works was redubbed VEB Sachsenring Automobilwerk Zwickau in honor of the nearby famous race track. The name change meant little, however, as output at Sachsenring was quickly derailed by steel shortages and East Germany's stumbling economy. As a result, after spending nearly $1 million to re-tool the facility for car production, only a measly 1,382 units of the P240 were ever built, topped by 519 in 1958. Only 110 were assembled in 1959 and the

car was discontinued, after a new CMEA agreement made Tatra in Koprivnice, Czechoslovakia the Eastern-Bloc's luxury car production center. Following the P240 experiment, car production was never again restarted at the former Horch Works.

Meanwhile, in spring 1956, AWZ Mosel began assembling the IFA F8 successor, the Zwickau P70. On May 1, 1958, AWZ was merged into VEB Sachsenring and redubbed Sachsenring Plant 2. Thereafter the P70 also got a name change. The first German car mass-produced with a fiberglass body, a total of 11,466 Sachsenring P70 were assembled in 1958 and a combined 36,161 of the two P70 models when the car's production run was terminated in 1959. Nevertheless, this represented not an end, but a new beginning for the Mosel Plant, as in August 1958 the factory had already commenced mass production of its replacement and East Germany's answer to the VW Beetle, the fwd Sachsenring Trabant P50 or 500 micro-mini. Notably, the car's body shells were manufactured at Sachsenring Plant 1 (Horch) and the two-stroke, two-cylinder, 500 cc engines built at the VEB Barkas Engine Works in Karl Marx City. In the pre-WW II period, the facility had served as an engine hall for Auto Union's Chemnitz operations.

Approximately 300,000 of the Trabant 500 and its successor the Trabant 600 were built in Mosel through the end of its production cycle in September 1965. Among these, a small number were exported to Belgium, Denmark, and the Netherlands. By that time, serial output of the Trabant 601 was well underway, with the new micro-mini launching in Mosel on June 30, 1964. The line was expanded to include Universal (station wagon) and jeep versions in 1965 and 1966, respectively. Whereas car bodies for the sedans were fabricated at Sachsenring #1, shells for the wagons and jeeps were built at VEB Meerane. During the pre-war period, the factory just north of Zwickau and then known as Gustav Hornig & Co. had supplied bodies to Auto Union.

Production of the Trabant P601 continued almost unchanged for the next 34 years. This represented a remarkable run for a car that was ridiculed because of its poor quality, heavily polluting blue-gray tailpipe emissions, and outdated technology, including its two-stroke engine, a motor that had been abandoned by almost all other automakers in the 1960s. The situation was further exacerbating by the inefficient Mosel

factory's inability to meet demand for the vehicle, which because of its affordability, commanded two-thirds of the East Germany car market by the late-1980s. Moreover, despite the strong demand, output of the Trabant 601 expanded only slightly during the 1980s, from approximately 111,250 Trabant 601 in 1977 to just 145,600 in 1988 and 143,000 in 1989. As a result, backorders for the car were estimated at 1.5 million in East Germany alone when the last of 2,818,547 was manufactured on July 25, 1990 (See Chapters 3 and 5).[5]

Meanwhile, as the outdated Trabant was on its way out, sweeping change was engulfing the country. On November 9, 1989, the East German Government announced that it would allow its citizens to travel to West Berlin, West Germany for the first time since they began constructing the Berlin Wall on August 13, 1961. This set off a chain of events culminating in the reunification of the two Germanys on October 3, 1990. Knowing that the outdated Trabant could not to compete with Western cars, and concerned that many of the 11,000 people involved in its production car would become redundant, the government also began working feverously to find a partner to save its car factories. As displayed in Table 4.1, on December 22, 1989, only six weeks after the opening of Berlin, they had found a savior for the Sachsenring operations.

As mentioned earlier, it was on that date that VW of West Germany and IFA announced that they would establish a 50/50 joint venture company, Volkswagen IFA-PKW GmbH, headquartered in Wolfsburg, West Germany. The groundwork for this accord actually began in 1984, when VW agreed to erect a four-stroke engine factory plant at the VEB Barkas Works in Karl Marx City. In that same year, IFA and PSA of France also had formed a tie-up to build driveshaft for Trabant 601 in Mosel. Output of the first VW motor at Barkas, a 1.3 L four-cylinder, four-stroke, 44-hp power pack, commenced in August 1988 and was shipped to AWE in Eisenach for installation in the Wartburg 1.3 sedans built there (See GM-Opel Eisenach).

[5] Ward's (1958–2014); Fisher (1990); Greenhouse (1990).

Table 4.1 Active and former car plants in the former East Germany

Firm	Origin	Place, state	Announced	Production launched	Emp. 2015	Vehicle output 2015	Vehicle capacity 2016
		Ex-East Germany			**20,862**	**819,427**	**875,000**
VW[a]	W. Germany	Zwickau, Saxony-2	Dec-1989	Oct-1996	8,820	301,301	300,000
GM Opel	USA	Eisenach, Thuringa-2	Mar-1990	Sep-1992	1,850	116,248	160,000
VW[b]	W. Germany	Dresden, Saxony	Jun-1998	Dec-2001	525	3,254	10,000
Porsche	W. Germany	Leipzig, Saxony	Sep-1999	Aug-2002	3,667	164,968	165,000
BMW[c]	W. Germany	Leipzig, Saxony	Jul-2001	Mar-2005	6,000	233,656	240,000
Former Related Car Plants							
VW-IFA[d]	W. Germany	Mosel, Saxony-1	Dec-1989	(VW) May-1990	Closed	x-Oct-1997	x-150,000
Opel-AWE[e]	USA	Eisenach, Thuringa-1	Mar-1990	(Opel) Oct-1990	Closed	x-Apr-1992	x-77,000

Sources: Compiled by author from VW (2000–2016, 2016b), Opel (2010–2016, 2016), VW Sachsen (2014); BMW Leipzig (2015–2016), BMW (2016).

[a] VW Mosel-2 now known as VW Zwickau.

[b] Aka the 'Transparent Factory'.

[c] BMW employed 4,700 and on-site suppliers the remaining 1,300.

[d] Opened April 25, 1910 as Audiwerke later known as AWZ.

[e] Eisenach built its first car in 1898 and later was known as BMW Dixi.

x—When production ended.

The VW-IFA new endeavor bore fruit on May 21, 1990, when output of the 601 successor, the Trabant 1.1, and of SKD kits of VW Polo minis were launched at Sachsenring #2 in Mosel, by then re-established as VW-IFA PKW Mosel. Both cars came equipped with 1.04 L four-cylinder, four-stroke, 40-hp motors manufactured at the aforementioned new VW engine hall Karl Marx City, which on June 1, 1990, became again known as Chemnitz. Production of the Trabant ended on April 30, 1991, when a pink Trabant 1.1 Universal wagon rolled off the assembly line in Mosel. The vehicle represented the last of 39,474 Trabant 1.1 assembled at the former Sachsenring #2/AWZ/Audiwerke in Mosel. Ironically, by that time, the plant's original company, the now Ingolstadt-based Audi AG, had been part of VW for more than 35 years.

VW Mosel-Zwickau

To seal its December 22, 1989 deal, VW pledged to invest approximately $3 billion in IFA's operations and to produce 250,000 cars per year in Mosel by 1996. As part of this arrangement, VW gained control over the Sachsenring factories (IFA Mosel and the former Horch Works in Zwickau), and the 7,281 worker VEB Barkas complex in Chemnitz. The latter was re-established as Motorenwerke Chemnitz GmbH and officially became a division of VW on April 1, 1992.[6]

At the time, VW officials viewed their joint venture with IFA as the first step in their automaker's expansion in CE, with projects in Czechoslovakia, Hungary, and Poland expected in the near future (See Chapters 3, 5–7).[7] They also viewed East Germany as a customer market ripe for the taking, as a result of Auto Union's historical ties to the region. Pay differentials were another factor driving VW's decision to take over IFA's Saxony-based operations, as at the time, East German workers were earning one-fourth that of their West Germany peers. Conversely, VW officials were well aware that these wage gains were

[6] Fisher (1990): Greenhouse (1990); Protzman (1990); Reuters (1990a); VW Sachsen (2016).
[7] Reuters (1990a).

only a temporary perk, as they may disappear once the two Germanys accomplished their goal of full political, economic, and monetary unification, including the reconciliation of the Western Deutschmark and Eastern 'Ostmark' currencies. Moreover, they knew they were under the watchful eye of the West German Government, who feared continued income inequities would fuel a massive westbound migration of eastern workers within the reunified country.[8]

VW further cemented its commitment to East Germany on March 12, 1990, when VW-IFA announced plans to build a new car factory in Mosel. In the interim, the company also declared its intentions to expand output of VW Polo at VW-IFA Mosel from approximately 12,500 cars annually to 100,000 in 1992 and then 300,000 per year in 1996, when the new plant was schedule to be operational. This process began on April 3, 1990, when shipment from VW Wolfsburg Plant of SKD kits were sent eastward in preparation for the aforementioned launch of VW Polo in Mosel on May 21. Four months later and preceding German unification by a week, the groundbreaking for the new VW Mosel car factory commenced on September 26, 1990. VW then gradually began to seize full control over the Mosel operations, beginning with the establishment of Volkswagen Sachsen GmbH on December 12, 1990, to oversee the building and operation. A second 12.5%/87.5% joint venture company between VW and East Germany's *Treuhandanstalt* (privatization agency) known as Sachsische Automobilbau GmbH also was charged on December 19, to maintain the old Mosel plant.

On February 15, 1991, Polo output in Mosel was joined by VW Golf (Mk2) mini. Joint production of both cars was short-lived, with Polo output ending on September 12, 1991, after 17,978 were built at the plant. This was planned, however, as it enabled VW to ramp up production of its popular Golf to approximately 35,000 in 1991, and then to more than twice that in 1992. The latter included the launch of the third-generation Golf (Mk3) on July 27, 1992. That same day, the

[8] The remainder of this section on VV Mosel-Zwickau draws upon: VW (2000–2016, 2016a, 2016b); VW Sachsen (2003–2015, 2014, 2016).

first operation of the new VW Sachsen Vehicle Works Mosel come online, the car bodies shop, supplying shells for Mosel-built Golf Mk3. These expansions were aided by the erection of a new 450,000-capacity engine hall at the VW Chemnitz. Construction of the engine works commenced on June 12, 1992, with output of four-cylinder motors launching on March 3, 1995.

Annual vehicle production at the old Mosel factory hovered at around 125,000 over the next four years. Then, with its paint shop and vehicle assembly hall now up and running, serial production of the Passat (B5) sedan commenced at the new VW Sachsen Mosel on October 28, 1996. After 87 years, car production at the old Mosel factory finally ended in October 1997, when the final Golf rolled of its production line and output of the fourth-generation Golf Mk4 was shifted to the new facility. To serve the new facility, VW expanded its workforce in Mosel from 2,500 to 4,500 over the next few months; the Chemnitz Plant employed about 580 workers at that time. In exchange for these developments, VW was offered $465 million in incentives from the State of Saxony. After a review by the European Commission's (EC) Competition in Brussels, Belgium in 1996, however, this package was reduced to $321 million, with the EC stating that the remaining $144 million in subsidies ran contrary to the fair competition principles of the European Common Market.

On January 1, 1999, the Town of Mosel, including the VW Sachsen complex, along with five other communities near the factory, was annexed into the City of Zwickau. Thereafter, the operations name was changed accordingly. By the middle of that year, annual vehicle capacity at VW Zwickau had reached 250,000. This capacity was surpassed in 2001 and 2002, with 250,505 cars built in 2002, including 224,525 Passat and 25,980 Golf.

Over the next few years, total output of these two models at VW Zwickau declined to 205,085 in 2003 before jumping to 277,077 in 2007. In the meantime, in another sign of the shifting tide eastward in European car production, on November 21, 2006 VW announced plans to halt car production at its 200,000-capacity VW Vorst in Belgium, where it employed more than 4,500 people building Golf. The automaker would ultimately keep the factory open by shifting output of

entry level Audi models to the renamed Audi Brussels, while significantly downsizing output and labor. This had little effect on VW Sachsen, as the impact of the Great Recession led to a decline in output at Zwickau to 212,721 in 2009. As shown in Table 4.2, production then increased to 262,376 by 2011, then tumbled to 220,601 in 2013 before rebounding to 301,301 in 2015. The latter total consisted of 263,150 Golf and 38,151 Passat.

As of December 31, 2015, the 180-hectare (444-acre), 300,000-vehicle capacity VW Sachsen Zwickau complex employed 8,820 and had produced more than 4.5 million vehicles since its opening in October 1996. The automaker also employed 1,837 at its 650,000-capacity Chemnitz engine operations, which through 2015 had manufactured more than 13.9 million four-cylinder engines since its August 1988 inauguration. With its eastern Germany base firmly entrenched in Zwickau, VW and its subsidiaries would go on to develop two more car factories in Saxony, the first of these was its transparent showpiece in Dresden.

VW Dresden's Transparent Factory

In April 1997, rumors circulated that pending an EC ruling on a $90 million state and local government incentive package, VW would build a second car factory in Saxony. The buzz grew louder three months later, when then-VW Chairman Ferdinand Piech spoke publicly about his ambitions to build a 12-cylinder VW ultra-premium sedan to contend with the Mercedes-Benz S-Class and BMW 7-series. On June 15, 1998, Piech's vision had morphed into reality, when VW revealed plans to construct a factory in Saxony's capital, Dresden, where it would launch annual output of 40 to 50 handcrafted Horch brand ultra-luxury cars by 2000 (See Table 4.1).[9]

In mid-September 1998, VW disclosed the site as a run-down tract at the intersection of Stubel and Lenne Strassen (Streets), situated not far

[9] *New York Times* (1997); Israel (1998); Penson (1998); Diem (1999).

Table 4.2 VW Zwickau (Mosel) car production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
VW Zwickau	**301,301**	**239,014**	**220,601**	**226,212**	**262,376**	**248,915**	**212,721**
VW Golf	263,150	225,920	182,048	159,127	170,475	183,572	160,511
VW Passat	38,151	13,094	38,553	67,085	91,901	65,343	52,210

Sources: Adapted by the author from VW Sachsen (2003–2015, 2016).

from Dresden's city center. This was followed up on November 27, 1998, when the auto group's board approved a request to invest as much as $219 million in the plant. According to company officials, the parcel located in Dresden's Strassburger Platz section was selected because it promoted environmentally sustainability by enabling workers to commute to the facility by trolley or bicycle, rather than by car. In keeping with this objective, the design plans called for automotive components to be delivered to the plant area by rail, where they would then be transferred to specially converted trams, rather than trucks.[10]

In contrast to this positivity, city leaders were initially reluctant to cede the inner city tract to VW, preferring to utilize the site for non-industrial purposes. These sentiments were fueled by local protests, which included a petition signed by 17,000 residents voicing their objections to the plant being located in the center of the city. The Dresden government eventually caved, fearing that their economically distressed city would lose the plant and its jobs to Leipzig, a city located just 120 km (75 miles) northwest and also in Saxony, which was aggressively recruiting VW.[11]

In December 1998, the two sides signed an accord calling for an 800-worker, 40,000-capacity car factory. Thereafter, VW established the wholly owned subsidiary, Automobilmanufaktur Dresden GmbH, to oversee the project, and on July 27, 1999, commenced construction of its new plant at Strassburger Platz. That same month, the German Government forwarded its report on the project to the EC. According to the proposal summary, VW was to invest a total of $787 million on a 20,000-capacity glass-walled car factory and two other complementary plants in and around Dresden. If all went as planned, the automaker was to raise capacity to 37,500 and thereby, create 2,000 jobs. In exchange for its investment, the State of Saxony was to provide VW with $102 million in subsidies.[12]

[10] *Bloomberg* (1998); Glancey (1999).
[11] *Bloomberg* (1998); Glancey (1999).
[12] European Report (1999); VW Sachsen (2003–2015); VW Dresden (2015a).

On September 17, 1999, at the Frankfurt Motor Show, VW wowed the crowd by unveiling a prototype for a new 5.0 L ten-cylinder, 317-hp diesel-engine ultra-luxury car. At the showing, Chairman Piech declared that this was the model that would crafted at his company's soon-to-be opened VW Dresden Plant. The all-wheel drive, full-size five-door fast-back, however, was not to wear a Horch marque, but rather be known as the VW Phaeton. Seven months later, on April 25, 2000, the *Die Glaserne Manufaktur* ('Transparent Factory') was completed, but its launch would wait another year. The stumbling block was the EC Competition Committee, which concerned that the State of Saxony's proposed incentive package to VW was unjustifiably too large.[13]

Related to this, on November 24, 1999, the EC declared that it would launch investigations into the state aid provided to two car factories in Europe: VW Dresden; and $41 million in subsidies offered for Fiat's $229 million investment in its Melfi Plant in southern Italy.[14] The EC stated that Germany's proposal request had failed to demonstrate how the planned aid was compatible with the fairness principles governing Section 2454 of the European Community's directive on motor vehicle production.[15] It also claimed that VW Dresden's case did not justify an exemption under Article 87 subsection 2 (c) of the EC Treaty, which allowed for special dispensations to certain areas in East Germany that were economically disadvantaged during the period when Germany was divided. German authorities countered by stating that the aid was necessary in order to encourage VW to keep its production within the EU Area, as opposed to locating it on a rival tract in Prague, Czechia (then not in the EU). A site in Berlin was supposedly an alternative option for the Dresden plant.[16]

Perhaps to sway the EC decision, in July 2000 VW announced its intentions to also produce a newly developed Bentley ultra-luxury model in Dresden and thereby, create another 900 jobs. This was a surprise, as

[13] Diem (1999); VW Sachsen (2003–2015); VW Dresden (2015a).
[14] *Financial Times* (2001).
[15] European Report (1999).
[16] European Report (1999).

the car was expected to be built at Bentley's main Pyms Lane Works in Crewe, Cheshire, England. The EC would have none of it, however, as on July 18, 2001, it finally rendered its decision on the Dresden, which was that only $64 million in state subsidies for the Transparent Factory were warranted.[17]

With the outcome behind it, on December 11, 2001, the Transparent Factory was officially opened. By that time, VW claimed to have invested $365 million in the facility, whose exterior façade and internal work stations more resembled an architecture studio than a foundry. Production of the VW Phaeton launched that day, with the first vehicle delivered to its intended customer on June 28, 2002. Whereas car bodies for the Phaeton were supplied by VW Zwickau (Mosel), its W12-cylinder motors were built at VW's Salzgitter Works near Wolfsburg and its six and eight-cylinder petrol and ten-cylinder diesels were manufactured at VW's Audi plant in Gyor, Hungary (See Chapter 7).[18]

A total of 371 Phaeton were produced in Dresden in 2011, expanding to 3,403 in 2002 and to a high of 6,189 in 2008. As shown in Table 4.3, output then backtracked to 4,071 during the economic crisis of 2009, before rebounding a new highs of 7,503 in 2010 and an all-time peak of 11,166 in 2011. On the other hand, none of the other rumored cars, including the Bentley Continental GT two-door fastback and a proposed ultra-luxury SUV were ever assembled at the plant. Production of a W12 ultra-premium platform mate of the Phaeton, the Bentley Flying

Table 4.3 VW Dresden car production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
VW Dresden	**3,254**	**4,449**	**5,867**	**10,190**	**11,166**	**7,477**	**4,071**
VW Phaeton	2,924	4,061	5,812	10,190	11,166	7,477	4,071
Bentley Flying Spur	330	388	55	—	—	—	—

Sources: Compiled and Adapted by author from VW (2000–2016); VW Sachsen (2003–2015).

[17] *Financial Times* (2001).

[18] Unless otherwise noted the remainder of this section draws upon: VW (2000–2016, 2016a, 2016b); VW Sachsen (2003–2015); VW Dresden (2015a, 2015b, 2016).

Spur four-door sedan, did launch in Dresden, however, on November 3, 2013. Unfortunately, by that time demand for the Phaeton had already significantly declined. As a result, only 5,812 Phaeton were assembled in 2013, along with 55 Bentley, followed by 4,061 and 388, respectively, in 2014. In addition, to help rein in costs, on April 1, 2014, the Transparent Factory and its related facilities were merged into VW Sachsen GmbH, which also consisted of the VW Zwickau and Chemnitz engine complexes.

In calendar year 2015, output in Dresden again contracted to just 3,254, consisting of 2,924 Phaeton and 330 Bentley. As of December 31, 2015, VW Sachsen employed a combined 11,182 workers, including: 8,820 in Zwickau; 1,837 in Chemnitz; and 525 in Dresden. VW also claimed that these factories induced the creation of an additional 30,000 jobs at local components, machinery/equipment, trade, and service firms. In the wake of its post-September 2015 diesel emissions scandal, however, and with demand for the car continuing to decline, on December 17, 2015, the German automaker announced plans to discontinue production of the Phaeton in March 2016.[19] This occurred on March 18, 2016, when the final petrol-powered Phaeton rolled off the Transparent Factory's assembly line, after only 84,253 total cars were built in the plant's 15-year history. The facility was then idled, and was expected to remain that way until the all-electric Phaeton model was ready for launch in 2019. On November 17, 2016, however, VW changed course, by declaring its intentions to commence output of its new e-Golf in Dresden in April 2017. This brings surprising new hope for the future of its showpiece, 'Glaserne Manufaktur'

Porsche Leipzig

On September 17, 1999, Porsche AG announced plan to invest $53.2 million and build a new SUV Plant in Leipzig (See Table 4.1). The facility was expected to initially produce 20,000 SUV per year and

[19] Also see Reuters (2015).

employ 260 workers. No incentive package was revealed at the time. Roughly two hours closer to the German seaports of Emden and Bremerhaven than Porsche's main complex in the Zuffenhausen district of Stuttgart, officials claimed that the Leipzig site provided the company with better access to foreign markets, especially North America. This was important given that a projected two-thirds of the factory's output was to be exported out of the country. Leipzig's all-out last-minute offer to win VW's Transparent Factory, also likely factored into this decision.[20]

Upon launch, the new Porsche Leipzig Plant was to become part of a joint production network with VW, which already encompassed Porsche Zuffenhausen, VW Slovakia in Bratislava, and VW Wolfsburg's related factories. In addition, the platform (PL71) for the new Porsche SUV was to be shared with a new VW luxury SUV (Touareg) to be built in Bratislava, although the two vehicles were to have distinctly different styling and pricing (See Chapter 6). Finally, it was announced that whereas the engines were to be manufactured at Zuffenhausen and many of the components were to be machined by Porsche's own suppliers, car bodies for the new model were to come from VW Slovakia, suspension components supplied by VW Braunschweig, and sheet metal pressings produced at either VW Hannover or Wolfsburg.

Construction of Porsche Leipzig was to begin in the autumn of 1999, with output of the new model to commence in late-2001. The production hall was completed in September 2000, but it was not until August 21, 2002, however, that the plant and adjacent test tracks were officially opened, and until December 2002, before serial production of the Porsche Cayenne sports SUV was actually launched.[21] By then, company officials claimed to already have received 25,000 orders for the vehicle. The factory essentially filled these orders by the end of Porsche's 2002–2003 Fiscal Year (FY) on June 30, 2003, with 24,925 Cayenne and seven pre-production versions of the $440,000 Porsche Carrera GT supercar built during this period.

[20] Unless otherwise noted, the Porsche Leipzig draws upon: *PR Newswire* (1999, 2002); VW (2000–2016, 2016a, 2016b); Porsche (2006–2016).

[21] Also see Landler (2002).

Serial production of the Carrera began in Leipzig in August 2003, with plant output expanding to 42,014 in FY 2004–2005, before hovering between 31,002 to around 36,173 over the next six FY. The exception to this was FY 2007–2008, when 48,503 vehicles were produced, including the last three Carrera were built. Conversely, on April 2009, the first Porsche 970 four-door luxury fastback was assembled in Leipzig and debuted at the Shanghai Auto Show. Dubbed the Panamera, Porsche's first sedan came equipped with Zuffenhausen-built engines and VW Hanover painted car bodies. As presented in Table 4.4, a total of 1,920 Panamera were produced in Leipzig in FY 2008–2009.

By FY 2009–2010 however, the Porsche was in the midst of a major corporate restructuring. This began in June 2007, when Porsche Automobil Holdings was created to oversee the Porsche family's assets, which at the time included a 100% interest in Porsche AG and a 20% share in VW acquired in 2005. By January 5, 2009, Porsche Auto Holdings had increased its stake in VW to 50.76%. Unfortunately, this investment and subsequent efforts led by then-Chairman Wolfgang Porsche to acquire even greater control of VW proved costly, throwing the company billions of dollars in debt at a time when capital markets were being squeezed by the world economic crisis.

In contrast, VW was awash in cash, prompting the two auto groups' boards to sign an agreement on September 11, 2009 to merge their collective operations by 2011. As part of the accord, Chairman Porsche was forced to cede control of his carmaker to VW management, ironically led by his cousin, Ferdinand Piech.[22] Although VW did not gain a 50.1% majority interest in Porsche until August 1, 2012, this decision effectively made Porsche a division of the VW Group on par with its other luxury high-performance brands, Audi, Bentley, Bugatti, and Lamborghini.

Following the reorganization, any decisions regarding the Leipzig Plant vehicle mix were greatly influenced by VW in Wolfsburg, and production data reporting was switched to on a calendar year basis. The new structure also accelerated the expansion of Porsche production levels

[22] Also see Dougherty (2009).

Table 4.4 Porsche Leipzig car production, 2009–2015

	2015	2014	2013	2012	2011	2010	FY2010	FY2009
Porsche Leipzig[a]	**164,968**	**147,751**	**107,026**	**110,264**	**93,838**	**63,524**	**31,022**	**34,560**
Porsche Cayenne	86,016	66,005	81,916	83,208	62,004	39,428	22,833	32,640
Porsche Macan	63,897	59,363	312	—	—	—	—	—
Porsche Panamera	15,055	22,383	24,798	27,056	31,834	24,096	8,189	1,920

Sources: Compiled and adapted by author from VW (2000–2016); Porsche (2006–2016).
[a] FY2009 and 2010 ended on June 30 of each year. Thereafter, Porsche reported output on a calendar basis.

and model lineup in Leipzig, resulting in output jumping to 63,524 in calendar year 2010, and then 93,838 in 2011. In addition, in March 2011, VW and Porsche declared their intentions to invest another $728 million in its Leipzig Plant, in order to prepare the factory for a compact CUV internally known as Cajun (i.e., the Cayenne Jr.), but dubbed the Macan in February 2012. The EC would approve the German Government's $61 million incentive package supporting the project, which was to create more than 1,000 new jobs at the plant.

When completed in November 2012, the 'Cajun' project had transformed Porsche Leipzig into a fully-fledged vehicle factory, with its own car body and paint shops. As a result, and due to rising demand for Cayenne, a third shift was added at the Leipzig Plant in January 2012. This boosted output to 110,264 in 2012, including a record 83,208 Cayenne, and employment to 2,500 at the end of that year. Another 107,026 vehicles were produced the following year, including 312 Macan. Equipped with the same VW modular longitudinal (MLB) platform architecture underpinning the Audi A4 to A8 sedans and Q5 and Q7 SUVs, the Macan debuted at the Los Angeles Auto Show on November 20, 2013. Output of retail models launched at Porsche Leipzig in December 2013, with serial production commencing in January 2014; the official public opening ceremony for the new line occurred on February 11, 2014. In large part because of the Macan, vehicle output at the factory rose to 164,968 in 2015 and employment expanded to 3,667 as of December 31, 2015. This included a record 86,016 Macan, along with 63,897 Cayenne and 15,055 Panamera (See Tables 4.1 and 4.4).

This growing commitment was cemented further when on March 18, 2014 Porsche announced that it was shifting car bodies manufacturing for the Panamera from VW Hanover to Leipzig. Conversely, in order to accommodate more Panamera output, VW revealed that complete manufacturing of the next generation Cayenne would be transferred to VW Slovakia by 2016 (See Chapter 6). Next, in July 2014, in an effort to relieve bottlenecks related to rising demand for the Macan, VW announced that some Cayenne also would be produced at VW Osnabruck. The factory in the State of Lower Saxony began this task in summer 2015, and built 15,803 Cayenne in that year.

Despite its changing vehicle lineup and the fallout from VW's 2015 Diesel Crisis, the future appears very bright for the 165,000-capacity Porsche Leipzig Plant. On the other hand, the unknown outcome of an ongoing legal battle between Porsche and VW shareholders over control of the two companies, could cloudy this outlook.

GM-Opel Eisenach and its Links to BMW

The Original Eisenach Works and BMW

Originally an aircraft engine manufacture, Bavarian Motors Works or BMW, entered the car business not at its current home of Munich, Bavaria, but rather in Eisenach, Thuringia. This occurred on November 14, 1928, when the company acquired the Eisenach Vehicles' Dixi Car Works from the railway coach manufacturer, Gotha Wagon. Founded on December 3, 1896, Eisenach Vehicles built its first electric and petrol automobiles under its own marque in 1898. This made it Germany's third established carmaker after Daimler and Benz. It then briefly marketed its products as Wartburg, before building its first Dixi brand car in 1904, equipped with a Karl Benz two-cylinder engine.[23]

By WW-I, Eisenach was assembling a wide range of Dixi cars, some of which were popular enough to export to Britain and France, where they were sold as Leander and Regina, respectively. After the war, however, the company ran into financial difficulties and was taken over by Gotha Wagon in 1921. Thereafter, its factory was renamed Dixi Works Eisenach to match its model line.

At the time of BMW's takeover in 1928, the Dixi Eisenach was assembling two mini-compact models: the Dixi 3/15 and Dixi 9/40. After the ownership change, the renamed BMW Factory Eisenach continued to produce the 3/15, initially as the BMW-Dixi 3/15 DA-1 and beginning in July 1929, as merely the BMW 3/15 DA-2. This thus

[23] Original Eisenach Works draws upon: Norbye (1984); Georgano (2000); Robson (2008) Schlegelmilch et al, (2008); Thompson (2011); BMW (2014); Jacobs (2016).

made the tiny 15-hp 3/15, an Austin Seven knockoff built under license with the British automaker since December 1927, the first model to wear the company's iconic blue, white, and black circular emblem and the original antecedent of today's 'Ultimate Driving Machines.'

Between its production launch in mid-April 1929 and when Dixi's agreement with Austin expired on March 1, 1932, BMW Eisenach manufactured 18,976 of the 3/15; this included 882 of the 3/15 Wartburg roadster. The 3/15 was then replaced by the BMW 3/20, the first car built based upon BMW's own designs. Over the next ten years, BMW introduced eight new vehicles, all equipped with six-cylinder engines and dubbed as '300 models,' beginning with the 303 sedan in 1933 through the 335 Cabriolet Graber luxury sports sedan introduced in 1939. During this period, the Eisenach factory was gradually expanded until it became landlocked by adjacent properties and roads. At the time, BMW's main plant in Milbertshofen, Munich (today's Olympic Park Area) was manufacturing airplanes and motorcycles for the Third Reich's war apparatus.

Some 79,000 BMW-badged automobiles were produced in Eisenach through 1941, with the final one of these constituting the last vehicle built by BMW in East Germany for more than 60 years. The following year, civilian vehicle output was halted in Eisenach, and the factory was ordered to manufacture aircraft engines and motorcycles for the German military apparatus. This move led to Eisenach Plant suffering heavy damage during the Allied bombing raids of 1944 and ended BMW's tenure at the factory.

Automobilwerk Eisenach Under Socialism

In July 1945, the State of Thuringia became part of the Soviet Occupation Zone of Germany, and similar to Auto Union's facilities in Saxony, BMW Eisenach was placed under the control of *Sowjetische AG Maschinenbau Awtowelo*. Car production re-commenced in November 1945, with workers assembling BMW 321 from whatever useable parts they could find in the factory ruins. Most of these cars were either shipped to the Soviet Union or sold in the Occupation Zone.

Soviet Avtowelo BMW Eisenach Works built 2,398 cars in 1948, with some of these BMW-badged vehicles exported to Belgium, Sweden, and Switzerland. This continued until 1952, when BMW Munich filed a lawsuit in West German court in an attempt to prohibit Eisenach from using the marque. The plant was subsequently bequeathed to the East German Government and renamed *Eisenacher Motoren-Werke* (EMW). In turn, the vehicles were re-branded as EMW and sold only in Eastern Bloc nations. At that time, EMW workers also were assembling IFA 309 (formerly the F9), after production was to the plant from IFA's AWZ Mosel in March 1953 (See Audi Origins).[24]

In 1955, BMW's lawsuit was concluded in its favor, and the EMW marque and production of BMW knockoff cars was ended. It would be another 50 years before another BMW was built in the territory of the former East Germany (See BMW Leipzig). The factory was then renamed again, this time to VEB *Automobilwerk Eisenach* (AWE), and in October 1955 began assembling pre-production models of the Wartburg 311 sedan. The vehicle essentially was the same mechanically as the IFA 309, but came equipped with a new body and stampings. Soon after, the Wartburg 311 lineup was extended to include a full range of editions, including a coupe, cabriolet, Kombi and Camping station wagon, pickup, and jeep editions. Whereas all of these models received outer shells from VEB Car Bodies in Dresden, final assembly of the Camping variant also was carried out at Dresden, and the Kombi and jeep versions were built at VEB Halle (in today's State of Saxony-Anhalt).

Exports to West Germany commenced in 1958 and some of these vehicles even reached American, where around 1,100 Wartburg were sold between 1958 and 1961. Sales in the U.S. stalled, however, due to tensions of the Cold War and the start in construction of the Berlin Wall on August 13, 1961. Output of Wartburg 311 at AWE nonetheless continued until the end of 1965, after the last of 258,928 built since 1955 was produced. Slightly more than 50% of these units were

[24] Automobilwerk Eisenach draws upon: Ward's (1958–2014); Georgano (2000); Robson (2008); Schlegelmilch et al, (2008); Thompson (2011); BMW (2014).

exported to 50 countries, including Britain beginning in 1964, with approximately one-third shipped to Czechoslovakia and Poland.

The 311 was succeeded by the Wartburg 312 on September 1, 1965, and then by the 353 on June 1, 1966 (Knight in England). The Wartburg 360, on the other hand, never reached the production stage, with AWE bailing out of the joint project with Skoda of Czechoslovakia in October 1974 (See Chapter 5). In the interim, British exports of the Wartburg 353 were halted as by then the car no longer met that nation's new stricter emissions standards. Perhaps not coincidentally, production of the vehicle peaked at 51,813 in 1974, the year in which the British policy was first announced.

On March 3, 1975, the 353 W (Advanced) replaced the 353 and proved the most popular among the Wartburg, with 868,976 built at AWE between 1975 and February 1989. Output rose to 57,565 in 1977 to a peak of 74,231 in 1986. By comparison, 356,330 units of the 353 were manufactured at the plant between 1966 and 1975. As production of the 353 W was being wound down, the final AWE model, the Wartburg 1.3 was introduced on October 12, 1988. As discussed earlier, the first Wartburg to receive a four-stroke motor, the car was equipped with the 1.3 L four-cylinder engines built by VW at VEB Barkas and used in some VW Polo Mk2 models (See Audi Origins).

Nonetheless, with the fall of State Socialism and the Berlin Wall on the horizon, the outdated and over-priced 1.3 model was unable to compete with other compact cars, even in its home market. As a result, by the end of 1989, AWE was in desperate need of a cash infusion to stay afloat. This lifeline supposedly came in December 1989, when AWE decided to join IFA in its joint venture with VW. As part of the arrangement, the Eisenach Plant was to build the 100,000 VW Jetta annually. However, three months later, believing that VW was promising something that it would never deliver, the Eisenach workers council voted against the arrangement, and instead opted for a tie-up with GM's Adam Opel division.

GM-Opel Eisenach

Adam Opel AG has been a division of GM since March 11, 1929, when the American automaker acquired a 76% holding in the German

automaker Opel for $30 million. Two years later, GM purchased the remaining 24% share in the company based in based in Russelsheim, Hesse. Along with the worldwide economic depression, GM's takeover of Opel acted as a second important catalyst driving the merger to create Auto Union in 1932.[25]

From November 18, 1934 until August 6, 1944, when British bombing raids destroyed nearly one-fifth of the factory, GM-Opel assembled 130,000 Opel Blitz commercial trucks at its 25,000-vehicle capacity plant in the City of Brandenburg. Between 1940 and 1943, the nearly 4,300-worker factory also assembled Auto Union licensed chassis for an all-wheel drive, mid-size military car model that was shipped for final assembly to Ambi Budd Presswerke in Berlin. After the war, both the heavily damaged Opel Brandenburg and Budd car body factories became part of the Soviet Occupation Zone. Thereafter, the remains of the two factories, as well as of Opel Russelsheim, were dismantled and transported to Moscow as war reparations.[26]

Approximately 45 years later GM re-entered East Germany, when on March 11, 1990 it declared that its Opel Division had entered into an agreement with AWE to jointly produce as many as 150,000 vehicles annually in Eisenach. GM was to invest approximately $600 million in the project, with the majority of its output to be sold in East Germany and Eastern Europe. These statements were based upon the assumption that new car sales in East Germany would quickly double from 200,000 to 400,000 per year once the Ostmark and Deutschmark achieved parity.[27]

On May 25, 1990, GM informed its shareholders that it planned to launch output of its Vauxhall Cavalier at the 77,000-capacity, 9,500-worker AWE in the fall of 1990 and initially build 10,000 Opel Vectra. The automaker claimed to have been lured to area by AWE's capable labor force, which at the time was earning just 40% of the wages paid to

[25] *New York Times* (1929a, 1929b, 1929c, 1929d); Georgano (2000); Thompson (2011).
[26] Georgano (2000); Thompson (2011).
[27] Reuters (1990b); Prokesch (1990); Protzman (1990).

their counterparts at the Opel Bochum and Russelsheim car factories in West Germany.[28]

Production of the first-generation Opel Vectra compact commenced at the renamed Opel-AWE PKW on October 5, 1990 (See Table 4.1).[29] Thereafter, the two-shift, 200-person Vectra related workforce began assembling about 50 cars per day. Output of the Wartburg 1.3 also briefly continued at AWE during this transition stage. After assembling 70,204 Wartburg in 1989, a total of 52,237 were built in 1990, followed by 7,200 in 1991. This brought the final count of all Wartburg produced at AWE between October 1955 and April 10, 1991 to 1.54 million.

Meanwhile, on December 12, 1990 GM revealed the second half of their intentions in Eisenach when they announcement intentions to construct a new $675 million, 150,000-capacity car plant in the area. More details came the next day, when it was revealed Opel had acquired a 71-hectare (176-acre) tract from AWE in Eisenach's Gries Business Park in which to build the 2,600-worker factory. More than 20,000 people would apply for these positions.[30]

Construction of the state-of-the art, lean production process-oriented facility began on February 7, 1991. Fourteen months later, on April 19, 1992, the last Vectra was assembled at Opel-AWE and the old factory was shuttered. Production in Eisenach was then idled until September 23 1992, when the first Vectra rolled off the assembly line at GM's brand new Opel Eisenach Works. Soon after, output of the successor to the Opel Kadett E, the Opel Astra F, was initiated at the new plant. An estimated 78,000 Vectra and Astra were assembled at the two Eisenach Plants in 1992. One minor setback for the local economy was the fact that these cars came equipped with engines manufactured not by local supplies, but by GM's new joint venture plant in Szentgotthard,

[28] Levin (1990).

[29] Ward's (1958–2014); Thompson (2011).

[30] AP (1990); Thompson (2011).

Hungary; in March 1992 GM Hungary also had begun KD assembly of a small allotment of Astra F (See Chapter 7).[31]

By June 1993, Opel production in Eisenach had been changed over from the Vectra and Astra to the second-generation Opel Corsa B. To accommodate the car employment was expanded over the next four months to 1,840 at the now fully operational, 160,000-capacity plant. The added workers enabled output to grow to 129,438 in 1994 and to a then plant record 158,710 in 1995. The decision to switch to Toyota's just-in-time, lean productions system not only helped boost output levels but also won the factory international recognition. This came from Economist Intelligence Unit's annual productivity survey, which named the Eisenach complex Europe's most efficient auto factory in both 1994 and 1995. Interestingly, the vast majority of the workforce at the facility also had worked build Wartburg at the highly inefficient AWE Plant.[32]

Nonetheless, despite these accolades and its advanced technology and processes, in 1995 the new Opel Eisenach Plant was not GM's lowest-cost assembly plant in Europe. This distinction belonged to its much larger Opel Zaragoza in Figueruelas, Spain, which launched in 1982 specifically to produce the first-generation Corsa. Eisenach's cost-structure was suffering because it lacked a body-in-white shop, where sheet metal components for each car's body shell were welded together. As a result, 100% of the car bodies and 80% the components utilized for Corsa assembled at Eisenach were manufactured at Zaragoza.[33]

To rectify this situation, GM-Opel invested another $675 million during the 1990s to upgrade and enlarge Eisenach complex, including the construction of car bodies and paint shops. This propelled vehicle output to 167,793 in 1997. That next April, production of the Opel Astra G launched at the factory, followed by Corsa C supermini in late-2000. By 2000, however, GM Europe/Opel was reeling from: (1) consistent annual losses; (2) a sluggish German market; (3) rancorous

[31] Ward's (1958–2014); Thompson (2011).
[32] Ward's (1958–2014); Kurylko (1996); GM Europe (2001–2009); Thompson (2011).
[33] Kurylko (1996).

management-worker relations; (4) increasing labor costs; (5) an unexpectedly shrinking European market share prompted by GM's severe underestimation of demand for diesel engines; and (6) a management shakeup instituted by new Opel Chairman Robert Hendry. Complicating matters was the impending January 1, 2002 introduction of the Euro currency in Germany and 11 other nations.[34]

In response to the demand for diesel cars, in August 2002 GM acquired a controlling stake in Isuzu Motors' engine plant in Tychy, Poland (See Chapter 3). Opel already was sourcing diesel motors from the Japanese truckmaker, initially Isuzu 1.5 L E turbodiesels manufactured in Fujisawa, Japan. Once Isuzu Poland came online in June 1999, it began supplying the Corsa B with 1.7 L Circle L diesel engines. The shift enabled Opel to quickly expand European production of Corsa C equipped with diesels.[35]

Nonetheless, these efforts proved too little and too late, stymied by stagnating car registrations in Western Europe (down from 17.04 million in 2000 to 16.27 million in 2003), rising EU unemployment (up to 8.8% in 2003), and declining European stock exchanges, business and consumer sentiment indices plummeted. Adding insult to injury was the sharp rise in the Euro against the U.S. dollar, which not only stunted exports, but also cut into profits on vehicles shipped from Germany to North America and other areas outside the Euro monetary zone. The end result was production cuts and employment retrenchment in Germany, with vehicle assemblies at Eisenach falling to just 127,100 in 2003 and then to 115,249 in 2005.

Plant output rebounded to 144,900 in 2006, and then surged to a still plant-record 181,862 vehicles in 2007 (all Corsa). In contrast, overall Opel vehicle output in Germany continued its decade long decline. Perhaps in part due to the impending tightening in EU-wide regulations on CO_2 emissions, output in Eisenach, came in at a reasonable 156,972 in 2008, before declining to 133,038 in 2009.

[34] Ward's (1958–2014); Kurylko (1996); Howes (2000); GM Europe (2001–2009).

[35] The remainder of this section draws upon: Ward's (1958–2014); GM Europe (2001–2009); Opel (2010–2016, 2016); Rahn (2010).

By the latter year, however, overall Opel production in Germany had contracted to just 422,222, or off an incredible 59.41% from 1.04 million in 1997.

As if the 'high' Euro were not impactful enough, by 2009 the Great Recession had cast doubt on the very survival of GM's Opel division. The American Government bailout of GM helped save Opel, albeit barely, as GM's European operations still suffered a loss of $747 million in 2011. As a result, as shown in Table 4.5, vehicle output in Eisenach contracted to only 103,434 in 2013. In response, employment at the factory was cut from 2,000 on December 31, 2000 to 1,360 at the end of 2013.

On a positive note, on September 23, 2010, Opel announced plans to invest $120 million in its Eisenach Plant to prepare the factory's existing production line to build the automaker's new fuel efficient, low emissions city car, code-named 'Junior.' GM later placed the cost of this retooling at approximately $266 million, bringing total investments since the plant's opening to $1.6 billion.

After building the first 1,438 units of the some named Opel Adam hatchback in 2012, serial production commenced in January 2013, with a total of 53,778 Adam in that year (See Table 4.6). In September 2014 the Adam series was expanded to include the Adam Rocks crossover. As a result, Opel Eisenach manufactured a total of 118,739 cars in 2014 and then 116,248 in 2015. The latter year included 60,976 Corsa and 55, 272 Adam. This meant that Corsa output at the factory had fallen by two-thirds from its peak of 181,862 in 2007, and by half from 129,858 in 2011. This was not surprising, considering that Opel/Vauxhaull production in Europe contracted from 1.74 million in 2007 to 1.14 million in 2015.

Nonetheless, as a result of growing demand for the Adam, a third shift was re-hired in Eisenach in 2015, restoring employment at the complex to 1,850 as of December 31, 2015 (See Table 4.1). Moreover, and ironically, with the VW Crisis seeming to have more adversely affected GM's more heavily diesel-reliant German rivals, the future prospects for Opel Eisenach and its fuel-efficient petrol models could become very promising.

Table 4.5 Opel Eisenach car production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
Opel Eisenach	**116,248**	**118,739**	**103,434**	**107,461**	**129,858**	**139,193**	**133,038**
Opel Adam	55,272	58,614	53,778	1,438	—	—	—
Opel Corsa	60,976	60,125	49,656	106,023	129,858	139,193	133,038

Source: Compiled and adapted by the author from Opel (2010–2016).

Table 4.6 BMW Leipzig car production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
BMW Leipzig	**233,656**	**211,434**	**186,695**	**164,282**	**199,154**	**186,752**	**137,734**
BMW 1-series	19,554	28,081	52,549	46,880	63,115	76,669	97,301
BMW 2-series	150,206	65,677	2,032	56	—	—	—
BMW 3-Series		—	—	—	—	—	23,778
BMW X1 (E84)	32,985	92,767	129,305	117,346	136,039	110,083	16,655
BMW i3 EV	24,000	21,504	2,667	—	—	—	—
BMW i8 hybrid	6,911	3,405	142	—	—	—	—

Source: Adapted by the author from BMW Leipzig (2015–2016).

BMW Leipzig

After relinquishing its Eisenach Plant to the Soviet occupiers, BMW did operate in East Germany during the Socialist Era. Just prior to unification, however, in July 1990, the company revealed plans to set up a tool-making plant in Eisenach, which it opened 7 km (4.5 miles) west of its former Dixi Works in March 1992; the facility was 7 km north of Opel Eisenach. It was another nine years, however, before BMW announced its full-fledged return to the region. This process began on July 13, 2000, when the automaker declared its intentions to meet growing vehicle demand for its vehicles by constructing an automobile assembly plant in Europe. Approximately 250 European cities expressed interest in the facility, which when fully operational was expected to employ 5,400 people.[36]

By December 2000, five finalist locales had been revealed: Arras, France; Kolin, Czechia; and three areas in Germany—Augsburg in Bavaria and two sites in the former East Germany, the Leizpig-Halle Area in Saxony and Saxony-Anhalt, and Schwerin in Mecklenburg-West Pomerania. A site in Presov, Slovakia, situated approximately 32 km (20 miles) north of U.S. Steel Kosice was eliminated from consideration at this time (See Chapters 5 and 9). BMW also seriously considered: Berlin; Erfurt, Thuringia; and Magdeburg, Saxony-Anhalt.[37]

With the lowest tax rates and wage levels, the Kolin site had major economic advantages over the other four areas. Arras most prominent feature was its geographic location, being situated within 200 km (125 miles) of 28 existing assembly plants and nearly all of the leading automotive components suppliers in Europe. Additionally, its average wages at the time were approximately half that of German workers. Augsburg was considered attractive because it was only a one-hour drive from BMW's main plant in Munich. Schwerin's advantage was its export potential, as it was situated within 200 km (125 miles) of the

[36] Guardian (2000); Heinker & Gummelt (2005); Robson (2008).
[37] Heinker & Gummelt (2005).

major seaports of Hamburg and Bremerhaven, and approximately 350 km (220 miles) from the Port of Emden.[38]

By mid-2001, the choices were narrowed to two, Kolin and Leipzig-Halle, with BMW announcing its decision to locate in Leipzig on July 18, 2001. Seven days later, on July 25, the automaker cemented its commitment, by signing an agreement with the City of Leipzig to acquire land in North Leipzig Industrial Park (today's *BMW-Werk Industriepark Nord*) for its new $1.1 billion complex. Production of fifth-generation BMW 3-Series (E90) luxury sedans was scheduled to commence by spring 2005, with annual output scheduled gradually increasing to 209,000 by 2009. In exchange for locating in an economically distressed region, the German Government offered $369 million in aid for the project BMW. After a review by EC, on December 11, 2002, this was reduced to $320 million.[39]

BMW officials stated that they had selected North Leipzig because of its location in the geographical center of Continental Europe, within close proximity to both developed and emerging European car markets. In addition, the automaker was attracted to the area by its: skilled workforce; logistics and supplier bases; and energy and transportation infrastructure. The latter provided excellent access to the company's production, supplier, distribution, and sales networks via the A9, A14, and A38 autobahns. Conversely, despite its potential labor-cost savings, the Kolin site was ruled out over fears that language barriers and differences in education and training systems might have delayed the plant's launch.[40]

Site preparation commenced on the 229-hectare (566-acre) site in August 2001, followed by the official groundbreaking ceremony on May 7, 2002. The plant shell was completed exactly a year later, and over the next 12 months equipment was install and infrastructure around the facility was improved. In the meantime, the first 1,500 people were hired from a pool of more than 100,000 applicants, with half of this new staff

[38] Heinker & Gummelt (2005).

[39] BMW (2001); European Commission (2002); Heinker & Gummelt (2005).

[40] BMW (2001); *Automotive News* (2003); Heinker & Gummelt (2005).

being residents of the Leipzig-Halle Region and 90% being inhabitants of the former East Germany.[41]

By August 2004, the first 3-Series prototypes were completed in Leipzig, with serial production commencing on March 1, 2005 and the official grand opening of the then 2,500-worker complex plant taking place on May 13, 2005 (See Table 4.1). Also of note was the fact that the March 1 launch not only marked BMW's return to East Germany, but also represented the first car built in Leipzig in 97 years. Between 1904 and 1908, a local firm known as Polymobil Musikwerke AG produced vehicles in the Wahren section of Leipzig (then an independent town), first under a license from Oldsmobile of America, and in its final year under its own designed cars under its Dux brand.[42]

A total of 51,762 BMW 3-Series were produced at Leipzig in 2005, followed by 118,486 in 2006 and then 155,950 in 2007. Among the latter were 106,834 BMW 3-Series and 49,116 BMW 1-Series cars. At that time, 4,100 people worked at the complex, of which 2,300-plus were engaged by BMW and slightly less than 1,800 were by on-site suppliers and service partners. As presented in Table 4.6, after a recession induced downturn in 2009, output rose again to 199,154 in 2011. In the interim, BMW and supplier employment at the complex factory expanded to 5,500 and serial manufacture of the second generation 1-Series commenced on September 1, 2007 and of X1 CUV on September 1, 2009. Conversely, output of the 3-Series was ended at the factory in April 2009.[43]

Output at the 240,000-capacity BMW Leipzig Plant surpassed 200,000 in 2014, followed by plant-record 233,656 in 2015. The latter consisted of: 150,206 BMW 2-Series cars and MPVs; 32,985 X1 CUVs; 19,554 1-Series hatchbacks; 24,000 i3 electric vehicles (EV); and 6,911 i8 ultra luxury plug-in hybrid sports cars. Serial production of the i3 and i8 commenced on September 18, 2013 and March 11, 2014, respectively.

[41] Heinker & Gummelt (2005).

[42] Georgano (2000); BMW (2001); Heinker & Gummelt (2005); BMW (2003–2016); Robson (2008).

[43] The remainder of this section draws from BMW (2003–2016; 2015; 2016); BMW Leipzig (2015–2016, 2016).

This model mix represented a major change from 2010 to 2014, when the X1 was the primary vehicle assembled at the factory.

As of December 31, 2015, a total of 6,000 people were employed at the BMW Leipzig complex, including 4,700 BMW associates and 1,300 for on-site suppliers (See Table 4.1). A total of 800 of these workers were engaged at the factory's second assembly hall, a $500 million plant solely responsible for the production of BMW's lightweight, carbon-fiber-reinforced plastic, 'i' electric and hybrid vehicles. Including other enlargements, and the four 2.5-Megawatt wind turbines located on the site's western perimeter, this has brought BMW investment in the site to more than $2.5 billion as of 2016; these turbines currently provide 20% of the factory's energy requirements and were expected to supply 50% in the near future.

Overall, the complex's workers, on-site suppliers, and others in the region have greatly benefited from the factory's success. They also have significantly contributed to it, by enabling the automaker to implement its just-in-time delivery and just-in-sequence production process. In concert with the logistics firm DB Schenker, this system also has allowed BMW Leipzig to manufacture and ship CKD vehicle kits to its South African and Chinese plants for re-assembly and procurement. Overall, these attributes coupled with the Munich automaker's continual expansion in production and investment paint a bright future for BMW Leipzig Plant.

Conclusion and Near-term Outlook for the Eastern German Plants

As again shown in Table 4.1, the five assembly plants in the former East Germany—VW Zwickau and Dresden, Opel Eisenach, and Porsche and BMW Leipzig—collectively employed 20,862 workers as of December 31, 2015, and had an annual vehicle capacity of 875,000 in 2016. This constituted a major upgrade from 1989, when Socialist East Germany's Sachsenring AWZ in Mosel (150,000) and AWE (77,000) were capable of producing only 227,000 cars per year. As illustrated in Table 4.7, the

Table 4.7 Car production in the former East Germany, 1989–2015

	2015	2010	2005	2001	1989	Change 2001–2015	% Change 2001–2015
East Germany Total[a]	**819,427**	**645,861**	**432,145**	**422,250**	**213,204**	**397,177**	**94.06%**
BMW Leipzig	233,656	186,752	51,762	—	—	233,656	—
Opel Eisenach	116,248	139,193	115,249	137,250	—	27,718	20.20%
Porsche Leipzig[b]	164,968	63,524	38,716	—	—	164,968	—
VW Dresden	3,254	7,477	6,001	—	—	3,254	—
VW Zwickau	301,301	248,915	220,417	285,000	—	16,301	5.72%
AWE	—	—	—	—	70,204	—	—
Sachsenring Mosel[c]	—	—	—	—	143,000	—	—

Source: Adapted by the author from Tables 4.2 to 4.6, Ward's (1958–2014), VW Sachsen (2003–2015), GM Europe (2001–2009), and BMW (2016).

[a] Does not include LCV only plants or domestic carmakers that produced less than 500 vehicles in any given year.

[b] 2005 average of FY2005 and FY2006.

[c] Formerly known as Audiwerke and AWZ.

five plants produced a combined 819,427 passenger cars in 2015), an increase of 397,177 and 94.06% from 2001, when Opel Eisenach and VW Mosel together built 422,250 cars. By comparison, 213,204 passenger vehicles were produced in East Germany in 1989, including 143,000 at AWZ and 70,204 at AWE.

In addition to the final assembly plants, a combined 170 automotive suppliers were located in the Central German Metropolitan Region in 2016, an area formerly within East Germany and encompasses today's federal States of Saxony, Saxony-Anhalt, and Thuringia. With four of the five assembly plants within its borders, Saxony has benefited most from the auto industry related FDI and quasi-FDI from the former West Germany. This allowed it to post a growth rate of 1.9% in 2014, third-highest among Germany's 16 lander.[44]

While these facts represent strong positives for the region's future, the outlooks for its five existing car plants vary widely. Among the five, the two Leipzig factories, BMW Leipzig and Porsche have the rosiest outlooks. Both have seen their output increase by more than 42% and 54,000 vehicles since 2012. The only factor inhibiting the Porsche plant is its present capacity constraints, which have provoked a shift in Porsche Cayenne SUV production to VW Slovakia. The much lower labor costs and larger Bratislava factory also serves as a constant competitor to Porsche Leipzig for new Porsche models.

Conversely, the future prospects for VW Zwickau, VW Dresden, and Opel Eisenach appear more uncertain. In the case of VW Dresden, tepid sales prompted the discontinuation of its primary model, the VW Phaeton, and the temporary closing of the Transparent Factory in 2016. As for VW Zwickau, output has increased steadily since 2013, surpassing 300,000 units for the first time in 2015, and sales in Western Europe of its primary product, the VW Golf, have continued to grow. Nonetheless, these positive signs were tainted on September 18, 2015. It was then that the U.S. Environmental Protection Agency's (EPA) charged VW with using 'defeat device' software in its 2009 to 2015 models equipped with turbodiesel engines, as part of the automaker's

[44] See Invest Region Leipzig (2016).

efforts to circumvent U.S. Clean Air Act Amendment regulations for Nitric oxide (NO_x) emissions. This included Zwickau-built Golf TDI 'clean diesel' models.

The resulting settlement and car buybacks have cost the automaker $16.5 billion and tarnished its reputation worldwide. These outcomes, along with pending charges in Europe and Korea, have placed a figurative dark cloud over VW, and will result in significant cost-cutting, including as many as 25,000 layoffs by 2025. Coupled with higher relative wages as compared with other EU areas, it may also prompt the automaker to transfer some of Golf and Passat production to lower cost outposts in Czechia, Hungary, or Spain, where it builds their MQB platform mates, the Skoda Octavia, Audi A3, and SEAT Leon, respectively. On the other hand, VW's recent declarations to build EV at Zwickau, Golf EV at Dresden, and to maintain labor in Germany may result in a shift in production from Wolfsburg and other higher cost plants to eastern Germany.

As for Opel Eisenach, GM's history of reshuffling its production bases to cut costs, the existence of lower cost options in Poland, Spain, and elsewhere, could affect the Thuringia-based factory. Related to this, if the low level of car output in 2015 is a signal of things to come, it remains unclear whether or not the American automaker's December 5, 2014 closing of Opel Bochum in northwest Germany augurs well or serves as omen of things to come for Eisenach.

Nonetheless, in spite of these current and potential negatives, the overall future of automobile production in the former East Germany remains bright. As to whether the former area can attract another new assembly plant over the next ten years, these prospects appears fair at best, inhibited by fierce competition from lower wage CE nations, as well from Spain and now Romania, Serbia and Slovenia.

References

AP (1990) New Opel Plant. *New York Times*, 14 December, D5.

Audi (1996) *A History of Progress: Chronicle of Audi AG* (Ingolstadt, Germany: Audi AG).

Audi (2013) *Four Rings: The Audi Story* (Bielefeld, Germany: Delius Klasing Verlag GmbH).

Automotive News (2003) BMW Picks Culture over Cost for 3-Series Plant. 23 October, 24H.

Bloomberg (1998) VW to Update Plants, Develop New Models. *Los Angeles Times*, 28 November, 2.

BMW (2001) New BMW Group Plant To Be Built in Leipzig/Halle. July 18. BMW Corporate News: Archives 2001, http://www.bmwgroup.com/e/0_0_www_bmwgroup_com/investor_relations/corporate_news/news/2001/news200114.html, last 8 February 2016.

BMW (2003–2016) *BMW Group: Annual Reports*, for 2002 to 2015 (Munich: BMW AG), http://www.bmwgroup.com, last 8 December 2016.

BMW (2014) BMW History: Milestones, http://www.bmwgroup.com/e/0_0_www_bmwgroup_com/unternehmen/historie/meilensteine/meilensteine.html, last 8 February 2016.

BMW (2015) BMW Leipzig. Anniversary, A Reason to Celebrate: 10 Years of Production in Leipzig. March 20, http://www.bmw-werk-leipzig.de/leipzig/deutsch/lowband/com/en/index.html, last 8 February 2016.

BMW (2016). BMW Group: Manufacturing Facilities: Leipzig Plant, http://www.bmwgroup.com/e/0_0_www_bmwgroup_com/produktion/produktionsnetzwerk/produktionsstandorte/werk_leipzig.html, last 8 February 2016.

BMW Leipzig (2015–2016) BMW Leipzig Annual Output, 2005–2015. Email Correspondence from Corporate Communications, BMW Group Werke Leipzig, Berlin, and Eisenach, 4 November 2015 and 30 March 2016.

BMW Leipzig (2016) Welcome to BMW Plant Leipzig, http://www.bmw-werk-leipzig.de/leipzig/deutsch/lowband/com/en/index.html, last 8 February 2016.

Diem W (1999) The 'People's Car' Aims at a New Class of People. *New York Times*, 10 October, AU1.

Dougherty C (2009) Tables Turn in Porsche's Pursuit of VW. *New York Times*, 20 June, B1, B4.

European Commission (2002) Commission Reduces Planned Aid to BMW for New Car Plant in Leipzig (Germany). 11 December, http://europa.eu/rapid/press-release_IP-02-1850_en.htm, last 15 December 2016.

European Report (1999) State Aid/Motor Vehicles: Commission Probes Aid to VW's Saxony and Fiat's Melfi Plants. *European Report*, Section No. 2454, 27 November.

Financial Times (2001) EU Clears Aid for New VW Plant in Dresden. 19 July, 10.
Fisher L (1990) Rehabilitating the Image of the Two-Stroke Engine. *New York Times*, 8 July, F9.
Georgano N (2000) *The Beaulieu Encyclopedia of the Automobile* (Chicago: Fitzroy Dearborn).
Glancey J (1999) Arts: Architecture; Never Mind the Baroque Palace. Have You Seen Our Car Factory? It Just Might Work. *Guardian*, 2 August, T12.
GM Europe (2001–2009) *GM in Europe: Overview/Facts & Figures*, 2000 to 2008 (Russelsheim: GM Europe Communications).
Greenhouse S (1990) East German Auto Plant on the Brink. *New York Times*, 6 July, A6.
Guardian (2000) In Brief: BMW to Build New Factory. 14 July, 27.
Heinker H and R Gummelt (2005) *Automobile Perspektiven: Einblickein Das Neue BMW Werk Leipzig* (Leipzig: Passage-Verlag).
Howes D (2000) Opel Launches All-New Corsa. *Detroit News*, 3 September, 1C.
Invest Region Leipzig (2016) Automotive: A Strong Sector, https://www.invest-region-leipzig.de/english/diversity_of_sectors/automotive_and_supplier_industry.html, last 26 March 2016.
Israel B (1998) VW Plans Entry-Level Bentley. *Automotive News Europe*, 15 June, 1.
Jacobs A J (2016) *The 'New Domestic' Automakers in the U.S. and Canada: History, Impacts, and Prospects* (Lanham, MD: Lexington Books).
Kurylko D (1996) Eisenach Plant Sets New Standards. *Automotive News*, 28 October, http://www.autonews.com/article/19961028/SUB/610280857/eisenach-plant-sets-new-standards, last 30 March 2016.
Landler M (2002) Variations on the Family Car: Porsche Offering an S.U.V. *New York Times*, 17 December, C1.
Levin D (1990) G.M. Vote Backs Rise in Pensions. *New York Times*, 26 May, 29.
New York Times (1929a) General Motors Deal with Opel Is Closed: Will Make Chevrolets at Works of German Firm. 7 March, 4.
New York Times (1929b) Opel-Motors Deal is Reported Signed. 12 March 12, 8.
New York Times (1929c) Germans Plan Bloc to Vie with Motors: Purchase of Opel Works Induces Eight Firms to Combine, Berlin Says. 14 March, 14.

New York Times (1929d) General Motors Gets Opel as Ally: Corporation Announces Deal with Germany's Principal Automobile Manufacturer. 18 March, 12.

New York Times (1997) Just Add Money For 20 Years. 17 April, D6.

Norbye J (1984). *BMW—Bavaria's Driving Machines* (Skokie, IL: Publications International).

Opel (2010–2016) *Opel in Europe Facts and Figures: Year in Review*, for 2009–2015 (Russelsheim, Germany: Opel Corporate Communications).

Opel (2016) Eisenach Plant. Facts and Figures, http://media.opel.com/media/intl/en/opel/company_opel/plants/eisenach.brand_opel.html, last 30 March 2016.

Penson S (1998) Pick and Mix Car Plant Stalls on Site. *The Engineer*, 30 October, 3.

Porsche (2006–2016) *Porsche Annual Reports* for 2005/06 to 2015 (Stuttgart: Porsche AG).

PR Newswire (1999) Porsche to Build Plant in Germany for Production of Sport Utility Vehicle. September 17, 8122, http://www.prnewswire.com, last 27 March 2016.

PR Newswire (2002). Porsche Unveils the Cayenne and Officially Opens Its New Factory. August 22. Available at: http://www.prnewswire.com, last 28 March 2016.

Prokesch S (1990) G.M. Plans New Link in East Bloc: 150,000 Cars a Year Might Be Built at East German Plant. *New York Times*, 17 March, D1, D3.

Protzman F (1990) West's Exhibits Bring the Leipzig Fair to Life. *New York Times*, 14 March, D1, D6.

Rahn C (2010) GM's Opel to Build New Small Car at Eisenach, Germany Plant. *Bloomberg*, http://www.bloomberg.com/news/articles/2010-09-23/opel-to-build-company-s-new-small-car-at-its-plant-in-eisenach-germany, last 30 March 2016.

Reuters (1990a) VW Deal for Venture in East Bloc. *New York Times*, 13 March, D1, D9.

Reuters (1990b) G.M. Planning German Plant. *New York Times*, 13 December, D5.

Reuters (2015) VW to Suspend Production at Showcase Phaeton Plant. Automotive News, 17 December, http://www.autonews.com/apps/pbcs.dll/article?AID=/20151217/COPY01/312179960&template=printart, last 15 December.

Robson G (2008) *Inside the BMW Factories: Building the Ultimate Driving Machine*. (Minneapolis, MN: Motorbooks).
Schlegelmilch R, H Lehbrink and J von Osterroth (2008) *BMW*. Revised Edition (Potsdam, Germany: H.F. Ullmann).
Thompson A (2011) *Cars of Eastern Europe: The Definitive History* (Newbury Park, CA: Haynes).
VW (2000–2016) *Volkswagen AG: Annual Reports*, for 1999 to 2015 (Wolfsburg: Volkswagen Group).
VW (2016a) Volkswagen AG: Facts and Figures Navigator 2016 (Wolfsburg: Volkswagen Group).
VW (2016b). Volkswagen Group Production Plants, http://www.volkswagenag.com/content/vwcorp/content/en/the_group/production_plants.html, 1 December.
VW Sachsen (2003–2015) Aktualisierte Umwelterklarung: Fahrzeugwerk Zwickau/Mosel |Die Glaserne Manufaktur Dresden |Motorenwerk Chemnitz, 2003–2015 (Zwickau: VW Sachsen).
VW Dresden (2015a) 100 Years of Car Manufacturing in Saxony. A Moving History, http://www.glaesernemanufaktur.de/en/idea/car-manufacturing-in-saxony, last 12 December 2015.
VW Dresden (2015b) Die Glaserne Manufaktur in Dresden. A Modern Success Story, http://www.glaesernemanufaktur.de/en/idea/die-glaeserne-manufaktur, last 12 December 2015.
VW Dresden (2016). 2015 Transparent Factory Production, Email from Internal Communications, May 3.
VW Sachsen (2014) History of VW's Activities in the New German Federal States (Zwickau: VW Sachsen GmbH).
VW Sachsen (2016) Volkswagen Sachsen GmbH Home Page, http://www.volkswagen-sachsen.de/de.html, last 25 July 2016.
Ward's (1958–2014) *Ward's Automotive Yearbook*, 1958 to 2014 (Detroit: Ward's Communications).

5

Foreign Carmakers in Czechia

Introduction

The largest vehicle producer in the CE, Czechia has a long and storied auto industry history. As mentioned in Chapter 2, under the Soviet-led CMEA, Czechoslovakia's was designated as a core for small passenger car production in the Eastern Bloc. The center of this output was the state-owned *Automobilove Zavody Narodní Podnik* (AZNP) Mlada Boleslav Plant, a factory which produced Skoda brand vehicles and that was located on a site that has built cars for more than 110 years. Beginning with a review of Skoda Auto's birth during the early twentieth century and AZNP's development in Socialist Czechoslovakia, this chapter chronicles Czechia's five post-1989 foreign car assembly complexes. As displayed in Table 5.1, this includes: (1) VW's Skoda Mlada Boleslav, (2) Kvasiny, and (3) former Vrchlabi plants; (4) Toyota and PSA's TPCA Kolin joint venture; and (5) Hyundai Nosovice. Similar to other chapters, the discussion concludes by summarizing foreign-led auto production developments in Czechia since the fall of Socialism and speculating on its near-term future prospects.

A.J. Jacobs, *Automotive FDI in Emerging Europe*,
DOI 10.1057/978-1-137-40786-3_5

Table 5.1 Foreign car plants in Czechia

Firm	Origin	Place, Region	Announced	Production launched	Emp. 31 Dec 2015	Vehicle Output 2015	Vehicle Capacity 2016
		Czechia			**31,577**	**1,241,161**	**1,430,000**
VW Skoda[a]	Germany	Mlada Boleslav, Central Bohemia	Dec-1990	Apr-1991	21,299	537,621	600,000
VW Skoda[b]	Germany	Kvasiny, Hradec Kralove	Dec-1990	Apr-1991	3,374	142,286	180,000
TPCA	Japan-France	Ovcary, Kolin, Central Bohemia	Dec-2001	Feb-2005	3,464	219,054	300,000
Hyundai	S. Korea	Nosovice, Moravia-Silesia	Sep-2005	Nov-2008	3,440	342,200	350,000
VW Skoda[c]	Germany	Vrchlabi town, Hradec Kralove	Dec-1990	Apr-1991	779	x-Oct-2012	x-70,000

Sources: Compiled and adapted by author from Skoda (2001–2016, 2016c); HMMC (2011–2016, 2016) Jacobs (2013); TPCA (2016a, 2016b).

[a] Formerly AZNP and located adjacent to the original Laurin & Klement Plant that launched production in 1905 and merged with Skoda in 1925.

[b] Began building car bodies as Franisek Janecek Kvasiny Works in 1934 and was placed under the direction of AZNP in 1947.

[c] Currently builds gearboxes. Began as Vrchlabi Karoserie, the car bodies plant of Petera & Sons in 1908 and placed under AZNP in 1946.

VW and Skoda in Czechia

L&K-Skoda Auto's Beginnings in Mlada Boleslav

Located 66 km (41 miles) northeast of the capital of Prague via Czechia National Motorway 10 (D10/E65), the municipality of Mlada Boleslav in today's Central Bohemian Region has produced cars since 1905. It was in that year that the bicycle and motorcycle manufacturer Lauren & Klement (L&K) built its first four-wheel prototype, the L&K Type A Voiturette. L&K was originally established in Mlada Boleslav, Austria-Hungary by Vaclav Lauren and Vaclav Klement in 1895. The founders then moved their company to the current site of Skoda Auto in 1898, and by 1907 had sold 44 Voiturette and had expanded the company's plant site to 13,500 m^2 (145,300 ft^2) and 600 employees. In the meantime, L&K introduced a wide range of passenger cars, taxis limousines, and delivery vans, before focusing upon four-cylinder vehicles in the 1910s.[1]

During this period, L&K also absorbed Reichenberger Automobile-Fabrik (RAF) in 1912. Founded in 1907 and based in the textiles Town of Reichenberg (today's Liberec, Czechia), RAF built its first cars in 1908. Whereas RAF's larger models were developed in-house, its smaller models were licensed knockoffs of Hansa Automobil models, a firm situated in Varel, Saxony (Lower Saxony) that later built Borgward. Moreover, RAF had exclusive rights to produce Daimler of England's Knight-brand engines in Austria-Hungary. As a result, some of the L&K models equipped with Knight motors were based upon RAF designs and assembled at its works in Reichenberg; RAF also had granted a sub-license to Puch in Graz, a carmaker that was the forerunner to the Austria's Steyr-Daimler-Puch and today's Magna Steyr.

During WW-I, L&K Mlada Boleslav was converted into a truck, engine, and ordnance operations. Car output resumed after the war, but with the forced breakup of the Austria-Hungary in 1918, L&K's

[1] The L&K-Skoda Auto's Beginnings draws upon: Kozisek & Kralik (1995); Georgano (2000); Pavlinek (2008); Thompson (2011); Skoda Muzeum (2015); Skoda (2016b).

domestic market was dramatically reduced in size. In addition, the war had created strained relations with foreign nations, particularly with Russia's new Bolshevik-led Government, causing exports to dry up. This coupled with the unstable economic conditions of the now independent Czechoslovakia left L&K financially incapable of modernizing its now run-down, 58,000 m^2 (624,300 ft^2), 1,470-employee car, truck, bus, airplane engine, and agricultural machinery manufacturing works.

The situation worsened when a fire damaged a sizeable portion of the complex in 1924. In response, L&K turned for help to the industrial conglomerate *Akciova spolecnost drive Skodovy Zavody, Plzen* or Skoda Works Plzen, AS. During WW-I, Skoda had become the largest arms producer in Austria-Hungary, employing 36,000 people. After the war, however, its military works were dismantled and its massive Plzen compound was converted into a diverse industrial combine. Taken over by the French multinational corporation Schneider in 1919, by 1924 Skoda was manufacturing power station equipment, locomotives, heavy-duty tractors, and trucks, and its Plzen grounds also contained a sugar refinery and a brewery, among other operations.

Eager to branch out into the growing passenger car sector, Skoda gladly 'merged' with L&K in 1925 and placed Vaclav Klement in charge of the renamed Laurin & Klement-Skoda Automobile Factory in Mlada Boleslav. Following the merger, Skoda financed the much needed upgrades to the Mlada Boleslav complex, constructing a new assembly hall with a mechanized conveyor-belt, a coach-building/car bodies shop, and R&D facilities. This greatly improved production efficiency and the quality and quantity of output, enabling the complex to assembly more than 7,000 cars in 1929, including the last vehicle adorned with the L&K name (branded L&K-Skoda). Another 100 or so Skoda Hispano-Suiza luxury cars were built at the Plzen Works between May 1926 and January 1930. Prior to is merger with L&K, Skoda had acquired a license to assemble Hispano-Suiza through an agreement with the Seine, France branch of the Spanish-based carmaker.

On January 1, 1930, the then 215,700 m^2 (2.32 million ft^2), 4,250-worker Mlada Boleslav Works became a wholly-owned subsidiary of Skoda and was renamed *AS Automobilovy Prumysl* (ASAP) Mlada Boleslav. Thereafter, car assembly was ended in Plzen and vehicles built in Mlada

Boleslav were stamped with Skoda's winged arrow logo. Nonetheless, the 1930s was a topsy-turvy decade for Skoda's ASAP, beginning with a worldwide Great Depression, followed by a failed merger with Praga and Tatra, and ending in WW-II. In the midst of it all, the ASAP output contracted to just 1,607 in 1933 before improving aided by the introduction of the affordable, Skoda Popular car line in February 1934.

A total of 9,930 Popular Type-418, 420, and slightly larger Type-912 were assembled in Mlada Boleslav between 1934 and 1938. Accompanied by three more upscale and powerful models—the Skoda Rapid, Favorit, and top-end Superb luxury cars—the Popular not only helped ASAP surpass Praga and Tatra as the top-selling domestic brand by 1936, but served as the building block for Skoda's early post-war model line.

Unfortunately, Skoda's growing domestic and international success would soon to come crashing to a halt. After assembling 7,223 cars in 1937, the 5,642-worker Mlada Boleslav complex produced only 4,452 passenger cars in 1938. By October 21 of that year, the Third Reich had annexed the German speaking 'Sudetenland' border areas of Czechoslovakia and on March 14, 1939, had made Slovakia an independent, but subordinated nation. The next day, the Nazis seized control of the remainder of the fractured Czechia. Thereafter, ASAP and Skoda's other concerns were incorporated into Reichswerke-Hermann-Goring and ordered to produce military equipment and vehicles for the German war machine. In the process, vehicle production in Mlada Boleslav contracted from 7,052 primarily military vehicles (5,672 cars and 1,342 trucks) in 1939 to only 316 military trucks through May 8, 1945, when the heavily damaged car factory was liberated when the Nazis surrendered.

AZNP (Skoda) in the Socialist Period

In July 1945, the partially reconstructed Skoda Mlada Boleslav complex was again producing cars, beginning with the Skoda 1101, representing a restyled version of the pre-war Popular OHV subcompact. Output of the Superb also resumed later in 1945. In March 1946, the Mlada

Boleslav Works was separated from Skoda's other operations and nationalized as the AZNP Mlada Boleslav.[2]

In the meantime, Skoda and the entire nation experienced constant turmoil, as the Socialist, Communist, and Democratic Parties struggled for power, and the population was resettled along ethnic lines. Ultimately, on February 25, 1948, the pro-Soviet Communist Party had triumph and taken control of the new Czechoslovak Republic. AZNP was then authorized as the nation's sole producer of small passenger cars, and charged with building Czechoslovakia's own 'people's car.' It also was granted permission to produce vehicles under the Skoda name and logo. In exchange for this domestic monopoly, Skoda's commercial vehicle production was re-assigned to three Prague-based firms, Aero, Avia, and Praga. Conversely, Aero and Praga, along with Jawa, were ordered to cease car production and told to concentrate on airplanes, motorcycles, trucks, respectively. Finally, Tatra, which began assembling vehicles in 1898 in Koprivnice, Moravia (today's Moravia-Silesia), and whose rear-mounted, air-cooled engine T57 and T97 subcompacts had inspired Ferdinand Porsche's original VW Beetle, was assigned the task of building large luxury cars.

In the ensuing restructuring, two car bodies manufacturing plants, Petera & Sohne's (sons) Vrchlabi Karoserie and Franisek Janecek's Kvasiny Works, came under the direction of AZNP Mlada Boleslav in 1946 and 1947, respectively. Located in Bohemia (today's Hradec Kralove Region), the Vrchlabi Plant began stamping carriages and car bodies in 1908 and by WW-II had become one of Europe's biggest producers, supplying not only Skoda, RAF, Praga, and Tatra, but also Auto Union, Citroen, Fiat, Hispano-Suiza, Mercedes, Renault, and the European car factories of America's Chrysler, Ford, and GM, among others. In 1946, it was charged with the tasks of producing Skoda light delivery vans and ambulances.

Situated 80 km (50 miles) east of Vrchlabi and also in Bohemia (and Hradec Kralove), the Kvasiny Works launched in 1934, producing car

[2] AZNP (Skoda) in the Socialist Period draws upon: Myant (1993); Kozisek & Kralik (1995); Georgano (2000); Pavlinek (2008); Thompson (2011); Skoda Muzeum (2015); Skoda (2016b).

shells for Jawa 700 subcompacts that were assembled at Jawa's plant south of Prague in Tynec nad Sazavou (Central) Bohemia. The 700 was particularly noteworthy, as it represented a licensed copy of the DKW F4 Meisterklasse manufactured at Audiwerke Mosel by the east German-based Auto Union (See Chapter 4). Once under AZNP, the Kvasiny Works was initially assigned production of a small allotment of Skoda Superb luxury line and of 1101 roadsters.

With the onset of the Cold War in the 1950s, Soviets instructed the Czech Government to focus more heavily upon the defense industry. In response to this request and to create more space at Tatra's Koprivnice Works for military vehicles, output of Tatra 600 'Tatraplan' sedan was shifted to AZNP's Mlada Boleslav in 1951. As a result, in addition to annually building 3,000 units of the 1102 successor, the Skoda 1200, the plant also assembled 2,100 Tatraplan between 1951 and 1952. Interestingly, the 1952 version of the Tatraplan was equipped with a 2.0L, four-cylinder Fiat engine.

The year 1951 also year marked the end in production of Aero-Minor cars. The last vehicles were not built by Aero in Prague, however, but rather were Jawa designed automobiles equipped with Aero manufactured engines, Skoda Kvasiny car bodies, and Motorlet NP components. Motorlet then completed the final assembly of the car at its truck factory in the Jinonice section of Prague. Prior to WW-II, Motorlet was known as *Walter Tovarna na Automobiliy a Letecke Motory* (Walter Automobile and Aircraft Engine Factories) and produced, among other things, small and ultra-luxury cars. This included Czechoslovakia's most expensive car, the Walter Royal full-size sedan, and licensed copies of Fiat automobiles. Between 1931 and 1936, Walter assembled approximately 1,000 Fiat 508 Balilla, 508S, and 514 combined, as the Walter Junior, Junior S, and Bijou, respectively.

After 1951, Motorlet concentrated on its primarily business, aircraft engines, building Soviet-licensed motors for MIG fighter jets based upon Rolls-Royce designs (and eventually became part of General Electric of America in 2007). Conversely, AZNP's three car plants assembled a combined 67,071 vehicles in 1952. Of these, 38,118 were assembled in Vrchlabi, 15,594 in Mlada Boleslav and 13,359 in Kvasiny. Less than 50 of these were sold to private citizens in

Czechoslovakia, however, with the remainder either exported or purchased by public entities. This figure was incredibly low for a nation of then 12 million, even considering the high car prices to earnings ratios and anti-private car ownership sentiments in Eastern Bloc nations during this period.

In 1954, AZNP introduced the Skoda 1201 and the smaller and more affordable 440, with serial production of the subcompact affectionately known as the 'Spartak' commencing in 1955. A total of 75,417 units of the 440, accompanied by 9,375 of its slightly more powerful 445 twin were produced in Mlada Boleslav through 1959. The 445, along with the sportier 450 derivatives were introduced in 1957, with the latter built in Kvasiny.

In 1959, the successor to 440 and 445 were launched as the Skoda Octavia and Octavia Super, along with the update 450, called the Felicia. These models were followed by the Octavia Combi (wagon) and the 1202 wagon/LCV in 1961. The Octavia and Felicia names were again revived by VW for different models in the 1990s. The popularity of the 440/Octavia lines created major capacity bottlenecks for AZNP, and encouraged the Czech State to take a much greater interest in automobile production in its 1960 National Five-Year Economic Plan. The result was $280 million in investments for at the Mlada Boleslav factory that culminated in a doubling in the plant's area to 80 hectares (197 acres) and an increase in employment to 13,000 in 1964.

Among the new editions were: a brand new assembly hall; a 75,000 m^2 (807,000 ft^2) car bodies plant; a 60,000 m^2 (645,800 ft^2) machine shop; aluminum alloy and iron foundries; Czechoslovakia's first automated engine stamping and assembly line; and 13 km of interior roads (8.1 miles). Overall, 134 companies from 14 Eastern-Bloc and western nations, including Renault of France and British Motors contributed to the project, helping double vehicle capacity at Mlada Boleslav to 140,000 annually, with room to expand to 230,000 annually in the long-term; the old plant usually built around 28,000 cars per year.

The new structures also welcomed the launch of a true 'people's car' in April 1964, the rear-engine 1.0L four-cylinder, 45-hp Skoda 1000 MB compact sedan (MB for Mlada Boleslav). Nine years in the making, the affordable successor to the Octavia sold well in Eastern Bloc

nations through the end of its production run in 1969, with some even finding their way to West Germany. The car, however, had one unfortunate flaw as compared to its predecessors: Its rear-engine, rear-wheel drive (rwd) setup inhibited the production of station-wagon and light van versions. As a result, the older Octavia Combi was continued until 1971, nearly two years after the 1000 MB's successor, the 100, was introduced in 1969. This started the company's trend of producing two generations of a model at the same time (e.g., Skoda Octavia and Octavia Tour for the earlier edition).

AZNP car output rose from 56,211 in 1960 to 92,717 in 1966. More than three-quarters of the vehicles produced in 1966 were 1000 MB and nearly half were exported, including KD kits to New Zealand, Pakistan. and Turkey. More than 80,000 of the 1966 output was assembled in Mlada Boleslav, as compared with approximately 5,500 Octavia Combi in Kvasiny and about 5,000 Skoda 1202 in Vrchlabi.

A total of 443,141 of the 1000 MB and its mid-cycle 1967 refresh, the 1100 MB, were built between April 1964 and August 12, 1969, when a fire destroyed 600 machine tools and much of the older Laurin & Klement assembly plant. Undeterred, on August 25, 1969, production of the 1200 replacement, the Skoda 100 commenced at the new assembly hall. This helped boost AZNP output to 143,000 in that year, enabling Czechoslovakia to out-produce East Germany for the first time. The two-door sporty version of the 100, the Skoda 110 R Coupe, commenced in 1970, with 56,902 units of the fastback built in Kvasiny through.

While the sizeable additions to the complex during early-1960s spawned an impressive expansion in output and exports, funds for further modernization of AZNP's Plants were not forthcoming thereafter. This caused Skoda cars to lose their appeal at home and abroad. One reason for this was purely political-economic power relations. Beginning with the ascension of Slovak leader Alexander Dubcek to First Secretary of the Communist Party of what was now the Czechoslovak Socialist Republic on January 5, 1968, political-bureaucratic leadership in country attempted to institute political and economic reforms. Among other things, Dubcek's Action Program allowed for greater freedom of expression and organization and improved

international relations with the West. He also proposed policies to promote greater economic diversification and inter-regional equity, and the decentralization of some administrative functions.

Dubcek's platform, however, raised the ire of Soviet leader Leonid Brezhnev's administration, who pushed him to slow or retract his measures. Then, his continual reinforcement of his allegiance, the Kremlin forcefully demonstrated its position by sending Warsaw Pact troops into Czechoslovakia, seizing Prague, and taking the Czech leader and his staff into custody on August 20 and 21, 1968. Following eight months of non-violent resistance, Dubcek was forced to resign on April 17, 1969, and was replaced by Soviet-backed leaders who reversed his reforms.

Over the next two years, the new regime did their best to restore normalized relations with the Soviets. During this period, much of AZNP's top management also was replaced by hardline loyalists. Nonetheless, the 'Prague Spring' undoubtedly affected AZNP's position in the Eastern Bloc's hierarchy. First, although East German Trabant and Wartburg were exported to the USSR, shipment of the better equipped Skoda cars was not permitted. Next, pressured by the Soviets, AZNP cancelled its ongoing Skoda 720 and 740 vehicle projects in June 1972.

The scrapping of the 720 model was most significant, as AZNP had worked on the fwd, rear-engine replacement for the 1000 MB lineup since 1967. It then assembled its first experimental versions in 1968, before bringing in Giugiaro's Italdesign to restyle the car in 1969. By August of 1969, prototypes of the Giugiaro designed, Skoda 720 four-door sedan were readied, followed by a two-door twin of the Fiat 124 coupe. Production was planned to launch in 1973 with annual output scheduled to reach 120,000 by 1975.

Fearing that the car would outdo its own Fiat 124-based Lada 1200/VAZ 2101 model, however, the Soviets pressured Czech authorities to discontinue the project. The government obliged and ordered AZNP to concentrate on its collaboration with East Germany's IFA plants to produce a modern front-engine, fwd replacement for the Skoda 100/110, Trabant P601, and Wartburg 353. In the meantime, Giugiaro sold his design to VW, which transformed it into the VW Golf hatchback.

Launched in Europe in 1974 as a replacement for the Beetle, and released in North America as the VW Rabbit and the sportier Scirocco in 1975, the Golf would become one of the world's most popular cars for the next 40 years (See Chapter 4).

As for AZNP-IFA collaboration, it originally commenced in 1970 with plans to assemble three mirror models: the 1.0L Skoda S760 version in Mlada Boleslav; the 1.1L Trabant P760 model at Sachsenring #2 Mosel; and a 1.3L Wartburg 360 iteration at AWE in Eisenach. The lineup was to include a two-door hatchback, four-door sedan, and a four-door fastback coupe. Mlada Boleslav was to manufacture motors for the vehicles, AWE to build the transmissions, and Mosel to prepare the front suspension, steering, and driveshaft. Prototypes were readied that year and the production goal was set at 360,000 cars per year, split among the three plants. It was not long, however, before bickering over design control short-circuited the project. In October 1974, the project was scraped, when a worldwide recession induced by the Arab oil embargo/energy crisis finally provoked the East Germans, already clamoring for a lower cost domestic solution, to withdraw.

It was 14 years before an upgraded Wartburg 1.3 was introduced in Eisenach and 16 years before production of what was to become the new Trabant 1.1 was launched in Mosel. Meanwhile, the Soviets again refused to issue AZNP permission to produce its own front-engine, fwd model in Mlada Boleslav. This prohibition was codified in the CMEA agreements of the 1970s, which specified that only the East Germans could assemble such cars. The CMEA also prohibited Skoda from producing cars with larger than 1.2L engines.

Without the necessary license, Czech State funding for the project was withheld. Staff did their best to salvage the project, but in the end were only able to launch a slightly updated and restyled rear-engine, rwd Skoda 105/120 (1.0L/1.2L) in August 1976. In contrast of these disappointments, expanding domestic wages and growing demand provoked a more than 22.79% rise in Skoda car output by during the early 1970s, from 142,856 in 1970 to 175,411 in 1975. Imports also increased, with Trabant, Wartburg, Soviet Lada and Moskvich, Romanian Dacia (licensed Renault), and Yugoslav Zastava, Polish FSO and FSM (all licensed Fiat) subcompacts available to the masses. Additionally, more affluent Czechs had access to some British Leyland, Chrysler, Saab, and Toyota cars during this period.

A third factor inhibiting further upgrades to AZNP's operations was regional politics. In response to pressure from Slovak politicians, a growing share of government capital expenditures were directed to the less developed eastern half of Czechoslovakia during the 1970s. With respect to the car industry, the largest new outlay was allotted for a new 100,000-vehicle capacity Skoda Branch Plant in Bratislava. Yet, even this decision was clouded in uncertainty. Although established in 1971, construction on the planned *Bratislavske Automobilove Zavody* (BAZ) was delayed until April 1974, and it was not until April 1982 before the first passenger car, the Skoda Garde, was produced at the new factory. Based upon the 120 sedan, and representing the successor to the 110R coupe, output of the Garde originated at AZNP Kvasiny plant in September 1981, before being transferred to Bratislava (See Chapter 6).

Conversely, despite its need to modernize, in order to accomplish its delegated task of developing an enhanced S100 model, minimal funding was authorized to Mlada Boleslav. This situation was further complicated by the severe economic stagnation that overrun the USSR and Eastern Bloc during much of the 1970s. As a result, Skoda car production grew only slightly during the second half of the 1970s, to 183,745 in 1980. Approximately 5,700 of this was built in Kvasiny, with the remainder occurring at Mlada Boleslav. The Vrchlabi Works, which saw its production of 1203 LCV transferred to *Trnavske Automobilove Zavody* (TAZ) in Trnava (Slovakia) in 1974, assembled a few 1203-based special LCV in 1980. In other words, although domestic and CMEA demand may have warranted greater production, outside forces had limited annual car output at the main plant's to 178,000 during the 1970s, a far cry from the potential 230,000 suggested in 1964.

The situation improved little for AZNP's plants during the 1980s, again stymied by antiquated cars and insufficient State investment. For example, because of a lack of funds and the CMEA restrictions on its engines, Skoda exports were curtailed by among others things, the stricter emission control directives issued by European Economic Community member nations during the early-1980s. This was particularly the case for West Germany, which also required the full conversion to unleaded gasoline by 1989.

Left little choice, in November 1982 the Czechoslovak Government resolved to develop their own fwd, front-engine replacement for the Skoda

105/120 line by mid-1985 and launch production by 1987. It also granted AZNP permission to forge a licensing agreement with a Western automaker for a modern, four-cylinder engine for the new car. These negotiations, with Fiat, PSA Renault, and VW, went nowhere however, primarily due to the unreasonable demands of the foreign automakers. Realizing that they had their potential competitor at a sizeable disadvantage, the Western firms demanded that AZNP purchase licenses for complete cars or pay exorbitant fees for their engines and agree not to export Skoda outside of the Eastern Bloc.

Ill-equipped and staffed to complete such an undertaking so quickly on their own, AZNP management scrambled to keep the firm's head above water. After being turned down by Giugiaro, they hired Nuccio Bertone's Turin-based firm to style the car, with work commencing in March 1983. In addition, Porsche Auto was brought in to help with the drivetrain (gearbox, clutch/transmission, etc.), Lucas of Britain's Girling division for guidance developing brakes, and Ricardo of Britain to aid with engine cylinder heads. Conversely, plant upgrades commenced in a haphazard fashion. Whereas the main plant's welding shop gained expensive new West German-made Kuka industrial robots, its foundries, press, and paint operations still utilized antiquated equipment.

The first prototype of the new model was completed on December 31, 1983, with more built by the following summer. Meanwhile, in 1984, a second joint venture which was to see Skoda supply engines for Trabant and Wartburg was aborted, when the East Germans instead consummated a deal with VW to erect a four-stroke engine factory in Saxony (See Chapter 4). That August, output of a slightly longer, upgraded version of the 105/120 line, the Skoda 130 sedan, commenced in Mlada Boleslav. A replacement for the Garde coupe, the Skoda Rapid, also was launched, but at BAZ, not AZNP.

Finally, in September 1987, nearly 13 years after the aborted 760 project, the first fwd, Skoda Favorit 136L supermini rolled off the slightly upgraded 184,000-capacity Mlada Boleslav assembly line.[3] A total of 171 Favorit, equipped with liquid-cooled front-mounted 1.3L four-cylinder,

[3] Also see Johnson (1989).

four-stroke engines were assembled in 1987, followed by 21,363 in 1988. The main plant also completed 137,397 units of the 105/120/130-series bring total car output to 158,760 in 1988. Another 7,406 light vehicles were built at the Kvasiny Works (including some Rapid Coupe), plus a small number of commercial/special vehicle were produced at AZNP Vrchlabi in that year. Although the Favorit's inauguration was celebrated as a new milestone in the country, the car's 1988 output was somewhat of a disappointment for company executives, as it constituted only about one-half of their projected 40,000 target for the car for its first full year.

Things improved slightly in 1989, when a total of 183,123 Skoda passenger cars were built in the Czechoslovakia, including 100,293 Favorit and 82,830 of the S105/120/130 range. Of this 175,253 were assembled in Mlada Boleslav and 7,870 in Kvasiny (all S120/130 coupes). Another 5,500 LCV were built at the Vrchlabi Works, which along with the BAZ Plant did not produce any passenger cars in 1989 (See Chapter 6). A total of 2.01 million Skoda 105/120/130 variants were built through the end of its production run in December 28, 1989. This included 120,105 sold in Britain between May 1977 and March 1990, where it was marketed as the Skoda Estelle.

As 1989 came to a close, however, something had to give. With Skoda producing still only 183,000 cars in that year, of which 50,000 were exported, nearly half of domestic demand was now being filled by imports. Moreover, while the components installed in the Favorit were fairly modern in some respects, overall its technology, reliability, and fit and finish still lagged far behind that of Western vehicles, let alone the Japanese-made small cars. For example, the Favorit was still based upon a 25-year old design with an engine that made the car impossible to export to Western Europe, let alone America, where emissions standards were even stricter. Anticipating this, by 1988 the Czech authorities were in talks with Opel, Porsche, Renault, and VW about potential licensing or subcontract arrangements to produce suitable engines.

Complicating matters was the fact that AZNP had borrowed $420 million to launch the Favorit, and by the end of 1989, was $1 billion in debt, and desperately in need of new investment to fund necessary major upgrades to the Mlada Boleslav Plant. This made the company highly vulnerable to foreign takeover following the fall of the Iron Curtain in

November 1989. This left the central government three choices, either: (1) admit defeat and allow a takeover; (2) finance the company's modernization; or (3) actively pursue a joint venture with foreign partner. It chose to the latter.

The Bidding for AZNP

In response to mass demonstrators, on November 24, 1989, the leaders of Czechoslovakia's Communist Party-led Government resigned. In the ensuing months, the new administration granted amnesty to 20,000 political and other prisoners, began the process of privatizing the nation's economy, and held its first free elections since 1946.

At the start of 1990, employment at AZNP stood at 20,698, with approximately 16,000 this workforce engaged at the main Mlada Boleslav complex. This included 1,600 unpaid prison workers, primarily engaged in the most hazardous activities in the production process, such as in the welding, paint, and pressed-metal shops. As a result, by January 4, 1990, just one day after being freed by national order, 1,551 had walked off the job bringing the automaker's production line to a standstill. AZNP brought in new staff, but the turnover proved costly, adding more losses to the company's already negative financial position.[4]

In an effort to save its debt-ridden carmaker and fund the plant modernization and expansion necessary to compete even in its own underserved domestic car market, the Czech Government began seeking a foreign partner to collaborate with AZNP. Unofficially, these negotiations began in December 1989, and by February 1990 the new President Havel was addressing the U.S. Congress and European Parliaments in search of investors for his troubled car industry. News stories suggested that Chrysler of America and Mazda of Japan had already held discussions with the government over AZNP, followed by GM and Ford.[5]

[4] Uchitelle (1990); Whitney (1990); Georgano (2000); Pavlinek (1998, 2002, 2008); Thompson (2011).

[5] Uchitelle (1990); Whitney (1990).

By April, the list had grown to include BMW, Daimler, Renault, and VW, with Fiat, PSA, and the Japanese automakers Subaru and Mitsubishi also later said to be in the mix. By the time

Of the public tender in May 1990, VW was rumored as the favorite to win a tie-up with Mlada Boleslav, GM seemingly most interested in the BAZ Plant in Bratislava, and Renault supposedly investigating a possible deal to produce cars in Mlada Boleslav and LCV at BAZ (See Chapter 6). In total 24 companies registered for the public tender, with only seven ultimately making what was considered serious offers: BMW, Fiat, Ford, GM, Mercedes-Benz, Renault, and VW.[6]

By September, speculators suggested that the list had been narrowed to three—GM, Renault-Volvo, and VW—and then to two, with Renault and VW engaging in a bidding war for the company. Initially, Renault offered to build either the Renault 18 (R18) compact sedan at AZNP, or a new two-door mini-compact that they were developing (the X06, later known as the Twingo). Officials from the French automaker believed that such an affordable model would sell well in Eastern Europe. Nonetheless, the Government and AZNP rejected this proposal, believing that it would assuredly spell the end the recently released Favorit model and the Skoda brand name altogether. In response, Renault presented an undisclosed revised plan that included Volvo in the venture, a deal which supposedly leapfrogged French-Swedish bid into the lead in the competition for AZNP.[7]

VW countered by offering to invest $5.3 billion by 2000, including $3 billion to erect a new 200,000-capacity assembly factory in Mlada Boleslav and $150 million for a 25% stake in AZNP. VW also promised to source components from AZNP's suppliers if their parts met VW's quality and technical standards, and even help these firms establish link with their own German suppliers. Finally, VW pledged to retain Skoda's brand and corporate identity in a similar fashion as it had with Seat, when it purchased a 51% stake in the Spanish automaker on June 18, 1986. VW them increased its stake in Seat to 75%

[6] Bloomfield (1990); Protzman (1990); Henderson (1995); Pavlinek (1998, 2002, 2008).
[7] Henderson (1995); Pavlinek (2008).

on December 23, 1986 (and then 99.99% on December 18, 1990). After taking over Seat's factories, VW then had expanded the vehicle capacity of its Martorell Plant near Barcelona from 350,000 to 500,000. If this process were to be followed AZNP, it would make Skoda a quasi-independent subsidiary of VW on par with Seat and Audi, giving it its own research & design, procurement, distribution, and sales divisions.[8]

On November 1, 1990, it was reported that central government had reached a preliminary decision to award the rights to the joint venture with AZNP to VW. Renault and Volvo was then given one last chance to make a counter offer before the decision was officially approved. This did occur, and according press reports on November 26, 1990, the two automakers pledged to invest a combined $2.6 billion in AZNP over the next ten years in what was to become a three-way equal partnership among the three automakers.[9]

As part of the deal, Renault-Volvo offered to enlarge annual Skoda vehicle brand output at the Mlada Boleslav complex first to 250,000 and then to 400,000 over time. This was to include the production launch of the Renault 19 compact Chamade (sedan) at the factory in 1993. A jointly produced new three brand model also was a possibility by 1997. Additionally, they promised to build new engine and gearbox plants, expand AZNP employment, and retain as many of its domestic components suppliers as possible. Finally, they agreed to produce and market worldwide a model fitted with car bodies designed by AZNP. In exchange, Renault-Volvo was to receive a 40% stake in a newly created company, with the Czech Government holding the remaining 60% share. As majority shareholder of Renault, the French Government was to provide all the necessary finances to make the project a reality.[10]

Taking this into consideration, in early-December, the Czech Government appeared to again favor Renault's bid. On the other

[8] Greenhouse (1990); Henderson (1995); Pavlinek (2008).
[9] Munchau (1990); Reuters (1990); Henderson (1995).
[10] Henderson (1995); Pavlinek (2008).

hand, AZNP's management and workforce strongly supported VW's offer, with the worker's union even threatening to call a strike if Renault won the tender. Whereas AZNP viewed VW's bid as financially superior and the best chance to preserve the Skoda brand name, its workers saw VW's management-labor system as more preferable. For its part, the government was concerned with the appearances of a possible German takeover of its auto industry, which evoked memories among some of the Nazi invasions of 1938 and 1939.[11]

Putting this aside, on December 9, 1990, the Czech Government decided to accept VW's bid and pledge to invest $5.3 billion in AZNP by 2000. As the details of the arrangement were slowly released over the next few months, VW's commitment was revised upward to $6.2 billion of which $4.0 billion was to be allocated by 1995. In addition, it was revealed that the German automaker was to acquire a 31% stake in AZNP for $360 million, with $70 million of this targeted toward repaying AZNP's existing debt. Finally, VW promised to: (1) retain the Skoda corporate identity marque; (2) maintain as many of the automaker's workforce and suppliers as possible; (3) double vehicle output to 400,000 by 2000; (4) erect a new 450,000 to 500,000-capacity four-cylinder engine plant; and (5) completely modernize the Mlada Boleslav operations by constructing new too, press, welding, and paint shops.[12]

VW Skoda Mlada Boleslav, Kvasiny and Vrchlabi

The VW-AZNP joint venture agreement was officially signed on March 28, 1991, and on April 16, 1991 AZNP ceased to exist, and was reborn as the VW Group affiliate, Skoda Auto. At that time, the 245-hectare (607-acre) Mlada Boleslav Plant complex employed 16,687 workers. In exchange, the Czech Government: (1) purchased the rights for VW to

[11] Henderson (1995); Pavlinek (2008).

[12] Ward's (1958–2014); Bollag (1990); Deutsch (1990); Jenkins (1990); Reuters (1990); Cohen (1992); Myant (1993); Henderson (1995); Kozisek & Kralik (1995); Skoda (2016b); Pavlinek (2002, 2008); Skoda (2016b, 2016c, 2016d).

use the Skoda trademark and logo for its cars from Skoda Plzen for $8.3 million; (2) granted the German automaker abatements on all taxes for two years; (3) waived tariffs on duties for imported production machinery and components; (4) cut in half any sales taxes on domestically produced new cars; and (5) authorized a special fast-track permitting process on VW's Skoda plant-related construction. As if that was not enough, the State also pledged to: (6) impose a 19% tariff on imported cars for four years; (7) help subsidize VW's retraining of AZNP's workers; (8) significantly upgrade plant related infrastructure; and (9) take responsibility for any environmental cleanup necessary related to AZNP's prior manufacturing activities.[13]

By the end of 1991, the former AZNP Kvasiny and Vrchlabi Plants also were integrated into VW-Skoda. Thereafter, VW subsequently invested another $540 million and raised its stake in Skoda to 70% on December 11, 1995. In the latter year, VW Skoda employed 15,649 workers in its three car factories or roughly 1,450 less than in 1992. This rationalization also led to the discharge of more than 3,000 Socialist-Bloc foreign workers on Skoda's payrolls (Vietnamese, Cubans, and Poles). In the meantime, on January 1, 1993, Czechoslovakia was split into two independent nations, Czech and Slovak Republics (Czechia and Slovakia).[14]

Passenger car output at Skoda's three Czechia plants ebbed and flowed during period, from 172,074 in 1991 to a record 219,612 in 1993, and then back to 173,659 in 1994. Thereafter, light vehicle production (cars, pickups, and light vans) steadily expanded to 348,168 in 1997, including 260,027 in Mlada Boleslav, 47,688 in Vrchlabi, and 40,453 in Kvasiny, but not the 9,002 CKD kits of Skoda Felicia prepared in Mlada Boleslav for final assembly at VW Poznan (See Chapter 3). Mlada Boleslav final assemblies consisted of 199,437 Skoda Felicia (introduced in October 1994) and 60,590 of the new Skoda Octavia (launched on September 3, 1996), which shared a

[13] Bollag (1991); Donovan (1991); Reuters (1991); Myant (1993); Henderson (1995); Pavlinek (2002, 2008).

[14] Myant (1993); Henderson (1995); Pavlinek (2008).

platform with the VW Golf and Jetta. Whereas all 47,688 of Vrchlabi Plant's production was Felicia cars, Kvasiny built 37,299 Felicia pickups and wagons and 3,154 Felicia-based VW Caddy pickups.[15]

By 1997, Skoda and Czechia's relatively skilled but lower-waged labor force had prompted: Germany's Robert Bosch, Continental, and ZF; France's Faurecia; Canada's Magna; and America's Johnson Controls, Lear, TRW, and Ford Motor's Visteon Division (acquiring Autopal of Novy Jicin), and others to establish components factories in Czechia. This was not surprising, as considering that unemployment was low and nearly two-thirds of all Czechs had secondary degrees, the average compensation of manufacturing workers in the country was only equivalent to $3.24 an hour in 1997. This figure was only one-ninth of comparable German industrial wages ($29.26), less than one-seventh that of Austria, Belgium, France, and the Netherlands, and less than one-fourth that was paid in Spain.[16]

In addition, emboldened by a new $22 million incentive package from the Czech Government, between 1999 and 2001 VW: (1) invested an additional $300 million to construct a new assembly hall in Mlada Boleslav; (2) financed with Skoda revenues, the completion of a new $562 million, 80,000 m^2 (860,000 ft^2), 2,000-worker, 500,000-engine and 500,000-gearbox capacity factory at the main complex; and (3) committed to significantly upgrade its Kvasiny operations. Meanwhile, on May 30, 2000, VW purchased the Czech Government's remaining 30% interest in Skoda Auto for approximately $310 million, meaning it had acquired 100% of the former AZNP for a total of $1.21 million.[17]

As a result of these new facilities, Skoda employment grew to 22,588 in 2000 and then to 24,129 in 2001. In addition, its final light vehicle assemblies in Czechia surpassed the promised 400,000 milestone in 2000, before rising to 437,186 in 2001; Mlada Boleslav also prepared another 23,700 KD kits for VW Poznan. Among these, 355,974

[15] Ward's (1958–2014, 2014); Pavlinek (2008, 2016); Skoda (2016b).

[16] Pavlinek (2008); Rugraff (2010); Czechia (1999–2007); BLS (2013); Czech Invest (2016b).

[17] Pavlinek (2008); Rugraff (2010); Czechia (1999–2007); VW (2000–2016): Skoda (2001–2016).

automobiles were assembled at Mlada Boleslav and 71,003 at Vrchlabi. Whereas Mlada Boleslav output included 229,037 Skoda Fabia and 126,937 Octavia, Vrchlabi produced 42,632 Octavia and 28,371 Felicia.[18]

As for the Kvasiny Plant, it underwent a major renovation in 2001, resulting in its workers assembling only 10,209 light vehicles in that year. This consisted of 9,628 Felicia pickups and wagons and 581 of the company's new flagship model, the VW Passat-based Skoda Superb sedan. Conversely, between the June 2001 discontinuation in Felicia output to the October 1, 2001 launch of the Superb, no cars were built at the factory. Instead, the final touches on a brand new $164 million, 35,000-capacity second Kvasiny assembly hall were completed, a paint shop was erected, and existing structures were redeveloped to create a new car body manufacturing works.[19]

Total final light vehicle assemblies at Skoda's three plants remained at around 435,000 between 2002 and 2004, before jumping to 485,417 in 2005. In the interim, exports of engines and components from the Mlada Boleslav to VW's other European plants also, pushing employment at the company's three Czechia vehicle complexes to 26,104, as of December 31, 2005, including 22,554 permanent and 3,460 temporary and part-time workers. Output then expanded further to 540,325 in 2006 and to 601,610 in 2007. Incorporating the 21,681 KD kits prepared at Mlada Boleslav (20,471) and Kvasiny (730) for final assembly at VW's plants in Bosnia-Herzegovina, India, Kazakhstan, Russia, and Ukraine, and Skoda Auto reported its total production as 623,291 in 2007.[20]

As presented in Table 5.1, final light vehicle assemblies at Skoda's three Czechia plants contracted to 500,515 during the Great Recession of 2009. This total rebounded to 595,613 in 2012 and then to a record 679,907 in 2015. During this period, output of finished automobiles at the Mlada

[18] Pavlinek (2008); Czechia (1999–2007); VW (2000–2016): Skoda (2001–2016).

[19] Pavlinek (2008, 2016); Czechia (1999–2007); Kimberly (2001); VW (2000–2016): Skoda (2001–2016).

[20] Pavlinek (2008, 2016); Czechia (1999–2007); Skoda (2001–2016).

Boleslav complex soared from 335,215 in 2009 to 537,621 in 2015. They also increased noticeably at the Kvasiny Plant from 94,335 to 142,286. In contrast, after building 67,047 cars during the first three quarters of the year, vehicle production at the 104-year old Vrchlabi complex was terminated in October 2012. Thereafter, and beginning on October 15, 2012, the retooled and expanded Vrchlabi factory's production lines began manufacturing 7-speed dual-clutch, direct-shift gearbox (DSG) automatic transmissions for the VW Group. For the remodeling and related technological investment, VW's Skoda received what amounted to a $36.7 million tax abatement from the Czech Government on May 30, 2013; Skoda utilized this right-off in tax year 2015.[21]

In its annual reports, Skoda Auto no longer disaggregates KD kit preparations by model from total final assemblies at each factory. Nonetheless, these production figures do infer the details of the expansions that have taken place at the Mlada Boleslav and Kvasiny Works since 2009. As shown in the second portion of Table 5.1, including KD kits completed outside of the Czechia, Skoda Auto Group plants produced 736,977 automobiles in 2015. This represented an increase of 217,332 or 41.82% from 2009, when Skoda reported producing 519,645 vehicles at its group factories. The bulk of this growth occurred at Mlada Boleslav, which assembled and prepared kits for 585,746 vehicles in 2015, as compared with 351,825 in 2009.

More specifically, Skoda's main factory's growth in vehicle production was buoyed by the doubling in output of the Octavia model, from 121,476 in 2009 to 281,507 in 2015 (third-generation since early-2013). This was supplemented by the third-generation Skoda Fabia (since August 2014), and the introduction of the new Skoda Rapid and its rebadged platform mate the Seat Toledo (in August 2012). In 2015, the company's main plant built and prepared kits for 180,611 Skoda Fabia, 103,900 Rapid, and 19,728 Toledo.

[21] Unless noted, the remainder of this section draws upon; Skoda (2001–2016, 2016a, 2016b, 2016c, 2016d), Czech AIA (2016); Czech Invest (2011–2015, 2016a); Pavlinek (2015b).

On the other hand, the Kvasiny Plant's expansion from 96,855 vehicles in 2009 to 151,231 in 2015 was led by the newly developed Skoda Yeti compact SUV (launched in May 2009) and the second-generation Superb sedan (April 2008). Skoda Kvasiny's final assemblies and kit preparations in 2015 consisted of: 73,941 Yeti; 66,137 Superb; and 11,153 Roomster MPV. The latter, of which production was shifted to Kvasiny from Vrchlabi in 2013, was discontinued on April 30, 2015.

In addition to manufacturing 679,907 automobiles, Skoda Auto also produced 1.02 million gearboxes and 624,760 engines in Czechia in 2015. As of December 31, 2015, these three complexes employed 25,452 workers, including 24,567 regular associates and 885 apprentices. This was an increase of 1,797 from 2009, when total employment was 23,655, consisting of 22,831 associates and 824 apprentices. Of the employees in 2015, a total of 21,299 were engaged at Mlada Boleslav, 3,374 at Kvasiny, and 779 at the Vrchlabi gearbox factory. Additionally, Skoda Auto's production chain engaged some 1,300 suppliers and logistics providers, employing nearly 100,000 people in Czechia. Approximately 80% of these were foreign companies, primarily from Western Europe.

After serving more than 110 years as the center of Czechia's automobile industry, the near-term future prospects for Skoda's 600,000-capacity Mlada Boleslav Plant remain very bright. Now encompassing nearly one-third of the town's land area, the complex also hosts Skoda Auto's global headquarters, its Research, Design, and Technical Development Department and employee training center, a KD kit preparation facility, an engine plant, and other automotive components works.

VW also has bigger plans for the 82-year old, 180,000-capacity Kvasiny Plant. The automaker has commenced construction on a $297 million enlargement that will raise vehicle capacity at the facility to 280,000 and employment to 4,675 by 2018. As part of this planned expansion, VW-Skoda installed new production equipment in Kvasiny's assembly and welding shops, greatly improved its logistic facilities, and launched output of two new models.

Production of the first new model commenced in February 2016, when the SEAT Ateca joined the Yeti and Superb on the plant's assembly lines. VW selected Skoda Kvasiny over its Spanish subsidiary

main factory as the sole producer of Atecta. The CUV represents the effective replacement for the SEAT Altea MPV that was produced at Seat Martorell between 2004 and 2015. Serial production of the second vehicle, the Skoda Kodiaq, commenced in October 2016. Sharing the same VW Group MQB platform as the Ateca and the VW Tiguan, Skoda's first seven-seat SUV was originally unveiled to the public on September 1, 2016 at special ceremony held in Berlin.[22]

The Czech and local governments have supported Skoda's recent efforts in Kvasiny by upgrading the area's transportation infrastructure and by building a supplier park. In response, 11 suppliers have opened new facilities nearby to the car factory. These events suggest a very bright future for Skoda Kvasiny operations and VW's overall operations in Czechia.

Toyota Peugeot-Citroen (TPCA) Kolin

On December 20, 2001, Toyota and PSA announced that they had agreed to invest $1.35 billion and build an $810 billion car factory 70 km (44 miles) east of Prague within the Central Bohemia Region's Village of Ovcary (See Table 5.2). More specifically, the 50/50 joint-venture plant was to be erected on a 124-hectare (306-acre) portion of the 360-hectare (889-acre) Kolin-Ovcary Industrial Zone, situated just 7 km (4.5 miles) north of Kolin. The same area had been a finalist for the BMW Leipzig Plant in July 2001 (See Chapter 4). Jawor, Poland and an unknown location in Hungary were the other finalists for the Toyota Peugeot Citroen Automobile Czech (TPCA) Plant.[23]

Attracted by Czechia's impending May 1, 2004 ascension into the EU, a generous incentive package, and lower labor costs, the TPCA Kolin was projected to directly employ as many as 3,000 and create an additional 7,000 supplier jobs nationwide. Toyota was to be in charge of designing and building the car, while PSA was to oversee purchasing and

[22] Also see Homola (2016).

[23] Ward's (1958–2014), Anderson & Reed (2001); Burt (2001); Green (2001).

Table 5.2 Skoda light vehicles production in Czechia, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
Skoda Auto in Czechia[a]	**679,907**	**660,412**	**582,826**	**595,613**	**596,226**	**534,702**	**500,515**
Mlada Boleslav Plant[a]	537,621	494,232	429,871	374,837	384,065	316,344	335,215
Kvasiny Plant[a]	142,286	166,180	152,955	153,729	141,535	144,612	94,335
Vrchlabi Plant	—	—	—	67,047	70,626	73,746	70,965
Skoda Group w/kits[b]	**736,977**	**735,951**	**639,889**	**656,750**	**674,010**	**575,742**	**519,645**
Mlada Boleslav Plant[b]	**585,746**	**558,294**	**478,481**	**432,885**	**455,181**	**353,034**	**351,825**
Skoda Fabia	180,611	142,545	158,386	177,999	215,138	193,675	230,349
Skoda Rapid	103,900	121,805	69,863	8,128	—	—	—
Skoda Octavia	281,507	277,403	228,461	241,758	240,043	159,359	121,476
Seat Toledo	19,728	16,541	21,771	5,000	—	—	—
Kvasiny Plant[b]	**151,231**	**177,657**	**161,408**	**156,816**	**148,203**	**148,962**	**96,855**
Skoda Roomster	11,153	29,983	31,425	—	—	30,473	42,315
Skoda Superb	66,137	58,981	55,325	65,934	70,891	65,939	34,868
Skoda Yeti	73,941	88,693	74,658	90,882	77,312	52,550	19,672
Vrchlabi Plant	**—**	**—**	**—**	**67,047**	**70,626**	**73,746**	**70,965**
Skoda Octavia Tour	—	—	—	—	—	25,955	32,567
Skoda Octavia	—	—	—	27,798	34,199	47,791	38,398
Skoda Roomster	—	—	—	39,249	36,427	—	—

Sources: Adapted by author from VW (2000–2016); Skoda (2001–2016, 2016a), Czech Invest (2016a)

[a] Obtained from Skoda (2016b) and may include some KD Kits assembled outside of Czechia.

[b] Figures reported by all three sources and include KD kits assembled at other Skoda Plants outside of Czechia.

logistics for the project. Vehicle output scheduled to begin in 2005 and ultimately assemble 300,000 cars per year (100,000 Peugeot, 100,000 Citroen, and 100,000 Toyota). The 1.0L, low emission city cars manufactured at the factory were expected to be priced competitively enough to attract both Eastern and Western Europeans that normally purchased used cars.[24]

In consideration for building the facility in the country, the Czech Government provided TPCA with a $210 million subsidy package including among other incentives: a 10-year tax abatement; $12.2 million toward the cost of land acquisition for the project; $25 million for site preparations; and $2,215 for each job created or equivalent to up to $6.7 million for 3,000 jobs. In addition, the state agreed to erect 850 multi-family housing units for company workers and promised to build a road linking the site to a planned extension of the D11/E67 Motorway. The latter provided access to Prague and eventually to highway E50, which runs via Motorway D5 from Prague west to Germany's A6 Autobahn and then France.[25]

Construction of the factory commenced on April 10, 2002 and was completed in December 2004. Two months later, on February 28, 2005, the first mini hatchbacks rolled off the TPCA Kolin assembly line (the plant's official opening ceremony occurred on May 31, 2005). A total of 103,819 of the triplets were built in that first year, including 34,627 Citroen C1, 34,603 Toyota Aygo, and 34,589 Peugeot 107. These cars were fitted with 1.0L Toyota engines and transmissions built 154 km (96 miles) north at TMMP in Walbrzych, Poland (See Chapter 3).[26]

A total of 3,000 workers were hired from a pool of 55,000 applications, with around 1,200 of these recruits being Kolin area residents. With initial annual salaries equivalent to $7,140, this meant TPCA associates were being paid effectively one-seventh to one-ninth the yearly

[24] Anderson & Reed (2001); Burt (2001); Green (2001).

[25] Anderson & Reed (2001); Burt (2001); Green (2001); Maynard (2002); Pavlinek (2008, 2015a).

[26] TPCA (2016a, 2016b).

compensation of manufacturing workers in other Western European. More surprisingly, their wages also were significantly lower than the average pay in the Kolin Region of $9,075 and average manufacturing wages in Czechia of $14,560 in 2005. This was atypical for Toyota, which generally compensated its plant workers in Western Nations wages that were well above their respective regional averages. These low wages resulted in a large turnover of staff in the first year, prompting TPCA to raise its starting salaries to equivalent to $9,545 in 2006. By then, however, nationwide industrial wages had already risen to approximately $16,280. This and local housing shortages forced TPCA to recruit Polish and Slovak labor to work at the factory.[27]

Output quickly zoomed near full capacity in 2006, when 293,650 cars were built. By that time, some 40 Japanese automotive suppliers had located in Czechia to serve TPCA, most opening shop within 200 km (125 miles) of the plant. This included: the giant Tier-I suppliers Denso, Aisin, Koyo (now JTEKT), Toyoda Gosei, Asahi Glass (AGC), and Koito; mid-size firms, such as Futaba; and smaller subsidiaries, such as the Denso-affiliate, Asmo. This clustering of components manufacturers helped pushed the domestic content value of vehicles built at TPCA to 50% (and volume of parts to 80% in 2006).[28]

Vehicle production rose to 308,204 in 2007 before expanding to 324,289 in 2008 and then to a peak of 332,489 units in 2009. As shown in Table 5.3, TPCA output in 2009 consisted of: 116,073 Peugeot 107; 116,057 Citroen C1; and 100,359 Toyota Aygo. Thereafter, the impacts of the 2009 Great Recession, including stagnating car sales in Western Europe and financial difficulties at PSA, output at TPCA Kolin contracted slightly to 270,705 in 2011 (See Table 5.3). This was significant in another way, as prior to the September 2008 'AIG-Lehman Shock,' strong demand for PSA vehicles and potential constraints at TPCA had the French automaker scouting Eastern European for a site for its own new $800 million, 5,000-worker engine and car assembly complex. This was on top of PSA's two-year old factory

[27] Pavlinek (2008, 2015a); BLS (2013); TPCA (2016a).
[28] Pavlinek (2015a); Czech Invest (2016b); TPCA (2016a, 2016b).

Table 5.3 TPCA Kolin car production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
TPCA Kolin	**219,054**	**203,105**	**185,127**	**214,915**	**270,705**	**295,712**	**332,489**
Citroen C1	60,631	64,666	58,469	65,834	88,683	102,252	116,057
Peugeot 107/108[a]	57,224	65,944	57,272	74,891	91,335	110,544	116,073
Toyota Aygo	91,199	72,495	69,386	74,190	90,687	82,916	100,359

Source: Adapted by author from TPCA (2016b).
[a] The Peugeot 108 was the next-generation 107, and launched with the newer C1 and Aygo in May 2014.

in Trnava, Slovakia, which it launched in October 2006 (See Chapter 6). Rumors centered on a tract in Lodz, Poland, although sites in Romania, Turkey, and Ukraine also were considered contenders for the facility.[29]

TPCA output continued to tumble to just 185,127 in 2013, before rebounding to 203,105 in 2014. The slight increase was aided by the production launch of the second-generation Aygo on May 27, 2014, along with its nearly identical siblings, the C1 and the renamed Peugeot 108. The introduction of the new iterations was preceded on March 7, 2014 by a public declaration from Toyota reconfirming its commitment to TPCA Kolin. This was welcomed good news for local staff, particularly in the wake of the growing concerns for PSA's future following the French carmaker's tie-up with and possible takeover by Dongfeng Motors of China.[30]

Output at TPCA again rose slightly to 219,054 in 2015, when 91,199 Aygo, 60,631 C1, and 57,224 of the 108 were built. More than 99% of these vehicles were exported out of the country in that year, primarily to Western Europe. In reaction to the 'VW Diesel Crisis' and other factors, and led by hybrid models, new registrations of Toyota Group passenger cars in the EU were up by 7.7% year-on-year through October 2016 as compared with the same period in 2015. This followed an increase of 7.3% in the prior calendar year, from 535,355 in 2014 to 574,652 in 2015. In response, production of the low emission, petro-powered Aygo were expected to expand again in 2016.[31]

As of late-2016, Toyota and PSA have invested a combined $1.1 billion in Czechia. They also have claimed that approximately three-quarters of the associates at the $840 billion, 3,464-worker, 300,000-capacity TPCA Kolin Plant was recruited from the Central Bohemian Region. To serve the plant, numerous Japanese automotive components firms also have located in Czechia, where they engaged more than 12,000 workers in 2016. This list was led by: AGC (with 3,450

[29] *PMR* (2008); Czech Invest (2011–2015); TPCA (2016a, 2016b).
[30] Reuters (2013); Ciferri (2014); TPCA (2016a, 2016b).
[31] ACEA (2011–2016); TPCA (2016a, 2016b).

employees); Denso (2,240, including its Asmo affiliate); JTEKT (985, including its Koyo divisions); Futuba (850); Panasonic Automotive Systems (850); Yazaki Wiring (737); Koito (726); Toyoda Gosei (656); and Aisin (524). Most of these firms delivered a large percentage of their parts to TPCA. This has helped push domestic content value of Ovcary-built vehicles to 80% in 2016.[32]

While there were still were doubts about PSA's future in Czechia, for Toyota officials and its suppliers, the only major issue inhibiting near-term growth in TPCA and vehicle components output was persistent labor shortages in Czechia. Nonetheless, when considering that TPCA was Toyota's only automobile assembly plant in CE, and that the automaker may shift some of post-Brexit British output east, and the factory's near-term outlook now appears as bright as it did pre-2009.

Hyundai Nosovice

On September 30, 2005, Hyundai Motor of Korea declared its intentions to become Czechia's third foreign car producer, when it revealed plans to invest $1.2 billion and to build a 300,000-capacity assembly plant in the country's Moravia-Silesia Region near Ostrava (See Table 5.2). Sites in Hungary and Poland also were considered for the factory. On March 27, 2006, Hyundai settled upon a 200-hectare (495-acre) tract in the 261-hectare (644-acre) Nosovice Industrial Zone, situated in Nosovice village, Frydek-Mistek District, and located 30 km (19 miles) southwest of Ostrava.[33]

To assemble the land for the industrial park, the Czech Government, led by its Business and Development Agency, Czech Invest, needed to coax more than 170 landowners to sell their parcels, including eight which initially refused because they owned houses or prosperous cabbage farms in the proposed zone; the area long has been known for its beer and sauerkraut production. Despite organized resistance from these local

[32] Muller (2016); TPCA (2016a, 2016b).
[33] Reid (2005); Yonhap (2005); Jacobs (2013).

land owners, the Government was determined to locate the Hyundai Plant in the region, which suffered an unemployment rate of nearly 15% in 2005, and had been in economic distress since the end of Socialism, as a result of a decline in its local steel and coal mining industries.[34]

In May 2006, the Korean automaker cemented their decision by signing an investment contract with the Czech Government, and then on July 7, 2006, by establishing Hyundai Motor Manufacturing Czech in Nosovice. In the interim, the automaker also committed to build a 600,000-capacity transmission factory at the site. The factory, which was to become the Hyundai Group's second in CE following its March 2004 announced Kia Slovakia Plant, was projected to launch output in late-2008, to employ 3,000 people, and to foster the creation of another 3,000 to 5,000 supplier jobs in the area (See Chapter 6).[35]

Similar to Toyota, Hyundai located in northeastern Czechia in order to benefit from the area's relatively skilled and less costly workforce, to cut transportation costs on deliveries, and to expand its duty-free access to the EU and thereby limit trade friction/quotas. Hyundai also sought to protect itself from volatility in foreign exchange rates, although this was still an issue as Czechia was not a member of the Eurozone monetary union. Finally, with Kia Slovakia near Zilina just 85 km (52 miles) southeast of Nosovice, the two factories could benefit from greater production scales and synergies between them (See Chapter 6).[36]

The issue of low wages was an interesting sticking point for Czech officials, as one of Hyundai's reasons for selecting Zilina over the Ostrava Area for its Kia plant was Czechia's higher wages relative to Slovakia. Hyundai claimed that whereas the small profit margins for the lower-end Kia models it planned to produce in Slovakia tied their hands, it had more flexibility in its siting a production facility for its namesake brand vehicles. Truth be told, in both cases it came down to government subsidies. After Slovakia had revealed early on that its was willing to outbid all comers for the Kia facility, the Czech Government responded

[34] Reid (2005); Yonhap (2005); Pavlinek (2008), Bakir (2011); Hruska (2016).
[35] AP (2006); HMMC (2011–2016, 2016); Jacobs (2013).
[36] Frink (2006); Pavlinek (2008).

by providing Hyundai with a $151 million incentive package, an amount that was approved by the EU's competition committee on May 11, 2007.[37]

Including municipal contributions, total aid had grown to $263 million by the end of 2007. This included, among other subsidies: $109 million for land preparation; a $54 million tax abatement; a $34 million discount toward the transfer of land for the project; upward of $32 million for ultimately creating 3,500 direct jobs; and a 45% refund on workforce training costs that was equivalent to $16 million. The Government also promised to improve the road network between Nosovice and Kia Zilina by the time the plant opened in late-2008 (While some enhancements were made in the Silesian Crossroads—East Corridor, the transformation of National Route 11/E75 into a divided highway from E462/National Route R48 near Cesky Tesin southward to Mosty u Jablunkova/the Slovak border was still not completed as of late-2016).[38]

Construction of Hyundai Nosovice commenced in March 2007 with serial production of Hyundai i30 hatchbacks launching on November 3, 2008. The vehicle was known as the Hyundai Elantra GT in North America and shared a platform with the Kia Cee'd built in Slovakia since December 2006. A total of 12,042 i30 were assembled at the 2,000-worker Nosovice Plant in 2008. As presented in Table 5.4, vehicle output expanded to 118,022 in 2009, including 111,934 i30 and 6,088 Kia Venga. The latter mini MPV was introduced at the plant in September, when a second shift was added at Nosovice, raising employment to around 2,700.[39]

Production at Hyundai Nosovice rose to 200,135 in 2010, aided by the September launch of the rebadged twin of the Kia Venga twin, the Hyundai ix20. The ix20 was built on the same platform as the Kia Soul CUV and the Hyundai i20 supermini hatchback. Whereas the Soul was

[37] Pavlinek (2008): Bakir (2011).

[38] Pavlinek (2008): Bakir (2011); Jacobs (2013).

[39] OICA (1999–2015); Czech Invest (2011–2015, 2016a); HMMC (2011–2016, 2016); Jacobs (2013).

Table 5.4 Hyundai Nosovice car production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
Hyundai Nosovice	**342,200**	**307,450**	**303,460**	**303,035**	**251,146**	**200,135**	**118,022**
Hyundai i30	106,000	99,000	124,500	131,000	107,160	130,598	111,934
Hyundai ix20	34,200	35,500	34,500	45,000	46,005	20,651	—
Hyundai ix35	89,000	173,000	144,500	127,000	70,254	—	—
Hyundai Tucson	113,000	—	—	—	—	—	—
Kia Venga	—	—	—	—	27,727	48,886	6,088

Source: Adapted by author from Czech Invest (2016a).
Notes: Data for 2012–2015 rounded by Hyundai.

built in Kia Gwangju in Korea and designed at Kia Motors America in California, the i20 was assembled at Hyundai Assan in Turkey and created by Hyundai Motor Europe's Technical Center in Russelsheim. The latter was not far from GM's Opel headquarters and factory in western Germany.[40]

In July 2011, production of the second-generation Hyundai ix35 SUV was shifted from Kia Zilina to Hyundai Nosovice. This and the September 19, 2011 introduction of a third shift of 800 workers pushed output to 251,146 vehicles and employment to 3,400 by the end that year. The automaker's suppliers followed suit, adding 1,200 new jobs of their own in Czechia in 2011. At that time, the average annual wage of Hyundai staff was right around the national average of $15,000.[41]

In 2012, final assemblies at Hyundai Nosovice exceeded full capacity for the first time, when 303,035 cars were built. Also in that year, the complex's transmission plant was greatly enlarged. Gearboxes built at the facility were now installed not only in Hyundai vehicles manufactured in Czechia, but also in those assembled at Kia Zilina and at Hyundai's factory in St. Petersburg, Russia. Vehicle output again exceeded capacity in 2013 and 2014, before jumping to 342,200 in 2015, consisting of: 113,000 Hyundai Tucson; 106,000 i30; 89,000 ix35; and 34,200 ix20 (See Table 5.4). Launched in June 2015, the Tucson represented the re-stamped third-generation ix35, with the Tucson name used for all three iterations of the CUV in North America.[42]

Annual vehicle capacity at Hyundai Nosovice stood at 350,000 and employment at 3,440 as of December 31, 2015 (Table 5.2). This included staff engaged at the complex's assembly hall, its stamping, welding, and paint shops, and its transmission factory. Another 7,000 people were engaged by the plant's suppliers. In the Moravia-Silesian Region, this included more than 5,000 employed by the Tier-I South Korean automotive components manufacturers: Sungwoo Hitech (1,487 employees); Plakor (1,050); Mobis (755), Donghee (608);

[40] Czech Invest (2011–2015, 2016a); HMMC (2011–2016, 2016).
[41] Czech Invest (2011–2015, 2016a); HMMC (2011–2016, 2016).
[42] HMMC (2011–2016, 2016); Czech Invest (2016a).

Dongwon (419); Hanwha Advanced Materials (360); and Hyundai Dymos (349). According to Hyundai, a combined 97% of its associates and that of its suppliers were currently residents of the area.[43]

As of 2016, Hyundai claimed investments of $1.26 billion in Czechia. This was expected to expand in the near-term, as the automaker continues to launch new models and enlarge capacity at its Nosovice operations. Related to this, in June 2015 Hyundai and South Korea's Nexen Tire announced plans to expend a combined $1.3 billion in Czechia by 2020. Hyundai's decision proved warranted when EU sales of Hyundai brand cars experienced growth in 2015 and 2016. More specifically, registrations of new Hyundai passenger cars in the EU in the first ten months of 2016 had increased year-on-year by 8.6% as compared with January to October 2015. This followed an increase of 11.4% for Hyundai cars between calendar years 2014 to 2015, from 410,185 to 456,926. Kia's registrations also were up 13.8% for 2016 and 8.9% between 2014 and 2015 (See Chapter 6).[44]

As for Nexen, it broke ground on its new $946 million, 12-million capacity tire factory northwest of Prague in Zatec, Usti nad Labem Region on October 1, 2015. When the operation in 2018, the facility was expected to employ more than 1,000 workers. The tiremaker selected Zatec over sites closer to Nosovice because it hoped to supply factories in both Czechia and Germany. This was not totally surprisingly, as only 15 of Hyundai Nosovice's 50 suppliers were even located in Czechia in 2016. As a result, at around 60%, the domestic content of the vehicles built at the factory in 2015 was significantly lower than that of TPCA. Of course, much of the remaining foreign inputs were manufactured in Slovakia by suppliers also serving the Kia Zilina Plant.

All told, Hyundai Nosovice's near-term future in Czechia appears very bright. Related to this presently all of the models produced at the factory were designed at the Hyundai Technical Center in Russelsheim, rather than in Korea or America. With this now the case, and considering that the Hyundai Group also has a competing plant in Slovakia, the transfer of some research

[43] HMMC (2011–2016, 2016); Czech Invest (2016b).

[44] ACEA (2011–2016); HMMC (2011–2016, 2016); Bloomberg (2015); Nexen (2015).

and design work to the Nosovice complex would provide even a stronger signal of the depth of Hyundai's long-term commitment to Czechia.

Conclusion

As of December 31, 2015, the four car manufacturing complexes operating in Czechia—VW's Skoda Mlada Boleslav and Kvasiny, TPCA Kolin, and Hyundai Nosovice—employed 31,577 people and had the collective capacity to build 1.43 million vehicles annually (See Table 5.2). Another approximately 119,000 people were engaged by firms manufacturing automotive parts and accessories in the country. This combined total of 150,000 represented a significant increase from 1994, when 57,647 were directly employed in motor-vehicle manufacturing related sectors, and from 122,000 in 2007.[45]

As illustrated in Table 5.5, the Skoda, TPCA, and Hyundai produced a combined 1,241,161 passenger cars in 2015, of which, more than 99% were exported out of the country. More amazing was the fact that annual passenger car output in Czechia had increased by 803,915 or 183.90% from 2001. At that time, VW Skoda's three plants, then including Vrchlabi, built 437,186 cars. This growth enabled Czechia to surpass Poland in 2005 to become CE's largest auto producing nation (See Chapter 3). Moreover, 2015 output was nearly 1.06 million and 577.77% greater than 1989, when Czechoslovakia's state-owned AZNP's three assembly plants built 183,123 Skoda.

While these facts suggest an upward trajectory in the near-term for the Czechia auto production, the future outlooks for the nation's four foreign car plants vary slightly. Among the four, the Skoda Mlada Boleslav and Kvasiny factories have the most positive future prospects. Since its pre-2009 crisis peak of 410,606 in 2007, VW has expanded output at Mlada Boleslav by 30.9% and 127,015 vehicles. Meanwhile, a recently announced $297 million investment will enlarge Kvasiny's

[45] Rugraff (2010); Czech Invest (2011–2015).

Table 5.5 Foreign car production in Czechia, 1989–2015

	2015	2010	2005	2001	1989	Change 2001–15	% Change 2001–15
Czechia Total[a]	**1,241,161**	**1,030,549**	**589,236**	**437,186**	**183,123**	**803,915**	**183.90%**
Hyundai Nosovice	342,200	200,135	0	—	—	219,054	—
Skoda[b]	679,907	534,702	485,417	437,186	183,123	242,721	55.52%
TPCA Kolin	219,054	295,712	103,819	—	—	219,054	—

Source: Compiled and adapted by author from OICA (1999–2016); Skoda (2001–2016, 2016a); Ward's (2014); TPCA (2016b); Czech Invest (2016a).

[a] As suggested in Table 2.3, Czechia 1989 totals do not include 490 cars produced by Tatra.

[b] Includes all Skoda plants in Czechia in that year. To avoid double counting in CE, the Czechia and Skoda figures do not include KD kits shipped for finally assembly to plants outside of the country.

capacity by more than 50% to 280,000 and employment to 4,675 by 2018.

Unlike its other plants in Europe, the VW diesel crisis may benefit more than harm its Skoda operations. For these reasons, the lower cost Kvasiny Plant won out over Spain's Seat Martorell for production of two new SUV: the Skoda Kodiaq and SEAT Atecta. Moreover, Skoda sales, as of yet, seemed to have been immune to the scandal. Through the first eight months of 2016, the brand's global vehicle deliveries have increased by 5.1% to 733,700 as compared with the same period in 2015. As a result, VW was planning on exporting Czech-made Skoda cars and SUVs to Korea and North America for the first time. In the former case, this followed the July 2016 suspension in sales of 80 VW, Audi and Bentley model variants and a fine of $15.9 million from the Korean Government for emissions violations; sanctions and planned buybacks of 475,000 diesel vehicles in America will cost VW $16.5 billion.[46]

If demand for Skoda vehicles continue to expand, VW likely will further enlarge Mlada Boleslav and Kvasiny to protect against any capacity constraints. Conversely, if the Kodiaq is well received in America, the Germany automaker may decide to shift some of its production to its Puebla, Mexico factory, where it will soon build its platform-mate, the VW Tiguan, or to VW Chattanooga, where it will launch its new VW Atlas CUV in early-2017. Or, it could decide to expand output at VW Bratislava, where it already produces luxury SUVs (See Chapter 6).

The future prospects for the Hyundai Nosovice Plant also appear fairly bright. Output achieved its planned 300,000-capacity in 2012, just the factory's fourth full calendar year. Capacity constraints then capped its growth somewhat between 2012 and 2014, before output was raised to 342,200 in 2015. The one caveat for Nosovice was Hyundai's nearby Kia Slovakia's Zilina Plant. However, if the Korean auto group's American experience with twin-car factories in Alabama and Georgia provides an example, the two CE plants will complement and feed off

[46] ACEA (2009–2016); Gibbs (2016); Shepardson (2016).

one another more than compete with one another. On the other hand, with Czechia still on the Koruna and Slovakia on the Euro, currency fluctuations may dictate temporary production shifts.

As for TPCA Kolin, output at the Central Bohemian factory has declined significantly since 2009. Toyota remains firmly committed to its only CE car factory and PSA's recent partnership with Dongfeng of China also may bode well for the plant's future. Nonetheless, it cannot be expected that PSA will continue to support two assembly facilities CE. In fact, early returns from 2016 suggest that any expansions the French automaker undertakes in the region in the near-term will occur at its underutilized Trnava Plant in Slovakia (See Chapter 6). In other words, TPCA will only go as far as its operator, Toyota, wants to take it. Recent pronouncements by the Japanese automaker and the potential impacts of both the VW Diesel Crisis and Brexit suggest an expansion in Czechia may be forthcoming related to Toyota's hot-selling hybrid models.

Overall, the positives propelling automobile production growth in Czechia, including record domestic new car sales, surely outweigh the potential negatives. As to whether the nation can attract another new assembly plant over the next ten years, this appears less certain. The main road blocks will be perpetual labor shortages in Czechia, fierce competition from other CE nations, and the lower wages of SEE nations, particularly, Romania, Serbia, and Slovenia. In reference to labor issues, this require a greater partnership with government to expand worker training programs in the area's outside of Prague. Czechia also will need the EC's competition committee to continue to reign in any potentially over-the-top incentive packages offered to automakers by neighboring CE nations.[47]

[47] Pavlinek (2015b); Muller (2016).

References

ACEA (2009–2016) *The Automobile Industry Pocket Guides*, 2008 to 2016–2017 (Brussels: European Automobile Manufacturers Association).

ACEA (2011–2016) New Passenger Car Registrations European Union, 2010 to October 2016. European Automobile Manufacturers Association Press Releases, http://www.acea.be/statistics, last 30 November.

AP (2006). Czech Republic: Hyundai to Build Auto Plant. *New York Times*, 28 March, C6.

Anderson R and J Reed (2001) Ex-communists become Rivals for Investment. *Financial Times*, 14 December, 14.

Bakir C (2011) A Southern Multinational and an Emerging European State in an Entry Bargaining Process, in Louis Brennan (ed.), *The Emergence of Southern Multinationals* (London: Palgrave), pp. 342–365.

Bollag B (1990) Prague Picks Volkswagen For Venture. *New York Times*, 10 December, D1, D4.

Bollag B (1991) VW Reaches Accord for Skoda Stake. *New York Times*, 20 April, 33, 35.

Bloomberg (2015) Europe's Car Output May Grow as China Costs Rise, *Automotive News Europe*, 29, June, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20150629/ANE/150629906&template=printartANE, last 15 December.

Bloomfield J (1990) Why Skoda Could Prove a Prize Catch for the West. *Guardian*, 7 May, 8.

BLS (2013) International Comparisons of Hourly Compensation Costs in Manufacturing, 1996–2012. U.S. Department of Labor, U.S. Bureau of Labor Statistics, www.bls.gov/ilc, last 15 December 2016.

Burt T (2001) Carmakers Plan Czech Investment. *Financial Times*, 20 December, p. 33.

Ciferri L (2014) Toyota Reconfirms Commitment to PSA Minicar Alliance. *Automotive News Europe*, 7 March, http://europe.autonews.com/article/20140307/ANE/140309861/toyota-reconfirms-commitment-to-psa-minicar-alliance, last 8 March.

Cohen R (1992) Seeking a Steal of a Deal in Prague? *New York Times*, 21 June, F1, F6.

Czech AIA (2016). Production and Sales Czech Makes 2003–2016. Czechia Automotive Industry Association Website, http://www.autosap.cz/en, last 15 December.

Czechia (1999–2007) Panorama of Czech Industry, 2000 to 2006 (Prague: Czech Ministry of Industry and Trade).
Czech Invest (2011–2015) Automotive Industry in the Czech Republic 2011–2015 (Prague: Czech Ministry of Industry and Trade, http://www.czechinvest.org/en, last 15 December 2016.
Czech Invest (2016a) Car Production in the Czech Republic by Plant, 2009–2015. Email correspondence from Sector Manager for Automotive & Green Mobility, 24 May.
Czech Invest (2016b) Sector Databases: Automotive Suppliers, https://suppliers.czechinvest.org/Aplikace/suppliers_ext.nsf/index.xsp, last 20 September 2016.
Deutsch C (1990) Czechs, VW Working out Pact Details. *New York Times*, 25 December, 43–44.
Donovan P (1991a) Finance and Economics: Volkswagen Gets the Go-ahead to Buy 70pc of Skoda. *Guardian* (London) 29 March, 13.
Frink L (2006) Luring Suppliers East. *Automotive News Europe*, 18 September, http://europe.autonews.com/article/20060918/ANE/60916048?template=printartANE, last 15 December 2016.
Georgano N (2000) *The Beaulieu Encyclopedia of the Automobile* (Chicago: Fitzroy Dearborn).
Gibbs N (2016) Skoda Eyes South Korea Entry in 2017. *Automotive News Europe*, 26 September, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20160926/ANE/160929907&template=printartANE, last 27 September.
Green P (2001) Czech Republic: Car Plant Planned. *New York Times*, 21 December, W1.
Greenhouse S (1990) Dear is Near for a Czech Auto Maker. *New York Times*, 5 October. D11.
Henderson J (1995) Skoda-Volkswagen-Renault Negotiations—The Renault-Volvo Proposal, in J Kubes and W Ketelhohn (eds), *Cases in International Business Strategy* (Oxford, UK: Butterworth-Heinemann), pp. 428–451.
HMMC (2011–2016) Hyundai Motor Czech Press Releases, January 2011 to September 2016, http://www.hyundai-motor.cz/, last 15 December 2016.
HMMC (2016) Hyundai Motor Manufacturing Czech, General Information, http://www.hyundai-motor.cz/english.php?rubrika=basic-info, last 30 September.
Homola P (2016) Skoda Plant Gets Ready for Two New Models. *WardsAuto*, 24 February, http://wardsauto.com/industry/skoda-plant-gets-ready-two-new-models, last 15 December.

Hruska V (2016) Community Resilience under Influences of Higher Governance Structures: The Case of the Case Rural Community Nosovice, in C Tamasy and J Revilla Diez (eds), *Regional Resilience, Economy and Society: Globalising Rural Places* (New York: Routledge), pp. 95–111.

Jacobs A J (2013) The Bratislava Metropolitan Region. *Cities*, 31, 507–514.

Jenkins I (1990) Volkswagen Leads the Race to Take over Skoda. *Sunday Times* (London), 9 December, B1.

Johnson R (1989). New Skoda Favorit 136, Yugo 103 bow in Amsterdam. A*utomotive News*, 6 February, 124.

Kimberley W (2001) Skoda: An Eastern European Success. *Automotive Design & Production*, 1 June, http://www.adandp.media/articles/skoda-an-eastern-european-success, last 15 December 2016.

Kozisek P and J Kralik (1995) *L&K Skoda 1895–1995* (Prague: Motorpress).

Muller R (2016) Czech Car Industry needs More Workers to Grow. *Automotive News Europe*, 2, June.

Maynard M (2002) Toyota Set to Give Details of Plans for Czech Auto Plant. *New York Times*, 8 January, W1.

Munchau W (1990) Volkswagen Boosted in Contest for Skoda. *London Times*, 2 November, http://www.thetimes.co.uk, last 15 December 2016.

Myant M (1993) *Transforming Socialist Economies: The Case of Poland and Czechoslovakia* (Aldershot, UK: Edward Elgar).

Nexen (2015) Nexen Tire Holds Groundbreaking Ceremony for its New Plant in Zatec, Czech Republic, 5 October, http://int.nexentire.com/pr_nexen/news/news_view.asp?idx=125, last 5 October.

OICA (1999–2016) Annual Automobile Production Statistics by Nation and Manufacturer for 1999 to 2015. Paris: Organisation Internationale des Constructeurs d'Automobiles, http://www.oica.net/, last 15 December 2016.

Pavlinek P (1998) Foreign Direct Investment in the Czech Republic. *Professional Geographer* 50 (1), 71–85.

Pavlinek P (2002) Restructuring the Central and Eastern European Automobile Industry: Legacies, Trends, and Effects of Foreign Direct Investment. *Post-Soviet Geography and Economy*, 43 (1), 41–77.

Pavlinek P (2008) *A Successful Transformation? Restructuring of the Czech Automobile Industry* (Heidelbeg: Physcia-Verlag).

Pavlínek P (2015a) The Impact of the 2008–2009 Crisis on the Automotive Industry: Global Trends and Firm-level Effects in Central Europe. *European Urban and Regional Studies*, 22 (1), 20–40.

Pavlinek P (2015b) Skoda Auto: The Transformation from a Domestic to a Tier Two Lead Firm, in J Bryson, J Clark and V Vanchan (eds), *Handbook of Manufacturing Industries in the World Economy* (Cheltenham: Edward Elgar), pp. 345–361.

Pavlinek P (2016) Production Data for VW Poznan and Skoda Kvasiny, 1994 to 2006. Email correspondence, 24 April.

PMR (2008) Poland in Contention for Large PSA factory 5 May, http://www.polishmarket.com/60086/Poland-in-contention-for-large-PSA-factory.shtml, last 15 December 2016

Protzman F (1990) Volkswagen and Czechs in Talks about Venture. *New York Times*, 20 March, D2.

Reid S (2005) Hyundai Gears up to Build New Czech Plant. *Edinburgh Evening News*. 30 September, 3.

Reuters (1990) Renault-Volvo Czech Car Plan. *New York Times*. 26 November, D7.

Reuters (1991) Volkswagen Czech Cuts. *New York Times*. 3 September, D10

Reuters (2013) Toyota, PSA will Likely Cut Output at their Czech Plant. Automotive News Europe, 23 October, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20131023/ANE/131029964&template=printartANE, last 15 December 2016.

Rugraff E (2010) Foreign Direct Investment (FDI) and Supplier-Oriented Upgrading in the Czech Motor Vehicle Industry. *Regional Studies*, 44 (5), 627–638.

Shepardson D (2016) VW's U.S. Settlement to Grow to $15 Billion in Emissions Scandal. *Automotive News Europe*, 27 June 27, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20160627/COPY/306279899&template=printartANE, last 15 December.

Skoda (2001–2016) *Skoda Auto Annual Reports*, for 2000 to 2015 (Mlada Boleslav: Skoda Auto).

Skoda (2016a) Production Data for Skoda Plants in Czechia for 2000 to 2015. Multiple Email correspondences with Corporate Communications, 20 April to 12 September.

Skoda (2016b) Skoda Auto History through Lens. Skoda Media Portal, https://media.skodaauto.com/en/Pages/History-new-timeline.aspx, last 11 August.

Skoda (2016c) Skoda Auto Production Plants, http://www.skoda-auto.com/en/company/, last 13 September.

Skoda (2016d) Skoda Media Portal, https://media.skoda-auto.com/en/_layouts/Skoda.PRPortal/homepage.aspx, last 15 September.

Skoda Muzeum (2015) Exhibits Displayed at the Skoda Museum in Mlada Boleslav, 26 August.
Thompson A (2011) *Cars of Eastern Europe: The Definitive History* (Newbury Park, CA: Haynes).
TPCA (2016a) Toyota Peugeot Citroen Automobile: About Us, http://en.tpca.cz/about-us/ and http://en.tpca.cz/about-us/tpca-in-numbers/, last 21 September.
TPCA (2016b) Toyota Peugeot Citroen Automobile Czech, Annual Production Data, 2005–2015, Email from TPCA External Affairs, 12 April.
Uchitelle L (1990) Havel's Aides Meet U.S. Bankers on Investment in Czechoslovakia. *New York Times*, 22 February 1990, A14.
VW (2000–2016) *Volkswagen AG: Annual Reports*, for 1999 to 2015 (Wolfsburg: Volkswagen Group).
Ward's (1958–2014). *Ward's Automotive Yearbook*, 1958 to 2014 (Detroit: Ward's Communications).
Ward's (2014) *Ward's World's Vehicle Data 2014* (Southfield, MI: Ward's Communications
Whitney C (1990) A Casualty of Amnesty: A Plant Using Convicts: Czechoslovakia. *New York Times*, 4 January, A15.
Yonhap (2005) Hyundai Motor to Build New Production Plant in Czech Republic. *AsiaPulse News*, 30, September, http://www.asiapulse.com, last 15 December 2016.

6

Foreign Automakers in Independent Slovakia

Introduction

Slovakia became an independent nation when it was separated from Czechoslovakia on January 1, 1993. Although FDI filtered in more slowly to the area during the 1990s as compared with than its CE neighbors, its central location, productive and relatively inexpensive labor force, and the aggressive recruitment efforts of its central government have transformed the country into one of Europe's most important passenger car production bases.

Beginning with a review of *Bratislavske Automobilove Zavody* or BAZ's development as branch plant for Czechoslovakia's AZNP (Skoda) during the Socialist Period, this chapter chronicles Slovakia's four current foreign passenger car assembly plants, namely: (1) VW Bratislava; (2) PSA Peugeot Citroen (PSA) Trnava; (3) Kia Zilina; and (4) the recently announced Jaguar Land Rover (JLR) Nitra Plant of India's Tata Motors. Similar to elsewhere, the chapter concludes with a brief summary of Slovakia's automobile production since the Fall of Socialism and a

A.J. Jacobs, *Automotive FDI in Emerging Europe*,
DOI 10.1057/978-1-137-40786-3_6

discussion regarding its near-term future prospects for landing a new car factory and existing plant expansion.[1]

VW Slovakia in Bratislava

The Initial Development of BAZ in Bratislava

As mentioned in Chapter 5, internal political pressure pushed the Government of Czechoslovakia to direct a growing share of capital expenditures toward the less developed Slovak half of the country during the last 20 years of the Socialist Era. Among other these projects, this prompted the transfer of: (1) some locomotive, diesel engine, tractor, and tank production to Martin in Zilina Region; (2) an Avia Motors truck components plant to the Town of Zilina; (3) some lower-end Jawa motorcycle production to the Town of Povazska Bystrica in the Trencin Region; and (4) some automotive components production to the Nitra Region. It also resulted in the re-establishment of a non-vehicle factory in Trnava as *Trnavske Automobilove Zavody* (TAZ). TAZ initially produced engines and vehicle components, but in 1973 began assembling a small batch of Skoda LCV to supplement those built at AZNP Vrchlabi. These facilities then helped attract foreign automotive suppliers to Western Slovakia after the Fall of Socialism.[2]

The most important project, however, was related to the Government's efforts to invest more heavily in private automobile production. While this resulted in to some modernization and vehicle capacity expansion at AZNP Mlada Boleslav, it also led to the establishment of BAZ on July 1, 1971. The new company was then charged with the task of building a new model based upon the original Alfa Romeo Guilia subcompact four-door sedan.

[1] The Initial Development of BAZ draws upon: Smith (1998); Pavlinek (2008); Thompson (2011); Jacobs (2013a, 2013b, 2016a, 2018).

[2] AP (1990); Zverina (1990).

Initially, BAZ's corporate headquarters was located in the Ruzinov borough of the City of Bratislava's eastside. On the other hand, its production workshop and Research, Development, and Design departments were located in a collection of existing buildings in central Bratislava's Mlynske Nivy section. This was only temporary, as on April 3, 1974, construction commenced on a planned 100,000-capacity vehicle plant on a vacant tract situated 18 km (12 miles) northwest of Bratislava Castle in the city's Devinska Nova Ves Borough/District IV.

Output of KD kits of Skoda cars and BAZ-brand LCV was planned to commence at the new factory in 1976. This schedule was never realized, however, as AZNP's failed collaboration with East Germany's Trabant and Wartburg caused numerous delays in the completion of BAZ's assembly hall (See Chapter 5). In the interim, beginning in 1979, BAZ briefly produced industrial equipment and robots. Finally, in March 1980, AZNP signed a new agreement with BAZ that called for the plant to annually produce 80,000 Skoda sedans and 17,000 coupes.

In early-1982, prototypes of the BAZ Skoda Locusta 743 supermini were assembled at the plant. This project was then put on hold in order to launch production of the car Locusta was derived from, the Skoda Garde, on April 30, 1982. From its inception in September 1981 until that time, the Garde had been built at AZNP Kvasiny in Czechia (See Chapter 5).

A total of 257 cars were assembled at BAZ in 1982, rising to 840 in 1983 and 1,036 in 1984. Late in 1984, production was transitioned to the Garde's successor, the Skoda Rapid fastback, itself based upon the Skoda 130 sedan built in Mlada Boleslav. Meanwhile, prototypes of the Locusta were again tested at BAZ in anticipation of building 10,000 units annually beginning in 1985. Serial production of the Locusta never commenced, however, and output of the Rapid contracted thereafter. Only 738 Rapid were assembled at BAZ in 1985, followed by 554 in 1986, and then only 53 when production was terminated on December 31, 1987. There were many reasons for this outcome, most prominent among them was the slow forwarding from Mlada Boleslav of vital components necessary to assemble the cars.

After car production was ended, BAZ built components for Skoda vehicles and continued its decade long assembling of Tatra-designed

Praga V3S three-ton military trucks (through 1990). During the 1980s, the plant also tested prototypes for LCV. Among these were: the BAZ Furgonet, which was based upon the Skoda 105/120 and tested between 1981 and 1983; and the BAZ MNA 900 and BAZ MNA 1000 commercial vans, of which test versions were built between 1986 and 1989. Unfortunately, none of these models ever went into full production. The same fate the BAZ Devin lorry, with production being cancelled in June 1989.

Although BAZ only produced 3,480 units of the Garde and Rapid between 1982 and 1987 and none in either 1988 or 1989, the complex would provide the launching point for Slovakia's automobile industry boom after the Fall of Socialism. This transformation began within months of the opening of the Berlin Wall in November 1989, when the Czech Government began soliciting Western partners for its soon to be privatized car plants.

VW Wins BAZ

As discussed in Chapter 5, by 1989, misguided State investment had left the technology, reliability, and fit and finish quality of the small, inexpensive Skoda models built in Czechoslovakia far behind that of Western automobiles. This left its auto industry highly vulnerable to foreign takeover as the country prepared to open up to market capitalism. In an attempt to save AZNP and BAZ, as well as protect their workforces, the central government began approaching foreign investors in hopes of establishing joint ventures with its debt-ridden carmakers.

Early on, GM and Renault expressed interest in both AZNP and BAZ. On June 26, 1990, press reports declared that GM Europe was in final negotiations with Czechoslovakia's Government concerning a project to produce 250,000 transmissions annually for export at an unspecified site in the country. Output was expected to commence in late-1992 and complement the automaker's plans to build Opel cars in Eisenach, East Germany and engines and cars in Szentgotthard, Hungary. The announcement also suggested this arrangement was separate from a potential GM deal to assemble LCV at BAZ.

A GM-BAZ joint venture seemed all but assured on November 7, 1990, when the American automaker publically declared, again pending a final agreement, that it would locate its planned transmission production at BAZ. GM officials also implied that the arrangement would include assembly of a small batch of Opel cars for the domestic market. In preparation for the deal, on November 30, 1990, the Ministry of Economy declared that the plant would be privatized and its assets and liabilities transferred to a newly created firm, BAZ Bratislava AS. This was made official on December 31, 1990.[3]

In the meantime, on December 9, 1990 the government had found its savior for the ailing AZNP Mlada Boleslav, when selected VW to partner with the soon-to-be privatized Skoda Auto (See Chapter 5). This development changed the entire complexion of the State's negotiations with GM, with automaker officials claiming that the Czech Government had become unwilling to resolve certain issues in a timely fashion, and was stalling for a better deal. GM also complained that the delay in transmission output was affecting its ability to produce cars in CE. As a result, despite the deal receiving approval from the Slovak Regional Government on February 26, 1991, the American automaker withdrew from its venture at BAZ.[4]

The motives behind the government's stalling tactics came to the fore on March 12, 1991, when the authorities announced that VW had outbid five other competitors for the rights to partner with BAZ (See Table 6.1). According to the deal announced the next day, VW was to invest $32 million in exchange for an 80% stake in BAZ, with the remaining 20% to be controlled by the Slovak Regional Government. Plans called for VW to initially assemble 3,000 VW Passat wagons (Arriva) per year in Bratislava, with output commencing possibly as early as December 1991.[5]

The official agreement between the two sides was signed on May 30, 1991, upon which BAZ's assets were transferred to the newly established

[3] AP (1990); Zverina (1990).

[4] Reuters (1991); Pavlinek (2008).

[5] AP (1991); Jakubiak et al. (2008); Pavlinek (2008); Jacobs (2013a, 2013b, 2016a, 2018).

Table 6.1 Foreign car plants in Slovakia

Firm	Origin	Place, Region	Announced	Production launched	Emp. 31 Dec 2015	Vehicle Output 2015	Vehicle Capacity 2016
		Slovakia			**16,908**	**1,000,001**	**1,120,000**
VW[a]	Germany	Bratislava, Bratislava	Mar-1991	Dec-1991	9,762	358,776	400,000
PSA	France	Trnava, Trnava	Jan-2004	Jun-2006	3,500	303,025	360,000
Kia	S. Korea	Teplicka nad Vahom, Zilina	Mar-2004	Nov-2008	3,646	338,200	360,000
JLR	India	Nitra, Nitra	Aug-2015	*late-2018*	*+2,800*	NA	*+300,000*

Sources: Adapted by author from Jacobs (2013a, 2013b, 2016a, 2017).
[a] Plant first established as BAZ on July 1, 1971 and launched car output on April 30, 1982.

limited liability company, Volkswagen Bratislava. Thereafter, the plant was re-tooled for car production, with the first two of the VW Passat (B3) rolling off the VW Bratislava assembly line on December 21, 1991 (See Table 6.1). Serial production of the third-generation Passat sedan commenced on February 14, 1992, with a total of 1,630 cars assembled at the plant in that year.[6]

On January 1, 1993, Slovakia became an independent nation and car output at the VW Plant in its new capital city increased to 2,958 in 1993. Meanwhile, assembly of a second vehicle, the VW Golf (Mk3) commenced at the facility in January 1994. This included the six-cylinder Golf Syncro, making VW Bratislava the only facility in the automaker's production network producing the four-wheel drive special edition of the car. In addition, welding and paint shops were added at the complex and a gearbox assembly line was transferred from VW's main transmission factory in Kassel, (West) Germany. Output of gearboxes commenced in Bratislava on August 22, 1994. In meantime, VW gained full control over the Bratislava operations when it acquired the Slovak Government's 20% stake in the venture on January 1, 1995. These changes increased car output to 19,688 and employment to 1,950 in 1995.[7]

Despite other pronouncements, VW's decisions for relocating these activities in Slovakia were purely economic. At the time, labor costs in the now independent country were less than one-tenth that in Germany and machining components and assembling gearboxes in Bratislava saved the company $3.50 per transmission as compared those built at Kassel. A total of 46,000 gearboxes were produced in Bratislava in 1994, followed by 185,000 in 1995, allowing the automaker to cut costs by approximately $800,000 in the first two years alone. Greater savings were still to come, as most of the components installed in Bratislava-built Passat and Golf were still being shipped in from Germany. This began to change slightly in 1996, when VW launched a 50/50 components joint venture with Siemens of Germany known as Volkswagen Electrical Systems (VES). Located 115 km (72 miles) east of the VW

[6] Jakubiak et al. (2008); Jacobs (2013a, 2016a, 2018).

[7] Jakubiak et al. (2008); Pavlinek (2008); Jacobs (2013a, 2016a).

Bratislava in Nitra, VES soon employed 800 people manufacturing wire harnesses/cables for engines, brakes, and other components for installation in VW cars.[8]

Vehicle output in Bratislava rose to 30,147 in 1996 and then to 40,885 in 1997. Additionally, in July 1997, VW announced that it would spend a fresh $70 million to expand and upgrade the Bratislava complex in preparation for the launch of the next-generation VW Golf (Mk4). Output of the Golf commenced on September 8, 1997, when a third work-shift also was added. This raised employment at the plant from 2,002 on December 31, 1996 to 3,000 on December 31, 1997. Conversely, assembly of the Passat ended at the facility in December 1997.[9]

Car Production in Bratislava jumped three-fold to 125,089 in 1998, accompanied by a slight 15% rise in gearboxes to 328,000. This pushed VW employment in Slovakia to 5,000 at the end of 1998. Further growth was stimulated by the Slovak Government's introduction of its 'Program for the Development of the Automotive Industry' in October 1998. The program which covered a planning horizon through 2010, set out to: (1) stimulate the Slovak economy and to create a positive trade balance; (2) expand domestic vehicle production, especially for export; (3) restructure the automotive components sector to better supply producers; and (4) utilize the automotive industry as a catalyst to quicken the integration of Slovakia into the world economy.[10]

As part of this initiative, the government set goals of: (1) creating 15,000 new automotive sector jobs; (2) attracting a second foreign automaker to the nation by 2010; and (3) trebling VW's production by 2010. It then provided VW with the first allocations under the program, granting VW a $44.0 million tax abatement in 1998 and providing it $12.3 million toward the construction of a components factory in the country between 1998 and 2000. The Government also allotted $423 million to: (1) construct a new road from the D2

[8] Done (1995); Jakubiak et al. (2008); Pavlinek (2008); BLS (2013); Jacobs (2013a, 2016a).
[9] Jones (1997); Jakubiak et al. (2008); Pavlinek (2008); Jacobs (2013a, 2016a)
[10] Ward's (1958–2014, 2014); VW (2000–2016); Jakubiak et al. (2008); Jacobs (2013a, 2016a)

Motorway to VW Bratislava (Route 505); (2) enhance rail capacity to the site; and (3) build 1,000 apartments in the region for VW employees and (4) provide a special bus service between worker housing and the plant.[11]

To coordinate these new developments, the German automaker established a new umbrella company to oversee its operations in the country, VW Slovakia AS. Then, on January 13, 1999, VW officially announced its plans to invest an undisclosed amount to establish a new components factory 248 km (155 miles) northeast of the car plant in Martin. VW also declared plans to transfer some production of the VW Polo (Mk3) supermini to Bratislava by the summer of 1999 and to double annual plant capacity to 250,000 by 2000. The German automaker's Seat Pamplona in Spain was to remain the main production hub for the Polo, but Bratislava was to replace Wolfsburg as the secondary site for the vehicle's output.[12]

A week after the twin disclosures, VW revealed that it would make an additional $267 million in upgrades to Bratislava in order to transform the operations into a full-fledged vehicle manufacturing factory. Vital improvements included major enlargements to the aforementioned body welding and painting shops. Only capable of handling 75,000 cars a year, these facilities had constrained vehicle output in 1998, forcing VW to meet demand by shipping approximately 50,000 already painted car bodies to the plant from Germany. Overall, the expansions in Martin and Bratislava were expected to raise employment at VW Slovakia's operations to 6,500 by the end of 1999.[13]

Still limited by bottlenecks, output at the plant rose only slightly to 126,503 cars and 360,000 gearboxes in 1999, with the first Polo rolling off the Bratislava line in June 1999. Sharing many components with the Golf, the Polo set on the same platform as the VW's Seat Ibiza and Seat Cordoba superminis, and the Seat Inca and VW (Polo) Caddy manufactured at VW's Martorell, factory. This enabled the Spanish plant to

[11] Jakubiak et al. (2008); Jacobs (2013a, 2016a)
[12] Done (1999); *National Post* (1999); Jacobs (2013a, 2016a)
[13] Anderson (1999); Griffiths (1999); Jacobs (2013a, 2016a)

ship KD kits of the Polo and three Seat vehicles bound for the Polish market to VW Poznan for final assembly between 1996 and 1999. Additionally, Martorell sent VW Caddy kits to Skoda Kvasiny in Czechia (See Chapters 3 and 5). Not surprisingly, despite the major enhancements, approximately 85% of the components installed in the vehicles built in Bratislava in 1999 were still imported, primarily from in Germany. Conversely, 98.6% of the cars assembled at the plant were exported out of the country, with 40% going to Germany.[14]

The picture for VW Bratislava soon improved, when on September 17, 1999, VW announced that it had selected the factory over 11 others in Europe to produce its new luxury SUV line. Developed in collaboration with Audi and Porsche, Bratislava was to build the lower-end iteration of the vehicle, the VW Colorado (later renamed the Touareg) and car bodies for the more expensive Porsche Cayenne to be assembled at Porsche's new plant in Leipzig, (East) Germany (See Chapter 4). In the meantime, construction got underway on VW Slovakia's Martin components factory, with output of gearboxes and brake parts commenced at the facility Martin on May 25, 2000. With its completion, VW's total investment in Slovakia rose to $450 million since 1991. Conversely, in 2001 a site in Presov, Slovakia was eliminated from consideration for a BMW Plant that ultimately went to Leipzig (See Chapter 4).[15]

Buoyed by the VW Polo, car output in Bratislava rose to 180,706 in 2000 and to 181,644 in 2001; some 331,000 gearboxes also were built in 2001. Vehicle output at the 6,800-worker complex then rose to 201,742 in 2002; another 700 were employed in Martin. More importantly, serial production of the VW Touareg luxury SUV commenced on June 30, followed by the manufacture of car body shells and other components for the Porsche Cayenne ultra-luxury SUV in December 2002. In addition, in September 2002 VW announced plans to shift production of up to 50,000 units of the next generation the Seat Ibiza

[14] SARIO (2007–2016a); Skoda (2001–2016)

[15] Tagliabue (1999); Mitchell (2000); Tutak (2000); VW (2000–2016); Smolka (2002); Jacobs (2013a, 2016a)

supermini from Martorell to Bratislava. Output of the third-generation Ibiza in Bratislava commenced in January 2003.[16]

In January 2004, the ten-year production run of Golf ended in Bratislava, with total volume declining to 171,888 in that calendar year. By that time, a new paint shop was operational at the complex. Meanwhile, by 2004, VW and the Slovak Government's Automotive Industry Initiative had attracted several of the world's largest suppliers to western Slovakia, including: Brose, Continental, Hella, Ina, Leoni, and ZF of Germany; and Delphi, Johnson Controls, and Visteon of America had landed in Slovakia. Several of these firms, and others soon to come, located in government subsidized industrial parks or areas, such as Lozorno and Malacky in the Bratislava Region, Ilava in Trencin, and Vrable in Nitra. On a side note, VW sold VES Nitra to Sumitomo Electric of Japan in April 2006, after which it became known as SE Bordnetze-Slovakia.[17]

Vehicle production at VW Bratislava rose slightly to 176,189 in 2005 and then 210,354 in 2006. The increased in 2006 was driven by the November 2005 launch in serial production of the Touareg sibling, the Audi Q7 luxury SUV. A total of 72,169 Q7 were assembled in Bratislava in 2006, accompanied by 60,802 Touareg, and a combined 77,383 VW Polo and Seat Ibiza. Another 28,303 sets of Porsche Cayenne kits, including painted car bodies mated to under-body chassis and wheels, fitted with gearboxes and Martin-built drivetrain, were prepared at VW Bratislava in 2006. These kits were then shipped to Porsche Leipzig, where interior components were installed and final assembly was completed. Including Cayenne in Bratislava's totals, VW Slovakia reported total car production as 238,657 in 2006 (Again, Cayenne were credited here to Porsche Leipzig).[18]

The shuffling of final assembly to Porsche Leipzig was purposeful on VW's behalf. In 2006, VW Bratislava production workers still received only $6.90 per hour in compensation for their activities as compared

[16] Ward's (1958–2014, 2014); OICA (1999–2016); VW (2000–2016)
[17] SARIO (2007–2016a, 2007–2016b); Jacobs (2013a, 2016a)
[18] Ward's (1958–2014, 2014); OICA (1999–2016); VW (2000–2016); Audi (2004–2016)

with $69 per hour in wages and benefits commanded by their peers in Germany. Therefore, whereas manufacturing most of the vehicle's components and bodies in Slovakia dramatically reduced production costs, assigning the finishing work to the Leipzig Plant allowed Cayenne models to be stamped with 'Final Assembly in Germany,' and thereby maintain their ultra-luxury status in American, European, and Asian markets.[19]

Production of Polo and Ibiza were ended in Bratislava in December 2007 and replaced in March 2008 by a small batch of Skoda Octavia overflow output from Mlada Boleslav; the Polo and Ibiza continued at VW Pamplona and Martorell, respectively. As a result, total output fell to 139,631 in 2008. More significantly, in December 2008 the Slovak Government approved an $18.8 million tax subsidy for VW related to its proposed new $405 million investment in the Bratislava factory. Released to the press on April 21, 2009, the new project was expected to boost vehicle capacity at the plant to 400,000 and to create 1,800 temporary construction jobs, 1,500 new plant positions, and 7,000 jobs nationwide. Scheduled for completion in early-2011, the development was to culminate in the launch in production of a new three-brand line of small cars in Slovakia.[20]

As shown in Table 6.2, the ensuing retooling and enlarging of the complex coupled with the 2009 Great Recession led to a further shrinkage in car production in Bratislava to 78,903 in 2009. This rose slightly to 105,596 in 2010 and 148,322 in 2011; including Cayenne kits, VW Slovakia reported these totals as 144,510 and 210,441, respectively. The 2011 increase in final assemblies was buoyed by the installation of a new large metal press shop and in October 2011, the launch of the city car triplets, the VW Up! and its less expensive siblings, the Skoda Citigo and SEAT Mii (See Table 6.2).[21]

[19] Wage data adapted from BLS (2013)

[20] VW (2000–2016, 2009); Skoda (2001–2016); *Slovak Spectator* (2007–2013); Jacobs (2013a, 2016a, 2018).

[21] Ward's (1958–2014, 2014); OICA (1999–2016); VW (2000–2016); Audi (2004–2016); VW Slovakia (2011–2016); Pavlinek (2015, 2016); Jacobs (2016a, 2018)

Table 6.2 VW Bratislava car production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
VW Bratislava[a]	**358,776**	**323,330**	**344,892**	**337,352**	**148,322**	**105,596**	**78,903**
Audi Q7	82,340	60,990	63,400	55,106	53,707	47,769	27,929
Seat Mii	24,516	25,845	25,489	26,409	990	—	—
Skoda Octavia	—	—	—	—	—	9,758	18,666
Skoda Citigo	41,280	41,974	42,971	36,687	1,027	—	—
VW Up!	151,450	130,780	142,171	141,515	12,612	—	—
VW Touareg	59,190	63,741	70,861	77,635	79,986	48,069	32,308

Source: Compiled by author from OICA (1999–2016); VW (2000–2016); Skoda (2001–2016); Audi (2004–2016); Ward's (2014).

[a] Does not include Porsche Cayenne car bodies sent for final assembly to Porsche Leipzig (See Chapter 4).

With the plant pumping out the new UP-Citigo-Mii! lineup full-throttle, final car assemblies in Bratislava jumped to 337,352 in 2012 and then a plant record 358,776 in 2015 (See Table 6.5). Including Cayenne and other car kits prepared at the complex and these totals were 419,888 and 397,456, respectively in 2014 and 2015. A record 426,313 cars and kits were prepared in 2013. Approximately 99% of these vehicles were exported out of the country between 2012 and 2015, and 61% of the final car assemblies produced, or 830,944, were from the UP! series. In 2015, this included: 151,450 UP!, 41,280 Citigo, and 24,515 Mii; accompanied by 82,340 Audi Q7 and 59,190 VW Touareg.[22]

Employment at the 400,000-capacity VW Bratislava stood at 9,762, as of December 31, 2015 (See Table 6.1). This represented an increase of 40.2% from 6,964 on December 31, 2010. As of 2016, the complex covered an area of 178 hectares (439 acres) and consisted of: a three-line 1.3-km-long assembly hall; three car bodies manufacturing shops (two SUV and one car); paint and metal press facilities; a components machining hall; and a 452-meter long ski lift-like cableway to transport cars to the complex's test track.[23]

VW engaged an additional 830 workers at its Martin components factory and a grand total of 10,800 in Slovakia when its VW Kosice warehouse and its 6,000 m^2 (64,500 ft^2) Stupava tool factory were included. The Martin factory has produced differential gears, flanges, flanged shafts, brake drums, and brake wheels for five different VW brand vehicles. Approximately 93% of its output was exported, primarily to VW Kassel, which received more than two-thirds of Martin's components. Whereas VW Kosice has retrofitted VW cars for the Russian market since 2004, the 200-worker Stupava factory was opened in the Bratislava Region's Malacky District in October 2014.[24]

[22] Ward's (1958–2014, 2014); OICA (1999–2016); VW (2000–2016); Audi (2004–2016); VW Slovakia (2011–2016)

[23] VW Slovakia (2011–2016)

[24] SARIO (2007–2016a); VW Slovakia (2011–2016)

Car production was expected to expand significantly at VW Bratislava in the near-term, following a series of announcements made in 2014 that will see its parent automaker invest a fresh $600 million. When completed in 2017, the Slovakia car plant will: (1) launch output of the Lamborghini Urus ultra-luxury SUV; (2) take on final assembly of the Porsche Cayenne from Porsche Leipzig; and (3) gain a new production line to stamp car bodies for the newly developed Bentley Bentayga ultra-luxury SUV—Bentley's Crewe Works in Cheshire East, UK commenced assembly of the Bentayga on November 27, 2015. The Urus and Bentayga will share VW's mid-size MLB platform with the Cayenne, Q7, and Touareg.[25]

Twenty-five years after VW's takeover of BAZ, VW Bratislava plant has remained Slovakia's largest individual FDI project. In total, VW has committed more than $1.5 billion to its operations in the country and created direct and indirect employment of more than 20,000. The Wolfsburg-based automaker also has reaped sizable rewards from its decision to locate in Bratislava, benefitting from the area's central location, low taxation, skilled workforce, and hourly labor costs that have remained less than one-fourth that commanded by its staff in Germany. All of these factors suggest a very bright near-term future for VW Bratislava.

PSA Peugeot Citroen Trnava

After considering several sites in CE, on January 15, 2003 *Peugeot Societe Anonyme Peugeot Citroen* (PSA) announced its intentions to build a $740 million car plant 56 km (35 miles) northeast of downtown Bratislava in Trnava (See Table 6.1). Projected to launch production of superminis in 2006, the 300,000-capacity, 3,500-worker factory was to be situated on a 192-hectare (474-acre) greenfield located just northwest of the junction of today's National Motorway D1/E58/E75 and Expressway R1/Route 51.

[25] Bryant & Foy (2014); Krogh & Pix (2014); *Automotive News Europe* (2015b)

Seeking to quickly increase worldwide sales by more than 20% in the near-term, PSA's declaration to locate in Slovakia came on the heels of its December 2001 decision to jointly open a similarly sized facility with Toyota in Kolin, Czechia (See Chapter 5). PSA officials maintained that the twin car factories enabled the company to overcome bottlenecks at its existing assembly facilities in France, Great Britain, and Spain. As for why Trnava, they stated that the site provided excellent highway, rail, air (M. R. Stefanik-Bratislava), and water transport (Port of Bratislava on the Danube River) access to both developed and emerging European markets. Finally, officials credited: Slovakia's pro-business climate; its manufacturing tradition; its relatively low-wage, but well-educated and mechanically-trained labor force; and the possibility of building a supplier park adjacent to the new factory, also influenced their selection of Trnava.[26]

In exchange for building the factory, PSA was awarded $180 million in incentives from the Slovak Government that was staggered to allow it to remain within the EU Competition Committee's 15% initial incentive-to-investment cap. The package included: $160 million in land and infrastructure for the plant; a $12 million job training grant; and as much as $6.05 million for job creation or equivalent to $1,730 per job up to 3,500. In addition, the government promised PSA: an undisclosed tax abatement; help subsidizing the construction of worker housing in the Trnava Region; and to establish a French immersion school in the city.[27]

The groundbreaking for PSA's new Peugeot Citroen Automobiles Slovakia Trnava Plant (later PSA Trnava) commenced on June 17, 2003, with the completion of the 92,000 m^2 (990,000 ft^2) assembly hall and its accompanying administrative buildings and stamping, body-in-white, and paint shops expected in the summer 2005. By that time, PSA also was to finish preparations on its $110 million, 50-hectare (125-acre) Trnava Logistics Park situated on the east side of the factory that was to serve PSA's Faurecia and the French components manufacturers

[26] Anderson et al. (2003); Arnold (2003); Green (2003); Jakubiak et al. (2008)
[27] European Commission (2006, 2007); Jakubiak et al. (2008)

Sofitec, Streit, and Valeo. The French automaker also declared that it would transfer its sourcing of automotive sheet metal from Western Europe to eastern Slovakia, as soon as U.S. Steel's $160 million hot-dip galvanizing mill came on-stream in Kosice in 2007.[28]

These developments were soon followed by rumors suggesting that PSA would expand vehicle capacity at its soon-to-be operational Slovak complex to 500,000 by 2009. The French automaker quickly squashed this speculation when media reports suggested that the Trnava enlargement would lead to the early closure of its 2,800-worker, 180,000-capacity Ryton Plant in Warwickshire, UK. PSA had promised to keep the factory, then building the outgoing Peugeot 206 supermini, opened until 2010. At the time, the 206 also was being manufactured at PSA's Poissy (near Paris) and Mulhouse factories in France.[29]

The assembly of prototypes for the Peugeot 206 successor commenced in Trnava in January 2006, with serial production of Peugeot 207 supermini launching on June 8, 2006; the official factory opening occurred on October 14, 2006 (See Table 6.1). PSA's Poissy and Madrid, Spain factories also began assembling the car at this time. A total of 51,719 Peugeot 207 were built in Trnava in 2006, rising to 177,586 in 2007.[30]

After investing another $145 million in the Trnava Plant, on November 26, 2007 PSA began preparations for a second model, the Citroen C3 Picasso Mini MPV. Sharing the PSA PF1 Platform with the Peugeot 207, a total of 1,841 Picasso and 186,397 cars overall were assembled at the then 3,101-worker, 300,000-capacity complex in 2008. It was not until March 2009, however, before serial production of the MPV finally commenced. As shown in Table 6.3, of the 203,732 total cars built at PSA Trnava in that year, 112,403 were Peugeot 207 and 91,329 were Picasso. The cutback in 207 output was prompted by falling car sales in Europe related to the 2009 Great Recession. In response, employment at the plant

[28] SARIO (2007–2016a, 2007–2016b); Jakubiak et al. (2008); PSA Slovakia (2012–2016a, 2012–2016b)

[29] Frink (2005)

[30] Tagliabue (2006); PSA (2007–2016); PSA Slovakia (2008–2011)

Table 6.3 PSA Trnava car production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
PSA Trnava	**303,025**	**255,176**	**248,405**	**214,617**	**177,676**	**186,140**	**203,732**
Peugeot 207	—	—	—	45,576	109,219	109,049	112,414
Peugeot 208	258,859	205,562	184,754	113,532	82	—	—
Citroen C3 Picasso	44,166	48,614	63,651	55,509	68,375	77,091	91,329

Source: Adapted by author from PSA Slovakia (2008–2011, 2014–2016).

contracted to 2,003 during early-2009, before being reported as 3,000 as of December 31, 2009.[31]

As the European economy continued to stagnate, vehicle output in Trnava declined in to 177,676 in 2011. It then rebounded to new highs of 214,617 in 2012 and 248,405 in 2013. This growth was propelled by a new round of $160 million in investments from PSA in 2011, and the related to the March 12, 2012 launch in serial production of the 207 replacement, the Peugeot 208 supermini. A total of 184,754 units of 208 were assembled in Slovakia in 2013. Employment also expanded slightly during this period, to 3,200 on December 31, 2013. By that time, Trnava had become PSA's primary site for Peugeot 208 production, its volume of supermini easily outpacing those built at PSA's 400,000-capacity Poissy and 452,000-Mulhouse factories. In fact, in 2013 Trnava produced more cars overall than the Mulhouse Plant did for the first time.[32]

The growth in Trnava was an encouraging sign, especially considering that PSA's recent major financial difficulties had thrown the automaker's future in doubt. These loses also led to three major events for PSA: (1) the forging of a global cost-sharing alliance with GM, with the American automaker acquiring a 7% stake in PSA on March 29, 2012 for $423 million; (2) the announcement of a reorganization plan on July 12, 2012 that called for the elimination of 11,200 PSA Group jobs in France by 2015; and (3) the offloading of a 75% share in its Gefco logistics division to Russian interests for $1.06 billion on December 20, 2012. Not including the proceeds from this sale, the PSA Group suffered a consolidated loss of $6.5 billion in 2012 alone. Things were worse for the automotive division, which recorded an operating deficit of $7.6 billion in that year, after losing $568 million in 2011.[33]

Following the implementation of its reorganization plan in May 2013, some 1,400 workers at PSA's Rennes car factory were laid off

[31] PSA (2007–2016, 2010–2016, 2014); PSA Slovakia (2008–2011, 2012–2016a, 2012–2016b); Pavlinek (2016)

[32] PSA (2007–2016, 2010–2016, 2014); PSA Slovakia (2008–2011, 2012–2016a, 2012–2016b).

[33] Bloomberg (2013); McVeigh (2013); Pavlinek (2016)

pending reassignment, and vehicle output at the automaker's 40-year old Aulnay-sous-Bois Plant in France was terminated in anticipation of its the total shutdown in 2014. When the last Citroen C3 supermini rolled off the Aulnay assembly line on October 25, 2013, approximately 3,000 permanent staff and 1,100 temporary workers lost their jobs. Poissy then became the sole producer of the C3, where cutbacks also were expected related to its Peugeot 208 production.[34]

The PSA Group suffered a consolidated loss of $3.06 billion in 2013, followed by a deficit of $675 million in 2014, with the latter year marked by the appointment of Carlos Tavares as President, effective January 1, 2014. In response to its dire financial position, PSA was forced to seek a partner, in order to obtain the necessary capital to undertake the international expansions that its board believed were necessary to remain economically viable. During this period, the French automaker was courted by GM and VW, among others, before receiving a $4 billion cash infusion from Dongfeng Motors of China and the French Government. Approved by PSA shareholders on April 25, 2014, the deal saw Dongfeng and the French State each pay about $1.1 billion for separate 14% holdings in PSA; GM retained its 7% share. Upon consummation of the deal, the Peugeot family's stake in the auto group was reduced from 25.5% to 14.0%.[35]

With its foundation secured, at least in the near-term, PSA continued to implement its new strategic vision, which was expected to significantly reshape and enlarge its global production footprint by 2020. A major part of its goal of reshaping its global footprint was the shifting of production of all of its low profit margin economy cars out of Western Europe to lower-wage nations. A major element of its plan for global expansion was revealed at the Paris Auto Show in October 2014, when a company official suggested that PSA was considering re-launching car sales in North America for the first time since 1992. Key to both of these developments was to be Trnava Plant, of which PSA claimed investments of more than $1.1 billion through 2015. This included $85

[34] PSA (2007–2016, 2010–2016, 2014); PSA Slovakia (2012–2016a, 2012–2016b)
[35] PSA (2007–2016); Reuters (2014)

million in April 2015 for the planned introduction of a new supermini model by 2018.[36]

PSA did not initially name the new model, but rumors surfaced in May 2014 that the automaker would transfer manufacture of its best-selling C3 from Poissy to Trnava. The French factory was then expected to commence output of the new upscale successor to the Citroen DS 3 supermini, the DS 3 hot hatch, which was to be released on the American market by 2020. This reshuffling was not surprising, considering at the time the average compensation of PSA's workforce in Slovakia was still one-fourth that of staff in France.[37]

Output Trnava rose to 255,176 in 2014 and then to a record 303,025 in 2015. In the latter year, 258,859 Peugeot 208 and 44,166 C3 Picasso were built. Approximately 99% of the vehicles built at the now 3,500-worker, 360,000-capacity PSA Trnava Plant were exported out of the country in both 2014 and 2015 (See Tables 6.1 and 6.3). All of these figures were projected to grow further by spring 2017, when the unnamed new model was to launch and a fourth work- shift was to be added in Trnava.[38]

As a result of PSA Group profits of $1.3 billion in 2015, the planned expansion of the Trnava Plant has progressed ahead of schedule. On March 15, 2016, the first prototype of its new third-generation C3 supermini was completed at Trnava and recruitment of a fourth-shift commenced in June 2016. Currently, the factory's crew of 3,500 was engaged in three full-time, five-day week work shifts. Based upon the new agreement signed between PSA and the local trade union, however, when the fourth 800-worker shift comes on-board in early-2017, it was to consist of two weekend modes. During their rotations, these associates will earn 70% to 80% of the wages paid to regular full-time operators, but in only two or three days of work.[39]

[36] *Automotive News Europe* (2015a)
[37] *Automotive News Europe* (2015a); PSA (2010–2016)
[38] SARIO (2007–2016a); PSA Slovakia (2012–2016a, 2012–2016b, 2014–2016).
[39] PSA (2010–2016); Homola (2016a)

With the serial launch of the C3 expected in late-2016, PSA Trnava officials expect production to rise to 315,000 cars in 2016, followed by 345,000 in 2017, and 360,000 in 2018. Nonetheless, rising demand for the Peugeot 208 in Europe has already quickened this pace, with the factory assembling a total of 178,748 vehicles in the first half of 2016. As a result, the complex may reach the automaker's 2018 goal of producing 360,000 cars in Slovakia two years ahead of schedule.[40]

It now appears that the Trnava Plant will play a major role in helping PSA achieve both its geospatial reshaping and cost-cutting goals. In June 2016, PSA revealed its intentions to significantly increase the CE parts content of its Trnava-built Peugeot 208 and Picasso from their 45% and 35%, respectively, in 2015. When launched in late-2016, the Citroen C3 was expected to contain approximately 86% CE content, rising to 95% within a few years. To aid in this effort, in June 2016, PSA also revealed plans to commence production of three-cylinder EB Turbo PureTech petrol engines in Trnava by 2019.[41]

In sum, only four years after PSA's future as a carmaker was in serious doubt, and its Slovakia factory was expected to be either absorbed by GM or VW or shuttered, the near-term future of PSA Trnava now appears reasonably bright.

Kia Zilina

Seeking to gain duty-free access to the EU market, cut transportation costs, and hedge against foreign exchange rate volatility, in November 2002, the Hyundai-Kia Motor Group began negotiating with CE politicians regarding potential sites for an automobile assembly plant. In August 2003, rumors circulating out of Seoul suggested that Kia Motors had narrowed its choices to sites in Czechia's Ostrava Region and in unknown area of Slovakia. In contrast to these reports, in September 2003 a Kia representative in Hungary declared that Czechia was the

[40] PSA (2010–2016); Jancarikova (2016a)

[41] PSA (2010–2016); PSA Slovakia (2012–2016a, 2012–2016b); Homola (2016b)

preferred location, but that Hungary and not Slovakia was the second nation being seriously considered for the factory. By October 2003, Czechia was the frontrunner, with Poland said to be making a late charge for the plant.[42]

In response to these revelations, Slovakia's Economy Minister visited Seoul to see if he could get his nation back on Hyundai-Kia's radar. His trip proved fruitful, as after touring four candidate sites that month, Hyundai executives revealed on November 26, 2003 that they had narrowed their choices to two finalists, Slovakia and Poland, with Czechia and Hungary being removed from their list. They clarified this stance by explaining that productivity and production costs were both important. As a result, despite its higher qualify infrastructure, Czechia was disqualified time because of its relatively high wage rates. As will be discussed later, Hyundai officials had other plans for the site near Ostrava.[43]

Hyundai suggested that if conditions were ripe that it would make its final decision on a site during February 2004 and begin construction on its $1.5 billion, 300,000-capacity car factory in 2005. At the time, the scuttlebutt centered on two sites, one in Kobierzyce, Poland, situated about 20 km (12.5 miles) south of Wroclaw and near Highway 8/E67, and the other located in northwestern Slovakia near Zilina. Poland's plan was to designate the site as part of a special economic area, and thereby provide the automaker with a ten-year holiday on income taxes, as well as special grants for job creation and training. The Polish government had already lowered its corporate taxes to 19%, so as to make them compatible with Slovakia, which had cuts its taxes to a similar rate in early-2004. In contrast, corporate tax rates were 31% in Czechia and 25% in Germany. The Polish Government also planned to incorporate Kobierzyce in its Highway 8/Expressway S-8 Corridor enhancement project (aka the 'Via Baltica' Expressway).[44]

[42] *Korea Times* (2003–2004).
[43] *Korea Times* (2003–2004).
[44] *Korea Times* (2003–2004); Kim (2004a); Landler (2004); Rousek (2004); Skyring (2004)

According to the Slovak officials, Zilina desperately needed the factory, as unemployment levels in the 50 km (30 mile) radius of the city were hovering around 15% in 2004, due to the major scaling down of national defense industry production following the Fall of State Socialism. Although no specifics were revealed at the time, Slovakia was believed to have offered Kia a ten-year abatement on corporate earnings, free land, and transportation infrastructure improvements to serve the factory.[45]

On March 2, 2004, Kia Motors division announced in Seoul that would invest $858 million and construct a 200,000-capacity car factory near Zilina. Company officials stated that it would break ground in 2004 and begin production of small cars at the proposed 2,400-worker factory in late-2006. About two weeks later, on March 18, 2004, the deal between parties was officially signed, and the very next day, Kia revealed plans to raise its investment in the factory by another $265 million. This was to then increase annual vehicle capacity to 300,000 and projected employment to 3,000 as demand grew. It also declared that Hyundai Mobis and eight other Korean auto parts makers had committed to invest a combined $300 million in their own plants in the area. This was done in order to ensure the quality and price competitiveness of Kia vehicles it produced in Slovakia.[46]

Overall, it was expected that the car plant would foster the creation of 5,500 supplier jobs, and that at least 70% of the components installed in its vehicles would be produced domestically.

Kia officials stated that Slovakia's lower wages and less adversarial labor unions were the key reasons why it had selected the nation over Poland for its first European assembly plant. As of November 2003, Slovak workers made an average of $537 per month as compared with $640 monthly in Poland. However, it was the Slovak and Regional Governments mammoth $1.23 billion incentive package that clearly won the day. Interestingly, Kia did not ask for nor receive any tax

[45] *Korea Times* (2003–2004); Kim (2004a); Landler (2004); Rousek (2004); Skyring (2004)
[46] Kim (2004b, 2004c); Len (2004); Rousek (2004)

abatements for the project. Instead, the automaker requested that the Slovak Government promise to: provide Hyundai Mobis with a favorable incentive package; and agree in writing that it would not allow another auto assembly plant to locate within 100 km (62 miles) of the new Kia factory.[47]

Among the incentives provided in the $1.23 billion package were approximately $365 million in land, housing, infrastructure, job creation, and training subsidies. This included upgrades to the Zilina Airport in Dolny Hricov and the construction of a railway terminal, police station, hospital, and English language school for the children of South Korean managers. In addition, $50 million was go toward erecting 1,000 apartments for workers and luxury homes for Korean managers in Zilina and near Bratislava. Finally, a job training grant was to be provided and a direct subsidy was provided to the automaker to $6.42 million for the creation of 3,000 direct jobs (equivalent to $2,141 per worker).[48]

Finally, the Slovakia Government pledged to build a 42-km (26-mile) stretch of limited-access highway from the Trencin Region to the City of Zilina. Prior to this promised $858 million highway project, the National Motorway 1 (D1 also designated E58/E75) extended only from Bratislava to the Village of Sverepec in Trencin. The remaining passage onto Zilina then required the use of the mostly undivided Routes 61 and 18. As a result of the promised upgrades, D1 was extended northwest to the Zilina Region, where it conjoins D3 (with the former Route 18 also now demarcated as E50/E75/E442) and then runs southeast toward Zilina city, where it presently ends at Route 61. From there, arterial Routes 60 and 583 lead eastward to Kia's Plant in Teplicka nad Vahom. Most of the scheduled improvements were finished by 2007, with the last section of D1 between Sverepec and Vritzer in the Trencin Region completed in 2010. Planned enhancements to the localized section in Zilina (Zilina Bypass) and of D1 eastward 32 km (20 miles) to Martin (VW) were expected by 2019.[49]

[47] Len (2004); Rousek (2004); Jakubiak et al. (2008); Snyder (2015)
[48] Rousek (2004); Jakubiak et al. (2008)
[49] Jakubiak et al. (2008); Thomas (2011)

Frustrated by the dramatic escalation in the bidding induced by the two finalist states, politicians in Czechia and Hungary challenged the legitimacy of the extraordinary subsidy package awarded Kia by Slovakia. They claimed was the enormous size of it was in violation of the 15% initial investment ceiling stipulated by the EC Competition Committee. On the other hand, Poland eventually decided that enough was enough and refused Kia's requests to top Slovakia's offer.[50]

Not yet an EU member, Slovakia was able to skirt around the EC's rules by providing the Korean automaker with off-site benefits that obscured the true direct benefits to Kia and thereby, not counted as direct state aid. This included the D1/D3 Motorway project, which also benefited PSA in Trnava and other Slovak residents; and the local airport upgrades, English school, police station, and hospital in Zilina, all of which also served other Zilina residents.[51]

Recognizing the wider benefits, on June 27, 2006, the European Investment Bank (EIB) committed to lend Slovakia $63 million to finance a 9.6 km (6-mile) segment of D1 between Sverepec and Vrtizer. The funds were to serve as a bridge loan until the EU Cohesion Funds that were co-financing the project were available. The EIB justified the loan by claiming that the project represented a crucial segment of Trans-European Transport Corridor No. V connecting Vienna, Bratislava, and Gdansk, Poland. In addition, they claimed that quick-starting the implementation of the project was crucial to Slovakia's future economic development and would reinforce existing FDI commitments made in the region, most notably, from Kia.[52]

In the interim, the Slovak Government ran into trouble assembling the land it promised for the plant. It overcame this situation by designating the Kia project a 'significant investment' in the public interest that was within a so-called 'sensitive sector' of the national economy. This entitled the State, despite resistance from some land owners, to condemn the land necessary to accommodate the Kia Plant, Mobis

[50] Mogyorosiova (2006); European Commission (2007)
[51] Mogyorosiova (2006); Thomas (2011)
[52] Jakubiak et al. (2008); Thomas (2011)

Slovakia, and the adjacent Industrial Park. The Slovak Government had utilized similar criteria to justify their major subsidies and land expropriations for VW Bratislava and Martin, and for Plastic Omnium's Auto Inergy investments in Lozorno (near VW Bratislava).[53]

On April 7, 2004, Kia Motors broke ground for its $1.12 billion Kia Zilina car factory on a 166-hectare (410-acre) development in the Village of Teplicka nad Vahom, located off Route 583 near the Vah River and just 6 km (4 miles) east of Zilina (See Table 6.1). Plant construction commenced on October 15, 2004 and the structure was ready for installation of its production equipment in January 2006. In the meantime, on the east side of the factory Mobis Slovakia was of erecting a $210 million, 1,200-worker components plant in the 424-hectare (1,047-acre) 'Industrial Park Kia.' There it was joined by seven other Korean suppliers, with three others, YURA, Daejung, and Dongil Rubber Belt, locating further south near D1/E75 in the Trencin Region. This supplier network soon grew wider following Hyundai's September 2005 announcement that they would build a second 300,000-capacity car plant in Nosovice, Czechia, located near Ostrava and just 85 km (53 miles) northwest of Kia Zilina (See Chapter 5).[54]

Trial production commenced in June 2006, with serial output of the Kia cee'd hatchback commencing at then 1,600-worker Kia Zilina Plant six months later on December 7, 2006. Sharing a platform with the Hyundai i3o (Elantra), the car was marketed as the Kia Forte outside of Europe. A total of 4,716 cee'd and 300 pre-production versions of the second-generation Kia Sportage SUV were built in that first year. Retail production of the Sportage, which also shared a platform with the i30, commenced in June 2007. This pushed total production to 145,097 and bumping employment to 2,700 in the factory's first-full calendar year. The Sportage represented an interesting case of how interconnected foreign automakers in Europe. The first-generation Sportage shared a platform and many of its mechanical components with the Mazda E-

[53] Mogyorosiova (2006); Thomas (2011)

[54] Rousek (2004); KMS (2007–2016); SARIO (2007–2016a, 2007–2016b); Jakubiak et al. (2008)

Series/Ford Econovan and during the late-1990s was assembled for European markets by Karmann in Osnabruck, Germany. When Karmann later went bankrupt in 2009, it was absorbed by its largest customer, VW.[55]

On July 19, 2007, the EC approved an additional $44 million grant by the Government of Slovakia to Kia Motors to help subsidize its planned $265 million expansion of Zilina's capacity to 300,000. That same day, the EC also authorized a $131 million tax abatement to Hyundai Steel (Hysco) to help subsidize its construction of a steel plant adjacent to the car factory. With the expansion approved, output exceeded capacity at 201,507 in 2008, before contracting in response the Great Recession to 150,020 in 2009. As shown in Table 6.4, year 2009 output consisted of 120,800 Kia cee'd and 29,200 Kia Sportage. In contrast, engine production at Kia Zilina continued to rise, from 176,126 in 2008 to 243,973 in 2009. The surplus was shipped to Hyundai Nosovice, which launched car output in November 2008.[56]

Since 2009, Kia Zilina has experienced continued growth in all phases of automobile manufacturing. Passenger car production has increased in every year between 2010 and 2015, surpassing 300,000 in 2013 and coming in at 338,200 in 2015 (See Table 6.4). In 2015, this consisted of approximately: 198,600 Sportage SUV; 109,600 cee'd; and 29,700 Kia Venga MPV. During this period, engine output has more than doubled to 582,238 in 2015. Roughly 99% of Kia Zilina's vehicles were exported out of the country and nearly half of it were shipped to Hyundai Nosovice in 2015.[57]

In the interim, employment at the now 360,000-vehicle, 600,000-engine capacity complex has grown from 3,000 in 2010 to 3,646 as of December 31, 2015 (See Table 6.1). Another 8,000 workers were engaged by its components suppliers in Slovakia. Including a 100,000 m^2 assembly hall, two engine works, press, car bodies, and paint shops, building structures currently encompassed 56.8 hectares of (140 acres)

[55] KMS (2007–2016, 2016)

[56] European Commission (2007); KMS (2007–2016, 2016); AmCham (2011); Pavlinek (2016)

[57] KMS (2007–2016, 2016); SARIO (2007–2016a).

Table 6.4 Kia Zilina car production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
Kia Zilina[a]	**338,200**	**323,720**	**313,000**	**292,050**	**252,252**	**229,505**	**150,020**
Hyundai ix35	—	—	—	—	36,000	95,100	—
Kia Cee'd	109,600	114,700	123,016	120,600	103,700	—	120,800
Kia Venga	29,700	29,900	29,706	34,900	11,000	54,300	—
Kia Sportage	198,600	179,000	160,278	136,500	101,400	80,000	29,200

Source: Adapted by author from KMS (2007–2016, 2016).
[a] Except for 2013, model figures rounded by KMS.

of the 166-hectare (411-acre) site, up from just 16.3 hectares (40 acres) at the end of 2009.[58]

Expanding car sales has fueled this growth, with registrations of new Kia passenger cars in the EU growing by 13.8% during January through October 2016, as compared with this same period in 2015. This was after full-year registrations in 2015 increased by 8.9% as compared to calendar year 2014, and by 35.2% year-on-year in 2015 as compared with 2010 (from 257,923 in 2010 to 343,724 in 2014 and then 374,219 in 2015).[59]

In 2015, Kia injected another $132 million into its Zilina Plant in order to launch two models: the new Kia cee'd GT edition in June; and in November, the fourth-generation Sportage. This brought its total investment in Teplicka nad Vahom to an estimated $1.6 billion since 2004. With company expectation that car and engine production will surpass 400,000 and 600,000 units, respectively, perhaps as soon as 2017, all signs suggest a very bright future for Kia Zilina in the near-term.[60]

Jaguar Land Rover (JLR) Nitra

In the midst of its competition over Kia, the Slovak Government also was negotiating with MG Rover regarding a factory to produce Rover 45 compact cars in the country. On January 27, 2004, reports out of London suggested that former British Leyland division, then controlled by Phoenix Venture Holdings, was proposing to erect a $250 million, 100,000-capacity plant in Zilina.[61]

Fortunately for Slovakia, things worked out with Kia, as after several efforts to liquidate its holdings, in April 2005 the Phoenix Group had placed MG Rover into receivership. This also ended any chance that the

[58] KMS (2007–2016, 2016); SARIO (2007–2016a).
[59] ACEA (2011–2016)
[60] KMS (2007–2016); Jancarikova (2016a).
[61] *London Times* (2004)

carmaker would build a plant in CE or takeover the failing FSO-Daewoo in Poland (See Chapter 3). In July 2005, MG Rover was acquired out of bankruptcy by Nanjing Auto of China, which itself was absorbed by Shanghai Automotive Industry Corporation (SAIC) in December 2007. Nanjing never obtained the rights to build Rover brand cars, however, as in an effort to protect its then Land Rover brand, Ford exercised its option to buy the marque from BMW in September 2006.[62]

Ford had acquired Land Rover from BMW in March 2000, a move that reunited the former British Leyland division with the Jaguar luxury car brand. Ford had gained a controlling interest in Jaguar in late-1989, from its then-owner British Aerospace (BAe). If this was not confusing enough, a desperate Ford would later offload Jaguar and Land Rover to Tata Motors Ltd. of India for approximately $2.3 billion. The transaction, which closed on June 2, 2008, also transferred to Tata the Rover marque, along with most of the other luxury brand trademarks and related facilities formerly operated by British Leyland.

Aided by the new and upgraded models introduced by Ford and related sales growth in China and North America, Tata Motors quickly turned around the new JLR. On October 21, 2014, Tata celebrated the opening of its new 130,000-capacity joint venture JLR plant with Chery Automobile in China. When the first Range Rover Evoque SUV rolled off the line in Changshu that day, it marked the first Land Rover ever manufactured outside of Britain (i.e., not CKD assembly).[63]

Something equally stunning occurred a day prior to the Chinese factory's opening, when it was reported that JLR was negotiating with several American and Mexico states regarding a possible 200,000-capacity SUV factory. These discussions proved just bargaining chips, as on February 20, 2015, rumors out of Britain circulated that the appreciation of the U.S. Dollar had pushed Tata to reconsider and instead build its new plant in Europe. JLR executives favored Turkey or Austria over the U.K. due to their lower development costs.[64]

[62] Jacobs (2016b)
[63] Jacobs (2016b); Gibbs (2014a, 2014b)
[64] *Automotive News* (2015a)

By May 2015, the focus had turned to CE, with sources suggesting that the usual four suspects, Czechia, Hungary, Poland, and Slovakia, had made JLR's short list for a supposed $1.85 million, 250,000-capacity plant. In the meantime, on July 2, 2015, JLR revealed that it had signed an agreement with Magna of Canada to build a small batch of future SUV at its plant in Steyr, Austria. This, however, was just the appetizer, as the next day news reports revealed that Poland and Slovakia were the finalists for what was now being touted as a 350,000-unit factory to open in 2019. At that time, it appeared that Jawor in south-western Poland, the same area that had failed in its bid to attract Toyota Kolin, was the favored site (See Chapters 3 and 5).[65]

Jawor would again be a bridesmaid, however, as on August 11, 2015, JLR declared that it had signed a letter of intent to build its passenger car plant in Slovakia. Automaker officials stated that they hoped to launch the factory in late-2018 and achieve annual output of up to 300,000 vehicles by 2025. Speculation was that the plant would build Jaguar and Land Rover brand crossovers with lightweight aluminum, monocoque car body shells and riding on the same iQ[Al] modular platform underpinning the new Jaguar XE mid-size luxury sedan (ex., the Jaguar CX-17 concept).[66]

A greenfield in the Nitra Region was pegged as the potential host for the plant, with a final decision expected in late-2015. This would place the facility just 51 km (32 miles) southeast of PSA Trnava and 112 km (70 miles) due east of VW Bratislava. Slovakia's membership in the Eurozone monetary union and its track record of assembling VW Group luxury SUVs were said to have given it unique advantages over the three CE nations. JLR claimed to be attracted to the area by its: (1) tariff-free access to the EU; (2) productive, but relatively lower wage workers; (3) strong supply base; (4) low-cost logistics, and (5) upgraded infrastructure. Poland's Deputy Prime Minister Janusz Piechocinski countered these ascertains, however, stating that Slovakia had won out for only one reason: It offered a subsidy package so large that no other government could match in good conscience.[67]

[65] *Automotive News Europe* (2015c); Bloomberg (2015a)
[66] Reuters (2015a); Snyder (2015)
[67] Bloomberg (2015b); Reuters (2015a); Snyder (2015)

On December 11, 2015, JLR announced that it had reached an agreement with the Slovak Government and would go ahead with its proposed $1.5 billion factory in Nitra. Construction was set to begin in 2016, with production scheduled to launch in late-2018 (See Table 6.1). The project was expected to commence in two phases, with annual vehicle capacity reaching 150,000 and employment 2,800 in the first phase. These totals were to rise to 300,000 and 4,000, respectively, sometime between 2021 and 2025. When fully operational, the plant was projected to foster the creation of 12,000 supplier jobs region-wide. In exchange for the plant, the Slovak Government was to provide JLR with $143 million in state aid. No word on specific subsidies were given at that time.[68]

On June 29, 2016, in the face of Britain's decision to leave the EU (Brexit), JLR reconfirmed it commitment to its new Nitra Plant. A month later, a company official stated publicly that the only thing holding up the plant was the construction permit, which the company hoped to receive by the end of the summer. This occurred on August 10, 2016, when it also came to light that the incentive package JLR had originally agreed upon with Slovakia in December 2015 was actually $637 million. In addition to the $143 million in what was called direct aid, the State also planned to spend: $135 million to build industrial park for the JLR factory and its suppliers on a 470-hectare (1,161-acre) site in the Drazovce District of Nitra city; and $359 million on transportation infrastructure, utilities, and flood protection for the so-named Industrial Park Nitra. This was to include a trunk road linking the park to National Expressway R1/E571.[69]

On September 13, 2016, JLR broke ground on its 300,000 m^2 (3.23 million ft^2) complex in Nitra. Of the $1.5 billion JLR was to invest, a total of $1.2 billion was to go toward plant preparation and construction and $303 million toward building a supplier network. The complex was expected to initially build Land Rover Discovery SUV, but to utilize Kuka's newly-developed Pulse carrier conveyor system capable of handling four different car models. Formerly part of the Quandt/BMW

[68] *Automotive News* (2015b); Nitra (2015); Reuters (2015b)
[69] Homola (2016c); Jancarikova (2016b); Krajanova (2016); Pitas (2016)

Group, the giant industrial equipment manufacturer Kuka also has supplied machinery to BMW Leipzig, VW Slovakia, Skoda Mlada Boleslav, and many other vehicle factories in Europe.[70]

As a result of its relatively productive and lower wage workforce, JLR Nitra should prove an important cog in Tata Motors' future expansion plans. While the automaker most likely will not build Jaguar cars at the facility, its present success in the luxury SUV market should insure a steady stream of output and workers in Slovakia. If Brexit creates a problem for the distribution of its British made vehicles, then Nitra's expansion will likely occur in 2021 rather than 2025. Conversely, and similar to Slovakia's other car manufacturers, the only factor potentially inhibiting any quickened pace will be labor shortages. JLR have already lured away some PSA managers for their project, and production workers may not be far behind when the automaker begins full-scale recruitment in late-2017.

Of course many variables could change before the factory launches its first crossover in late-2018. Nevertheless, after increasing its registrations of new Land Rover SUV in Europe from 65,468 in 2010 to 136,022 in 2015, and posting another 15.7% gain through October 2016, the near-term certainly appears bright for JLR Nitra.[71]

Conclusion

As of December 31, 2015, the three active passenger car assembly complexes operating in Slovakia—VW Bratislava, PSA Trnava, and Kia Zilina—collectively employed 16,908 people and had the capacity to build 1.12 million vehicles per year (See Table 6.1). These totals were to rise by another 2,800 and 150,000, respectively, when JLR Nitra comes on-stream in 2018. According to government sources, another 63,000 workers were engaged by Tier-I automotive suppliers and nearly 200,000 overall were either directly or indirectly employed because of

[70] JLR (2016); Nitra (2016); Jancarikova (2016c).
[71] ACEA (2011–2016)

the nation's automobile industry. As a result, the auto sector accounted for 43% of Slovakia's industrial production and 35% of its industrial exports in 2015.

As illustrated in Table 6.5, VW, PSA, and Kia produced a combined 1,000,001 passenger cars in 2015. More than 99% of these vehicles were exported out of the country. More amazingly was the fact that annual passenger car output in Slovakia had increased by 818,357 or 450.43% since 2001, when VW Bratislava assembled 181,644 cars. By comparison, Slovakia produced no passenger cars in 1989, when the territory was a part of Socialist Czechoslovakia.[72]

Since 2007, the nation of 5.4 million people has produced more passenger cars per-capita than any nation in the world. This figure has nearly doubled during that period, from an estimated 98 cars assembled per-capita in 2007 to 184 per-capita in 2015. Only Czechia, at just under 118 per-capita, was even close. Beginning with the adoption of its 'Program for the Development of the Automotive Industry' Initiative in October 1998, the Slovak Government has played an active role in these developments. It has done this by aggressively recruiting foreign carmakers and components manufacturers, subsidizing expansions of existing factories, building industrial parks, and upgrading transportation infrastructure.

In addition, both VW Bratislava and Kia Zilina have served as catalysts for auto industry related economic growth not only in Slovakia, but also through process, scale, and supply chain synergies created with sibling plants in neighboring countries (i.e., Audi Hungaria—situated 78 km (49 miles) south of VW Bratislava in Gyor; and Hyundai Nosovice—located 85 km (53 miles) northwest of Kia Zilina). For VW, such connections extend to the original reasons why it took control of the near-bankrupt BAZ in 1991: It already had acquired its former parent, Skoda of Czechia (See Chapters 5 and 7).

All of these facts, coupled with the nation's proximity to Western European markets, membership in the Eurozone, growing

[72] The Conclusion also draws upon: SARIO (2007–2016a, 2007–2016b); Cienski (2008); Czechia (2016); Jancarikova (2016c); Slovakia (2016)

Table 6.5 Foreign car production in Slovakia, 1989–2015

	2015	2010	2005	2001	1989	Change 2001–2015	% Change 2001–2015
Slovakia Total	**1,000,001**	**521,241**	**176,189**	**181,644**	**0**	**818,357**	**450.43%**
Kia Zilina	338,200	229,505	—	—	—	337,900	—
PSA Trnava	303,025	186,140	—	—	—	303,025	—
VW Bratislava[a]	358,776	105,596	176,189	181,644	0	177,132	97.52%

Source: Adapted by author from OICA (1999–2016); KMS (2007–2016); PSA Slovakia (2008–2011, 2014–2016) Ward's (2014).
[a] To avoid double counting in CE, does not include Porsche Cayenne car bodies and components shipped to Porsche Leipzig.

agglomerations of foreign automotive suppliers, and relatively inexpensive, but productive labor force, suggest a rosy near-term future for Slovakia's car plants. Similar to Czechia, the only factor possibly stunting this continued growth is chronic labor shortages, which may prompt foreign carmakers to locate their future plants in Poland or perhaps further south in the emerging SEE nations of Romania, Slovenia, or Serbia.

References

ACEA (2011–2016) New Passenger Car Registrations: European Union, 2010 to September 2016. European Automobile Manufacturers Association Press Releases, http://www.acea.be/statistics, last 15 December 2016.

AmCham (2011) Trnava: A Strategic Choice for Connection. Online Magazine of the American Chamber of Commerce in the Slovak Republic. 24 May, http://www.amcham.sk/publications/connection-magazine/issues/3081_the-automotive-industry, last 28 September 2013.

Anderson R (1999) Skoda drives VW's Success Story. *Financial Times*, 1 March, Auto 4.

Anderson R, M Arnold, and J Reed (2003) Peugeot to Build New Plant in Slovakia. *Financial Times*, 16 January, 28.

AP (1990) G.M. in Venture in Czechoslovakia. *New York Times*, 8 November, D5.

AP (1991) Skoda Plant Pact with Volkswagen. *New York Times*, 14 March, D4.

Arnold M (2003) Peugeot Citroen Beats Own Sales Forecasts. *Financial Times*, 08 January, 25.

Audi (2004–2016) *Audi Annual Reports*, for 2003 to 2015 (Ingolstadt: Audi AG).

Automotive News (2015a) Jaguar Land Rover Favors Europe over U.S. for New Plant. 20 February, http://www.autonews.com/article/20150220/COPY01/302209984?template=printart, last 10 April.

Automotive News (2015b) Jaguar Land Rover says Slovakia Plant will Start Production in 2018. 11 December, http://www.autonews.com/article/20151211/COPY01/312119975/jaguar-land-rover-says-slovakia-plant-will-start-production-in-2018, last 12 December.

Automotive News Europe (2015a) PSA's Slovakia Unit to Boost Output with New Model. 31 March, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20150331/ANE/150339973&template=printartANE, last 10 April.

Automotive News Europe (2015b) VW will Invest 500 Million Euros to Expand Slovak Plant. 10 April, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20150410/ANE/150409851&template=printartANE, last 10 April.

Automotive News Europe (2015c) Jaguar Land Rover Close to Deciding on Eastern European Plant. 22 May, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20150522/ANE/150529931&template=printartANE, last 23 May.

Bloomberg (2013) PSA Plant Closing Leaves Europe with 18 Factories too Many. *Automotive News Europe*, 25 October, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20131025/ANE/310249892&template=printartANE, last 14 September 2016.

Bloomberg (2015a) Jaguar Land Rover in Talks on Setting up Plant in Poland. *Automotive News Europe*, 3 July, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20150703/ANE/150709939&template=printartANE, last 3 July.

Bloomberg (2015b) Jaguar Land Rover Plant would Boost Slovak Growth Next Year. *Automotive News Europe*, 22 September, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20150922/ANE/150929966&template=printartANE, last 23 September.

BLS (2013) International Comparisons of Hourly Compensation Costs in Manufacturing, 1996–2012. U.S. Department of Labor, U.S. Bureau of Labor Statistics, www.bls.gov/ilc, last 15 December 2016.

Bryant C and H Foy (2014) Porsche to Build Cars in Entirety Outside Germany for First Time. *Financial Times*, 19 March, http://www.ft.com/intl/cms/s/0/5022b050-aeb7-11e3-aaa6-00144feab7de.html?ftcamp=crm/email/2014321/nbe/Autos/product#axzz2xrS56A6x, last 14 September 2016.

Cienski J (2008) Production Reaches Top Speed in Auto Sector. *Financial Times*, 23 July, 5.

Czechia (2016) Distribution of the Population by Sex and Age Group as at 31.12 (2006 to 2015). Czech Statistical Office, 16 October, https://www.czso.cz/csu/czso/home, last 14 September.

Done K (1995) VW Switches Work to Low-Cost Unit in Slovakia. *Financial Times*, 19 December, 4.

Done K (1999) Europe: VW to double capacity in Slovakia. *Financial Times*, 21 January, 27.

European Commission (2006) Slovakia: EUR 50 million for the construction of the D1 Motorway. 27 June, http://europa.eu/rapid/press-release_BEI-06-74_en.htm, last 14 September 2016.

European Commission (2007) State Aid: Commission Endorses €32 Million Aid to Kia Motors Slovakia to Expand Car manufacturing Plant. 18 July, http://europa.eu/rapid/press-release_IP-07-1135_en.htm, last 14 September 2016.

Frink L (2005) PSA to Expand Trnava Plant to 500,000. *Automotive News*, 13 June, http://www.autonews.com/apps/pbcs.dll/article?AID=/20050613/SUB/506130857&template=printart, last 14 September 2016.

Gibbs N (2014a) Jaguar Land Rover is in Talks for U.S. Plant. *Automotive News Europe*. 20 October, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20141020/ANE/141029996&template=printartANE, last 14 September 2016.

Gibbs N (2014b) Jaguar Land Rover Picks Discovery Sport to Lead Brazil Output. *Automotive News*. 29 October, http://www.autonews.com/apps/pbcs.dll/article?AID=/20141029/COPY01/310299949&template=printart, last 14 September 2016.

Green P (2003) Slovakia: Peugeot Plans Plant. *New York Times*, 16 January, W1.

Griffiths J (1999) Western Investment Rewarded with Growth. *Financial Times*, 1 March, 04.

Homola P (2016a) PSA, Daimler Consider Building New Plants in Europe. *WardsAuto*, 22 March, http://wardsauto.com/industry/psa-daimler-consider-building-new-plants-europe.

Homola P (2016b) PSA to Hike Car Builds, Add Engine Output in Slovakia. *WardsAuto*, 10 June, http://wardsauto.com/industry/psa-hike-car-builds-add-engine-output-slovakia, last 14 September.

Homola P (2016c) Jaguar Land Rover Confirms Slovak Plant, Despite Brexit. *WardsAuto*, 28 July, http://wardsauto.com/industry/jaguar-land-rover-confirms-slovak-plant-despite-brexit, last 14 September.

Jacobs A J (2013a) The Bratislava Metropolitan Region. *Cities*, 31, 507–514.

Jacobs A J, ed (2013b) *The World's Cities: Contrasting Regional, National, and Global Perspectives* (New York: Routledge).

Jacobs A J (2016a) Automotive FDI and Dependent Development: The Case of Slovakia's City-Regions in the Bratislava-Zilina Corridor. *The Open Urban Studies and Demography Journal*, 2 (1): 1–19.

Jacobs A J (2016b) *The 'New Domestic' Automakers in the U.S. and Canada: History, Impacts, and Prospects* (Lanham, MD: Lexington Books).

Jacobs A J (2017) Nested Dependent City-Regions: FDI, Uneven Development, and Slovakia's Bratislava, Nitra, Trencin, Trnava, and Zilina City-Regions. *Journal of Urban Affairs*, 39 (5), http://dx.doi.org/10.1080/07352166.2017.1282768.

Jakubiak M, P Kolesar, I Izvorski, and L Kurekova (2008) The Automotive Industry in the Slovak Republic. Washington, DC: International Bank for Reconstruction and Development/World Bank, Commission on Growth and Development, Working Paper No. 29.

Jancarikova T (2016a) PSA, Kia Forecast Higher Production in Slovakia. *Automotive News Europe*, 19 May, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20160519/ANE/160519849&template=printartANE, last 14 September.

Jancarikova T (2016b) Slovakia's State Aid for Jaguar Land Rover may Reach 600 Million Euros. *Reuters.com*, 11 August, http://uk.reuters.com/article/slovakia-autos-idUKL8N1AS2LY, last 14 September.

Jancarikova T (2016c) Jaguar Land Rover Breaks Ground for Slovak Plant. 13 September, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20160913/ANE/160919962&template=printartANE, last 14 September.

JLR (2016) Jaguar Land Rover Begins Construction Of Slovakian Plant. Press Release. 13 September, http://media.jaguarlandrover.com/news/2016/09/jaguar-land-rover-begins-construction-slovakian-plant last 15 December.

Jones J (1997) VW Bratislava Expands Production. *Slovak Spectator*, 27 August, http://spectator.sme.sk/c/20014586/vw-bratislava-expands-production.html last 15 December 2016.

Kim H (2004a) Slovakia Lures Hyundai-Kia with Skilled, Loyal Labor. *Korea Herald*, 16 January, http://www.koreatimes.co.kr/last 15 December 2016.

Kim H (2004b) Hyundai, Kia Pick Slovakia for European Plant. *Korea Herald*, 2 March, http://www.koreatimes.co.kr/, last 15 December 2016.

Kim H (2004c) Hyundai-Kia plant planned in Slovakia, 3 March, http://www.koreatimes.co.kr/last 15 December 2016.

KMS (2007–2016) *Kia Motor Slovakia: Annual Reports* for 2006 to 2015 (Teplicka nad Vahom: KMS).

KMS (2016) Kia Motor Slovakia Annual Production Data, 2008–2015. Email from KMS Public Relations, 28 April 2016 and 5 May 2016.

Korea Times (2003–2004) Multiple News Articles on Kia Slovakia without bylines, dated in 2003 and 2004, http://www.koreatimes.co.kr/last 15 December 2016.

Krajanova D (2016) Jaguar nas Bude Stat' Pol Miliardy aj Bez Zaratania 130-milionovej Dotacie. *Dennik N*, 10 August, https://dennikn.sk/531932/jaguar-nas-bude-stat-pol-miliardy-aj-bez-zaratania-130-milionovej-dotacie/ last 15 December.

Krogh H and P Krix (2014) Lamborghini SUV will be Built at VW's Slovakia Plant. *Automotive News Europe*, 25 April, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20140425/ANE/140429959&template=printartANE, last 15 December 2016.

Landler M (2004) Slovakia No Longer a Laggard in Automaking. *New York Times*, 13 April. C1.

Len S (2004). Korean Carmaker Plans Plant in Europe. *New York Times*, 3 March, W7.

London Times (2004) Slovakia in talks with MG. 28 January, 26.

McVeigh P (2013) GM-PSA rumors may be a 'Stalking Horse.' *Automotive News Europe*. 28 June, http://www.autonews.com/article/20130628/BLOG15/306299999/#axzz2g8a8Qn00, last 15 December 2016.

Mitchell C (2000) BMW Eyes Site near Proposed U.S. Steel Plant in Slovakia. *Times* (Northwest Indiana), 25 October, http://www.nwitimes.com/, last 15 December 2016.

Mogyorosiova Z (2006) Adaptation of the EU Competition Policy in Slovakia —Selected Problems. *Narodohospodarsky Obzor [Review of Economics Perspectives]*, 2006 (1), http://is.muni.cz/do/1456/soubory/aktivity/obzor/6182612/7667845/06Mogyorisiova.pdf, last 15 December 2016

National Post (1999) VW to expand in Slovakia: Will cost $364-million. 14 January, C13.

Nitra city (2015) Jaguar Land Rover Prichadza do Nitry. 15 December, https://www.nitra.sk/zobraz/obsah/18350 last 15 December 2016.

Nitra city (2016) Zavod Jaguar Land Rover Zacne s Vyrobou v Roku 2018. 21 September, https://www.nitra.sk/zobraz/obsah/19093 last 15 December.

OICA (1999–2016). Annual Automobile Production Statistics by Nation and Manufacturer for 1999 to 2015. Paris: Organisation Internationale des Constructeurs d'Automobiles, http://www.oica.net/last 15 December 2016.

Pavlinek P (2008) *A Successful Transformation? Restructuring of the Czech Automobile Industry* (Heidelbeg: Physcia-Verlag).

Pavlínek P (2015) The Impact of the 2008–2009 Crisis on the Automotive Industry: Global Trends and Firm-level Effects in Central Europe. *European Urban and Regional Studies*, 22 (1), 20–40.

Pavlinek P (2016) Whose Success? The State-foreign Capital Nexus and the Development of the Automotive Industry in Slovakia. *European Urban and Regional Studies*, 23 (4), 571–593.

Pitas C (2016) Jaguar Land Rover says 'Short-term' Brexit Impact will not Affect Slovak Plant. *Automotive News Europe*, 29 June, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20160629/ANE/160629835&template=printartANE last 15 December.

PSA (2007–2016). *PSA Peugeot Citroen Annual Results*, for 2006 to 2015. Paris, https://www.groupe-psa.com/en/, various dates, last 6 October 2016.

PSA (2010–2016) PSA Group Newsroom. Various dates between 2010 and 2016, https://www.groupe-psa.com/en/newsroom/ last 15 December 2016.

PSA (2014) *PSA Peugeot Citroen Memento 2013*, March (Paris: Media Groupe PSA).

PSA Slovakia (2008–2011) *PCA Slovakia Vyrocna Sprava*, 2008 to 2011 (Trnava: PSA).

PSA Slovakia (2012–2016a) PSA Peugeot Citroen Slovakia: Automobilka v Trnave. Various dates between 2012 and 2016, http://www.psa-slovakia.sk/o-psa-slovakia/automobilka-v-trnave.html?page_id=168 last 15 December 2016.

PSA Slovakia (2012–2016b) PSA Peugeot Citroen Slovakia: Novinky a Spravy. Various dates between 2012 and 2016, http://www.psa-slovakia.sk/, last 15 December 2016.

PSA Slovakia (2014–2016) Annual Production Figures News Releases, January 2014 to 2016, http://www.psa-slovakia.sk/last 15 December 2016.

Reuters (1991) G.M. Withdraws From Czech Deal. *New York Times*, 27 February, D3.

Reuters (2014) PSA to move Citroen C3 Output to Slovakia from France. *Automotive News Europe*, 22 May, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20140522/ANE/140529946&template=printartANE, last 15 December 2016.

Reuters (2015a) Jaguar Land Rover Plans New Plant in Slovakia. *Automotive News Europe*, 11 August, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20150811/ANE/150819989&template=printartANE last 12 August.

Reuters (2015b) Jaguar Land Rover will Sign Slovakia Plant Deal this Week. *Automotive News Europe*, 8 December, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20151208/ANE/151209865&template=printartANE last 9 December.

Rousek L (2004) Slovakia Is Becoming a Haven for Car Makers. *Wall Street Journal*, 13 May, http://www.wsj.com/articles/SB108439026928609602, last 15 December 2016.

SARIO (2007–2016a). Automotive Industry, 2006–2015. Data obtained from annually updated e-documents published online by the Slovak Investment and Trade Development Agency between 2010 and 2016, http://www.sario.sk/en/invest/sectorial-analyses/automotive-industry, various dates, last 3 October 2016.

SARIO (2007–2016b). Regional Analyses, 2006–2014. Data obtained from annually updated e-documents published online by SARIO between 2010 and 2016, http://www.sario.sk/en/invest/regional-overview, various dates, last 3 October 2016.

Skoda (2001–2016) *Skoda Auto Annual Reports*, for 2000 to 2015 (Mlada Boleslav: Skoda Auto).

Skyring K (2004) Poland and Slovakia go Full Throttle for Kia Car Factory. *Radio Praha*, 16 January, http://www.radio.cz/en/section/ice_special/poland-and-slovakia-go-full-throttle-for-kia-car-factory last 15 December 2016.

Slovak Spectator (2007–2013) Multiple Press Reports on VW Slovakia, http://spectator.sme.sk/, last 15 December 2016.

Slovakia (2016) Population (Absolute Data), 1996 to 2015 Population as of December 31 of Each Year. Statistical Office of the Slovak Republic. http://www.statistics.sk, last 31 August.

Smith A (1998) *Reconstructing the Regional Economy: Industrial Land Regional Development in Slovakia* (Cheltenham, UK: Edward Elgar).

Smolka D (2002) VW Looking to Another Slovak Plant. *Slovak Spectator*, 25 February, http://spectator.sme.sk/c/20012376/vw-looking-to-another-slovak-plant.html, last 31 August 2016.

Snyder J (2015) Why JLR picked Detroit East. *Automotive News*, August 17, p. 12.

Tagliabue J (1999) Automakers Translate S.U.V into European. *New York Times*, 14 December, C1, C14.

Tagliabue J (2006) There's Detroit and There's Trnava. *New York Times*, 25 November, C1.

Thomas K (2011) *Investment Incentives and the Global Competition for Capital* (New York: Palgrave).

Thompson A (2011) *Cars of Eastern Europe: The Definitive History* (Newbury Park, CA: Haynes).

Tutak R (2000) Expansion Drive by VW: The German Carmaker has Invested DM821m in Bratislava in the Past Decade. *Financial Times*, 25 May, 3.
VW (2000–2016) *Volkswagen AG: Annual Reports*, for 1999 to 2015 (Wolfsburg: Volkswagen Group).
VW (2009) Volkswagen to Produce the New Small Family in Slovakia. VW Press Release. 4 April, https://www.volkswagen-media-services.com/, last 31 August 2016.
VW Slovakia (2011–2016) Volkswagen Slovakia, http://en.volkswagen.sk/en/Company/plants.html, VW Media Services postings between July 2011 and October 2016; last 14 December 2016.
Ward's (1958–2014) *Ward's Automotive Yearbook*, 1958 to 2014 (Detroit: Ward's Communications).
Ward's (2014) *Ward's World's Vehicle Data 2014* (Southfield, MI: Ward's Communications).
Zverina, J (1990) GM to Build Vehicles, Transmissions in Czechoslovakia. *UPI Archive*, 7 November, http://www.upi.com/, last 31 August 2016.

7

Foreign Car Plants in Hungary

Introduction: Setting the Scene for Foreign Car Assembly Plants in Hungary

In 1949, the Soviet-led CMEA agreement passenger car production was ended in Hungary when the nation's vehicle makers were instructed to produce buses, a small allotment of trucks, and automotive components. Under the new division of labor, Hungary's Ikarus of Budapest became the largest bus maker in the CMEA. During the 1970s, it was assisted on bus assembly by Hungary's *Labor Muszeripari Muvek* (Labor-MIM) of Esztergom, Komaron-Esztergom County and Poland's Jelcz & Star. Next, *Csepel Autogyar* was made responsible for the manufacture of trucks. At various times during the Socialist Period, its factory in Szigethalom, Pest County assembled: licensed Steyr under its own marque; Raba equipped with engines licensed from MAN of Munich, West Germany (now part of VW); and knockoffs of Sweden's Volvo C202 Laplander military vehicles. Finally, *Magyar Waggon-es Gepyar* of Gyor, Gyor-Moson-Sopron County was assigned axel, steering, and gearbox production. As a result, Magyar Wagon & Machine Works, which had built Raba brand vehicles prior to WW-II, and Csepel would

A.J. Jacobs, *Automotive FDI in Emerging Europe*,
DOI 10.1057/978-1-137-40786-3_7

supply components for Polski Fiat, Soviet Lada, and Yugoslavia's Zastava vehicles.[1]

In the last year of the CMEA, 1989, Ikarus built 14,400 buses and Csepel assembled 2,600 Raba trucks. Although its own financial problems led to the demise of Csepel in 1996, Ikarus was still producing buses in 2016 at its three plants: Budapest Matyasfold; Szekesfehervar, Fejer County; and Szeged, Csongrad County. Meanwhile, after its privatization in 1992, Magyar Wagon was renamed Raba and currently builds military trucks and supplies car and trucks components from its facilities in: Gyor; Sarvar, Vas County; and from the former Ikarus Mor Plant in Fejer County. More importantly, Raba would play a vital role in the development of Hungary's present-day passenger car industry. It would do so first by establishing a joint venture with America's GM in 1990 in Szentgotthard, Vas County Town and second by providing VW's Audi with an industrial hall and site in Gyor.

After a brief examination of Hungary's early-20th Century connections with foreign automakers, including Ford's plant in Budapest, this chapter provides a brief chronology of Hungary's four foreign passenger car plants, beginning with: (1) GM-Opel Szentgotthard, which now produces only engines; (2) Magyar Suzuki in Esztergom; (3) VW's Audi Gyor; and (4) Daimler's Mercedes-Benz Kecskemet. As previously, the conclusion summarizes the trajectories of these three existing car factories and speculates on their near-term future and the potential for a new assembly facility in Hungary.

Early Automakers and Foreign Car Production in Pre-Socialist Hungary

Csonka, Fejes, and Hungary's Early Carmakers

Hungary's motor vehicle industry and its connections with foreign carmakers extend back to the early-1900s. Initially, cars were assembled

[1] The Introduction draws from: Ward's (1958–2014); Sadler & Swain (1994); Raba (2016); Pavlinek (2018).

from imported CKD kits, with Budapest, then a major center in Austria-Hungary, serving as the cradle of its automobile industry. This changed in 1905, when the Hungarian engineer Janos Csonka became the first to design and build his own car.[2]

Csonka studied internal combustion engines in Paris and in 1877, at 25 years old, became the director of an engineering training workshop at Budapest Technical University (today's Budapest University of Technology and Economics). He soon became known for his inventions, such as: Hungary's first gasoline engine; with Donat Banki, the first carburetor for a stationery engine; the Banki-Csonka engine; and Hungary's first motorcycle and motorboat.

In 1900, he was commissioned by the Royal Hungarian Post to develop motorized tricycles and four-wheelers for mail service uses. As a result, his first car, turned out to be a mail vehicle built at the university's training workshop.

Magyar Wagon and Istavan Rock Machine Works agreed to manufacture his postal vans in Budapest and following their acceptance, the inventor launched Janos Csonka Automobile Works in 1906. There he developed a series of petrol engines for motor vehicles and in 1909, his first one-cylinder 4-hp passenger car. The vehicle came equipped with a Csonka-built engine, transmission, and body. Approximately 150 Csonka car were assembled through 1912, including some that competed well on the international racing circuit. The inventor would be pushed out of the car business by big industrialists, but one of his small cars would form the basis for those developed by Hungary's largest pre-World War II automaker, *Magyar Altalanos Gepgyar* (MAG).

MAG was originally established in 1885 as the agricultural machinery maker Budapest Mill Engineering and Machine Works. By 1901, however, its founders Daniel Podvinecz and Vilmos Heisler began assembling licensed Leesdorfer cars. Headquartered in the Leesdorf section of Baden near Vienna, Leesdorfer Automobilwerk itself only began building cars in 1898, and then at that utilizing chassis imported from Amedee Bollee fils of LeMans, France.

[2] Csonka, Fejes draws upon: Georgano (2000); HITA (2012); HIPO (2015); HIPA (2016); Negyesi (2016b).

In 1904, Podvinecz & Heisler moved to a bigger factory where they began producing Phonix brand cars. These too were not original models, but rather derived from factory tooling and drawings acquired from the troubled Aachen, Germany automaker, Cudell Motor Company. Although designed by well-known racing driver Karl Slevogt, the Cudell-Phonix failed to make a mark.

A loan from the Pest Bank of Commerce allowed the Phonix Automobile Works to stay in business, but without Podvinecz, who died in 1908. Phonix made a variety of cars and buses based upon Cudell's Phonix line, but despite their good reviews, never well sold enough to keep the company afloat. As a result, Podvinecz & Heisler was reorganized and its Phonix Car operations renamed *Magyar Altalanos Gepgyar* (MAG).

Designed by the well-known engineers Janos Csonka and Jeno Fejes, output of MAG's first vehicles was buoyed by orders from the Hungarian Post and the Austria-Hungary military. Fejes had previously worked at Magyar Automobil Rt Westinghouse of Arad (Marta). Marta was established as a branch plant of the Le Havre, France automobile division of the American conglomerate Westinghouse. In 1912, Marta was taken over by Magyar Rubber Company and a year later was building licensed British Daimler models. This ended during WW-I when Marta was ironically taken over by Benz of Mannheim, Germany. After the war, Austria-Hungary was split into multiple sovereign nations, and Arad was incorporated with Transylvania into Romania. The plant later was incorporated into Astra Automobile & Wagon which ultimately became a major producer of rail freight cars.

As for MAG, it continued building car until 1915, when the factory began manufacturing Austro-Daimler licensed aircraft engines and then airplanes in support of its nation's war efforts. This prompted the construction of a larger factory in Matyasfold village, situated just northeast of Budapest (now in Budapest). With Austria-Hungary's defeat in the war, Hungary became a crucible of political, economic, and social turmoil, with its industrial enterprises hopelessly cut off from their prewar resource bases now located outside its domestic borders. As a result, MAG was again in financial straits and in 1920 was again reorganized by its new owner, the Hungarian General Credit Bank.

After regaining its footing, the Budapest automaker introduced its Magomobil and Magosix car models. Whereas the Magomobil was were influenced by German cars of the time, Magosix were considered prestigious because they came equipped with a fair amount of American-made parts. These vehicles, however, were most popular as Budapest taxis and became historically noteworthy for being the first cars ever produced in Hungary via an assembly line.

Nonetheless, by 1935, MAG was out of the car business after building just 2,000 passenger cars and 150 commercial vehicles, the bulk assembled before the Stock Market Crash of 1929. Most of these cares were sold locally, although a few were exported to Britain. Perhaps, more than anything else MAG's legacy was its designers, Csonka and Fejes. Whereas Csonka was well-known beforehand, Fejes was MAG's chief-engineer until 1923, when he left the company to start his own automaker.

Between 1923 and 1928, Fejes Engine and Machine Works only built 45 small, crudely designed contraptions assembled at its Budapest Plant. While these vehicles were forgettable, their use of pressed and welded sheet-iron instead of castings did draw the attention of British engineer and motorcycle racer Cyril Pullin. So much so that he based the 1928 to 1930 Ascot minicar models that he built at his Letchworth, England Plant on the Fejes design.

Magyar Wagon's Raba Car Works in Gyor

Also known as Hungarian Railway Carriage and Machine Works, Magyar Wagon was founded in Gyor in 1896. The company then branched out into motor vehicles, experimenting with a petrol-powered mechanical all-wheel drive (AWD) on-road tram in 1904. Four Csonka mail cars were built in 1905, accompanied by chassis for Csonka and Arnold Spitz of Vienna. Spitz cars were built by Graf & Stift, a vehicle maker that later became a subsidiary of MAN.[3]

[3] Magyar Wagon draws upon: Georgano (2000); Negyesi (2016b); Raba (2016).

In 1913, Magyar Wagon manufactured its first commercial truck and acquired the rights to assemble licensed Praga Alpha and Grand models from Prague Automobile Factory, Ltd. (then Austria-Hungary). This resulted in the production of the company's first car in early-1914, the Raba Alpha, with the marque a tribute to the Raba River running through Gyor. Magyar Wagon then assembled a small batch of Raba Alpha and Grand until production was interrupted by WW-I.

A handful of Grand models were built after the war, with the Hungarian transportation equipment manufacturer ending car production in 1925. Whereas many of its trucks and buses were equipped with diesel engines licensed from MAN, the Raba AF 1.5-ton light utility truck was produced through an agreement with Austrian Automobile Company, the successor firm to Austro-Fiat. Commercial vehicle production continued until 1936, when Magyar Wagon's operations was transformed into a war machine, manufacturing aircraft and tanks to support Hungary and Nazi Germany's efforts in WW-II. This was unfortunate, as nearly two-thirds of the factory was damaged by the Allied bombing attacks of 1944.

After WW-II, Magyar Wagon came under the purview of the Soviet-led CMEA and manufactured railway cars, railway bridges, construction and agricultural equipment, trucks and buses. Some of its commercial vehicles were built under license through a consortium with MAN and Renault. Perhaps more importantly, in accordance with the National Public Roads Program of 1966, Magyar Wagon opened a new engine factory in Gyor in 1969, where it produced MAN licensed diesel engines.

In 1992, Magyar Wagon was turned into a private stock company under its historic brand name: *Raba Jarmuipari Holding Nyrt* (Raba Automotive Holding, Plc.). Although Raba never again produced cars, its automotive components plants in Gyor and Mor and its established international connections with some of the world's largest automakers, would help attract three foreign automakers to Hungary: GM, Suzuki, and Audi.

Ford Motor and Weiss Manfred of Budapest

Between 1924 and 1930, the industrial conglomerate Manfred Weiss Steel & Metal Works manufactured cars, trucks, and buses at its Csepel

Works in Budapest. Some of these vehicles were built on Model A Ford chassis. Owned and managed by Weiss and other Hungarian Jews, the firm became one of Austria-Hungary's largest defense contractors during WW-I. This also made it a target for the Gestapo, and in 1944, it factories were confiscated by the Nazis. The plant was subsequently heavily damaged by Allied bombing against the Third Reich. After the war, Manfred Weiss' operations were nationalized as Matyas Rakosi Iron & Metal Works, and what was left of the plant manufactured Csepel trucks under license from Austria's Steyr-Daimler-Puch.[4]

As for Ford Motor Company, partially as a result of the connections of two Hungarian engineers who worked for Henry Ford in the U.S. in the early-1900s, Joszef Galamb and Jeno Farkas, licensed copies of Model C derived from the Ford Eifel were assembled in Budapest between 1937 and 1939. In addition, on October 1, 1938, Ford Hungary was established as a wholly owned subsidiary of Ford Germany of Cologne. By then, engines, gearboxes, and chassis also were being manufactured in Gyor and Budapest.

Ford's Budapest Plant, however, never built civilian cars. As was the case with Magyar Wagon, when the factory commenced production in 1941, its output consisted of military vehicles for the Hungarian Army and ultimately Nazi Germany. After the war, in January 1946, the Hungarian Government transferred ownership of Ford Hungary to the Soviets.

After refusing overtures from the Hungarian Transport Ministry to build a 100,000–200,000 car plant, Ford opened its Alba components plant in Szekesfehervar, Fejer County in 1992. The plant, situated 64 km (40 miles) southwest of Budapest on Motorway M7/E71, was later operated by Ford's former Visteon unit before being purchased by Hanon Systems of Korea.

[4] Ford and Weiss draws upon: Georgano (2000); Havas (2000); *Automotive News* (2003); HITA (2012); HIPA (2016); Negyesi (2016b).

GM-Opel Szentgotthard

The CMEA Agreements effectively prohibited passenger car production in Hungary through 1989. The exception to this was a brief period in the mid-1950s when a few small companies built tiny microcars. This fledgling effort of Hungary's Ministry of Metallurgy & Machine Industry was halted by the Soviets in 1956, however, when the Hungarian Revolution was stamped out and a more obedient government was installed. As presented on Table 7.1, this situation quickly changed on January 13, 1990, when after almost two years of negotiations, GM Europe announced that it had reached a preliminary agreement with Magyar Wagon's Raba trucks division to erect a joint venture factory in Szentgotthard, Vas County. The American automaker stated that it was attracted to the greenfield site near the Raba River by the area's inexpensive, but relatively skilled workforce and highly undeserved car market. With no native carmaker, a population of 10.6 million, and only 120,000 cars typically imported from the CMEA countries, Hungary was said to have 400,000 customer waiting list for car.[5]

By September 1990, construction and recruitment of 850 workers for the new GM Hungary Manufacturing, Ltd.'s Szentgotthard Plant was to be underway, with output scheduled to launch by March 1992. In exchange for factory, the Hungarian Government provided GM with a ten-year tax abatement on corporate taxes and discounted duties on imported automotive components. At that time, GM revealed that it had taken a two-thirds share in the project, with RABA owning 21% and Hungary's State Development Authority (HAFI) holding the remaining 12.3%. Later reports suggested that GM Europe initially contributed enough capital to secure a 65% share in the venture, with RABA taking a 20% stake and HAFI 15%. In addition, with Opel based in Russelsheim, the West German Government was said to have guaranteed as much as $178 million of GM's investment.[6]

[5] Reuters (1990a); Havas (2000, 2007); Negyesi (2016a).

[6] Reuters (1990a, 1990b); Sadler & Swain (1994); Havas (2000, 2007).

Table 7.1 Active and former foreign car plants in Hungary

Firm	Origin	Place, County	Announced	Production launched	Emp. 31 Dec 2015	Vehicle capacity 2015	Vehicle output 2015
		Hungary			**18,511**	**540,000**	**525,753**
Suzuki	Japan	Esztergom, Komarom-Esztergom	Jan-1990	Oct-1992	3,100	300,000	185,533
Audi[a]	Germany	Gyor, Gyor-Moson-Sopron	Nov-1992	Apr-1998	11,411	160,000	160,206
Mercedes-Benz[b]	Germany	Kecskemet, Bacs-Kiskun-1	Jun-2008	Mar-2012	4,000	180,000	180,014
		Kecskemet, Bacs-Kiskun-2	Jul-2016	*By 2020*	*+2,500*	*+150,000*	*NA*
Former Plants							
GM Opel[c]	USA	Szentgotthard, Vas	Jan-1990	Mar-1992	1,200	0	last May-1999

Sources: Adapted by author from OICA (1999–2016); Audi (2004–2016); Audi Hungaria (2016b); Daimler (2015–2016b); MAGE (2016); Magyar Suzuki (2015, 2016a).

[a] Began building engines in September 1993 and announced car production May 1996.

[b] Estimated from multiple sources.

[c] Current employment, still producing engines and components.

From initial published reports, the only clear specifics about the plant was that it was to be located in Szentgotthard, a town 160 km (100 miles) southwest of Gyor near the Austrian border. News stories suggested that GM would invest anywhere between $100 million-$200 million on the project. In terms of output, production was quoted at between 15,000 and 25,000 Opel Kadett cars and somewhere between 100,000 and 200,000 four-cylinder motors annually. These same news releases also stated that the majority of the factory's engine output was to be exported to GM's plants in Western Europe.[7]

The primary destination for Szentgotthard engines became more transparent on March 11, 1990, when GM announced that it was erecting a new car plant in Eisenach, East Germany and considering other small car operations in Czechoslovakia and Poland (See Chapters 3–6). Another probable destination for the engines was Suzuki's new Hungarian car plant, to be launched by the Japanese automaker and GM partner in 1992 in Esztergom, 270 km (168 miles) northwest of Szentgotthard (See Suzuki Esztergom below).[8]

Construction began in September 1990, with the first Opel Astra F compact rolling off the assembly line at the $295 million, 200,000-engine, and 15,000-vehicle capacity GM Hungary Szentgotthard on March 13, 1992 (See Table 7.1). A combined 400 workers were employed at the complex's launch, effectively building CKD kits of the sixth-generation Opel Kadett, with the switch of the nameplate to Astra occurring at GM's other European factories in September 1991.[9]

In June 1992, the first 1.6L engine was produced in Szentgotthard. These were followed by 1.4L motors, with the engine plant's official dedication ceremony occurring on July 24, 1992. A total of 9,401 Opel Astra kits and 20,511 engines were built in the first year, with employment rising to 528 as of December 31, 1992. A total of 13,344 Astra were assembled in 1993, approximately 10,000 of which were sold in Hungary. This made the Opel the nation's best-selling car, and GM

[7] Ward's (1958–2014); Reuters (1990a, 1990b).

[8] Prokesch (1990).

[9] Reuters (1990b); *New York Times* (1992); Protzman (1992); HITA (2012); Opel (2016).

with a market share of 23.0%, Hungary's top selling car manufacturer. GM-Opel held onto this mantle until 1997, when it was overtaken by Suzuki.[10]

As for the engines, 75,741 units were produced in 1993, approximately 65,000 of which were 1.4L motors. This combined with car output enabled the Szentgotthard Plant to turn a profit in its first full year in operation. The engine hall welcomed a second shift in May 1994, raising output to 160,033 units, employment at the complex to nearly 700, and capacity from 140,000 to 260,000 motors by the end of that year.[11]

The engine plant's expansion was aided by the early-1994 introduction of the Opel Tigra two-door sports coupe, which was being assembled at Opel Zaragoza in Spain. In response, in November 1994 and January 1995, respectively, GM bought out its two partners, HAFI and RABA, and gained full ownership control of the Szentgotthard operations. This was followed in March 1995 by a declaration of a new $181 million investment by GM in the renamed *Opel Magyarorszag* (Opel Hungary). This enlarged engine capacity to 460,000 and to funded the construction a similarly capable engine cylinder-head production hall. When operational in 1996, the new expansions were expected to raise employment at Opel Hungary to 870 and total investment in the operations to $476 million.[12]

In the years to follow, the number of cars produced in Szentgotthard never again reached their 1993 peak. After assembling 12,282 Astra in 1994, a total of 12,488 were built in 1995, followed by 11,255 in 1996, when 310,034 engines also were produced. By that time, Opel Hungary employed 933 people, with 260 assembling CKD kits of Opel Astra F caravans, hatchbacks, and sedans. In October and November 1996, however, GM placed the plant's future car production in doubt, when

[10] Ward's (1958–2014); Havas (2000, 2007); HITA (2012); HIPA (2016); Opel (2016).
[11] Havas (2007); Opel (2016).
[12] O'Leary (1995); Havas (2007); Opel (2016).

it announced that it would begin manufacture of the Opel Astra at its new factory in Gliwice, Poland by late-1998 (See Chapter 3).[13]

Despite the uncertainty, a total of 12,752 were produced at Opel Szentgotthard in 1997. In that year, employment in peaked at the complex at 1,203, supplemented by 332 workers at plant subcontractors. With output of Astra F commencing at the new Opel Gliwice on August 31, 1998, production of the car was ended in Hungary in December 1998. At that time, car production in Szentgotthard was changed over to the Opel Vectra after assembling 80,835 since March 1992. The switch was necessary to support overflow demand from the Opel Eisenach, which had been producing the Vectra with Szentgotthard-built engines since September 1992 (See Chapter 4).[14]

A total of 9,709 cars were built at Opel Szentgotthard in 1998, including an estimated 9,313 Astra and 396 Vectra. In in the interim, the engine plant launched output of new 1.8L EcoTec motors. In December of that year, Opel also declared its intentions to transfer 140 workers from the car plant to the engine hall, creating a fourth shift there and thereby boosting annual engine capacity to 530,000. Interestingly, at that time, approximately 53% of the workers at Opel's highly profitable Hungarian Plant had a high school, college or university degree, a level of educational attainment far surpassing that of Opel's German plants.[15]

An estimated Vectra were assembled during the first half of 1999, after which, car production was ended in Szentgotthard after building 85,239 cars in seven years. Thereafter, CKD production of the Astra F was shifted temporarily to Opel Gliwice for calendar year 2000, before winding down at Daewoo-FSO in Poland in 2001 (See Chapter 3). In the interim, the Szentgotthard car plant was re-tooled for production of GM's Detroit Diesel Allison bus and truck transmissions, which commenced in 2000.[16]

[13] Ward's (1956–2014); BBJ (1996); O'Leary (1996); Havas (2007).
[14] Ward's (1956–2014); O'Leary (1998); Havas (2007).
[15] Ward's (1956–2014); *WJS* (1998); Havas (2007).
[16] Ward's (1956–2014); Wright (1999); GM Europe (2001–2009); Opel (2016).

Opel Hungary produced a plant record 511,813 engines in 1999, followed by 490,400 in 2000 at the then 956-worker complex. The complex then got a new shot in the arm when, on March 13, 2000, GM and Fiat revealed that they had forged a strategic alliance in which GM was to acquire 20% of Fiat in exchange for $2.3 billion and 5.15% share in GM stock. As part of this agreement, the two companies set up a joint powertrain design center in Turin on January 1, 2001, and became 50/50 partners in rebranded Opel Hungary Powertrain Szentgotthard Plant (See Chapter 3). The two automakers then committed to procure a larger share of their European powertrain products from the factory. Related to this, in 2002 Opel Szentgotthard commenced manufacturing of continuously variable automatic transmissions (CVT), many of which were exported to the U.S. to GM's Spring Hill, Tennessee car plant. There they were installed through 2004 in GM's Saturn Vue SUVs. In contrast, a near-bankrupt Fiat divested its stake in GM in December 2002, although connections between the two automakers in Hungary continued through the decade via GM's partnership with Suzuki (See Magyar Suzuki).[17]

Engine production at the 60,000 m^2 (646,000 ft^2) Szentgotthard factory remained around 450,000 between 2004 and 2007, before falling to 392,378 in 2008 and then to below 300,000 annually between 2009 and 2012. This contraction was a function of two important events: GM's and Opel's financial troubles; and the 2009 Great Recession. The economic crisis, did not deter GM's faith in its Hungarian operations, however, as on September 21, 2010 the automaker revealed plans to invest a fresh $656 million in the complex to erect a new 30,000 m^2 (323,000 ft^2), 500,000-capacity engine factory on its existing 35-hectare (86-acre) Opel Hungary site. This proclamation was supported earlier that day when GM's former Allison Transmission division announced its own plans to build a new automatic transmission manufacturing facility in Szentgotthard.[18]

[17] Tagliabue (2000); Camuffo & Volpato (2002); GM Europe (2001–2009); Opel (2016).
[18] GM Europe (2001–2009); Opel (2010, 2016, 2010–2016).

The new Opel engine hall was expected to contain three lines, collectively manufacturing a new series of fuel-efficient, 'Flex' petrol and diesel EcoTec engines. Made completely from aluminum, the motors were engineered to comply with the EU's Euro 6 tailpipe emission standards that were to go in effect in September 2014. The Hungarian Government provided $35 million dollars in subsidies to the engine project that was to generate roughly 1,000 new jobs at the then 600-worker Opel operations by 2012, and an additional 2,500 to 3,000 at local suppliers. On the other hand, company press releases suggested that the new Flex engine plant would generate 800 new direct jobs as it steadily raises annual output to 500,000 by 2015 and ultimately 600,000.[19]

Construction of the 'Flex' building began in April 2011 and the plant was inaugurated on September 20, 2012; Allison Transmission opened on October 4, 2011. Serial production of Flex engines for commercial sale commenced on February 8, 2013, beginning with 1.6L four-cylinder Spark Ignition Direct Injection (SIDI) Turbo petrol motors. At the time, 300 of Szentgotthard then 680 employees worked at the Flex Plant. The 1.6L petrol was followed by the introduction of 1.6L four-cylinder Common Rail Direct Turbo Intercooled (CDTI) diesels on June 18, 2013, and then by the launch of the 1.0L three-cylinder SIDI Turbo petrol engines on July 16, 2014.[20]

Among the vehicles receiving the 1.6L petrol and the diesel engines were Opel Gliwice's 2014 and 2015 model year Opel Astra J and its successor, the 2016 Astra K. The 1.6L diesel was originally designed by Fiat-GM Powertrain in Turin. It had replaced a 1.7L diesel produced by Isuzu at its engine plant in Tychy, Poland (See Chapter 3). Among the vehicles equipped with 1.0L petrol were Opel Eisenach's 2014 to 2016 Opel ADAM, 2015 and 2016 Opel Corsa E, and the 2015 and 2016 Opel ADAM ROCKS (See Chapter 4).[21]

[19] GM Europe (2001–2009); Opel (2010, 2016, 2010–2016); *SeeNews Hungary* (2013).

[20] Opel (2013, 2014, 2010–2016).

[21] The last three paragraphs draw upon: Opel (2010–2016, 2016); Opel Hungary (2016).

As a result of these developments, total engine production in Szentgotthard rebound to 354,002 in 2013 and 376,892 in 2014, before jumping to 511,749 units in 2015. In the latter year, output was roughly split between the new and old engine operations. The year 2015 also marked the first time that Opel Szentgotthard manufactured more than 500,000 units in a given year since 1999. A fourth Flex motor, the 1.4L turbo petrol also was introduced in 2015, and was ready for installation in the September 2015 released Astra K.

To support this growth, GM raised employment at Opel Szentgotthard from 680 in 2013 to 810 in 2014, and then to 1,200 in 2015. Additionally, on March 3, 2015 it announced plans to expand employment by as much as 500 over the next few years. This suggested that although there were not any plans to reinstitute automobile production, the future prospects for Opel Szentgotthard appear 'bright.' This projection was buoyed by the fact that the now 650,000-capacity complex has remained GM-Opel's sole producer of Flex and Family I engines for its European vehicles.

Magyar Suzuki Esztergom

After nearly four years of negotiations, on January 13, 1990, Suzuki Motor announced that it had entered into an agreement with the World Bank's International Finance Corporation (WBIF), a Hungarian syndicate known as *Autokonszern*, and C. Itoh Trading Company of Japan to finance the construction of a $140 million car plant in Hungary's ancient capital of Esztergom. (See Table 7.1). Under the initial arrangement, the 19-company Autokonszern, which included Hungarian banks and commercial vehicle makers, was to own 50 percent of the venture, Suzuki 30%, and C. Itoh and the WBIF both 10% each (WBIF's was from a line of credit of $85 million). Earlier news reports stated that the venture was to be strictly between Suzuki and Ikarus, but these proved incorrect.[22]

[22] Ward's (1958–2014); Reuters (1990a); Sanger (1990); *Toronto Globe & Mail* (1990); HITA (2012).

Announced within hours of GM's commitment to Szentgotthard, Suzuki's joint venture plant was to be located on a 35-hectare (87.5-acre) tract near the Danube River which formerly had served as a Soviet a military testing area. Although not well connected to Gyor and other points west by highway, the site was strategically located in north-central Hungary near the Slovak border and just 45 km (28 miles) north of Budapest. Scheduled to launch in 1992, the plant was to initially employ 1,100 and assemble 15,000 Suzuki Cultus supermini annually year from CKD kits imported from the automaker's Kosai Plant in Japan. Output of the car, which was sold in Europe as the Suzuki Swift, was expected to reach 50,000 by 1995 and 100,000 sometime thereafter.[23]

For locating in the economically depressed northern industrial belt adjacent to a declining coalfield, the factory received $4.2 million in direct government aid plus the same ten-year tax abatement and breaks on imported components awarded to GM-Opel Szentgotthard. In return, Suzuki promised to steadily raise domestic content until it reached 50% of the value of each vehicle. As a result of prior agreements between Hungary and the EU, if local content reached 60%, the Japanese automaker could export its cars duty-free throughout the EU.[24]

The accord officially creating Magyar Suzuki was signed on April 24, 1991 and construction of factory proceeded shortly thereafter. The assembly of prototypes began in late-August 1992, with serial production of the Suzuki Swift supermini commencing at the 270-worker Esztergom Plant on October 22, 1992. Whereas Japanese media reports at the time stated that Suzuki had spent $190 million on the project, with Western outlets placing the value at closer to $230 million. Suzuki stated that it expected that 60% of the vehicles built in Esztergom would be sold in Hungary with the remainder exported primarily to Europe. Domestic sales appeared to be a challenge from the start, however, considering that the Swift was priced at between $9,170 and $10,675

[23] Sanger (1990); *Toronto Globe & Mail* (1990); Suzuki (2016b).
[24] Salder & Swain (1994); Havas (2000, 2007).

and the average annual salary in Hungary was equivalent to just $3,316 per year in 1992.[25]

Magyar Suzuki assembled 992 Swift in the final three months of 1992 and 13,021 in 1993. In the latter year, plant employment was nearly 500. Meanwhile, by the end of 1993, the value of Hungarian-built components installed in Esztergom assembled Swift had jumped from 25% in 1992 to 48% in 1992. Among this domestic content, 23 percentage points was manufactured by Suzuki (pressing, welding, painting, and assembly) and the other 25 percentage points by local suppliers.[26]

Things started off shaky, however, with the plant reporting losses of $55.2 million in the first two years. Nonetheless, the bulk of the red ink was bookkeeping, caused by the rapid appreciation of the Japanese Yen against the Hungarian Forint and other currencies. This made Suzuki's Japanese bank loans much more expensive to pay back. Autkonszern offered no relief, as despite still owning 40% of the venture, it did not have the financial wherewithal to inject more equity in the project. Conversely, the Hungarian Government agreed to provide $13 million of the $78 million that Suzuki needed to keep the Esztergom plant in operation. The resulting recapitalization raised the Japanese automaker's stake in the Esztergom Plant to 55.2% in April 1995. Conversely, Autkonszern's share fell to 24.9%, Itochu's rose to 13.6%, WIBF's fell to 3.5%, and the Hungarian Bank for Investment and Development held 2.8%.[27]

Production rose to 19,412 in 1994, with exports of the Swift also launching in that year. On the demand side, Suzuki sold 16,065 passenger vehicles in Hungary in 1994, giving it a 17.9% domestic market share. This ranked the automaker third behind Opel and Lada of Russia, at 22.6% and 19.5, respectively. To help improve this position and push the plant toward Suzuki's goal of producing 40,000 cars, a second shift was introduced at the Esztergom factory in September

[25] Bohlen (1991); Mikuni(1992); Cohen (1992); Kanabayashi & Aeppel (1992); Suzuki (2016b).
[26] Ward's (1958–2014); Laszlo (1993); Havas (2000, 2007).
[27] Gaspar (1994); BBJ (1994–1997); Havas (2000, 2007).

1994. In addition, on September 2, 1994, Suzuki and Subaru's parent Fuji Heavy Industries announced that they had agreed to jointly build 12,000 all-wheel drive (AWD) versions of Swift per year at Magyar Suzuki as re-badged Subaru Justy. Output of Justy in Esztergom commenced in 1995, with 5,400 assembled in that year. Overall, a total of 36,453 cars were assembled at Magyar Suzuki in 1995. At that time, 1,030 people were employed at the facility, with another 4,000 engaged by Suzuki's 38 Hungarian suppliers.[28]

Suzuki Motor claimed investments of $200 million in Hungary as of July 1995. It then committed a fresh $25 million in order to achieve its goal of raising local content in Swift models to 80% by 1997, with the remaining percentage coming from Japanese-made engines and transmissions. These current and planned figures were quite significant, considering that the domestic content of Szentgotthard-built Opel Astra was only 5% in 1995. The Opel local content figure never did surpass 10%, averaging 9.6% before Astra production was moved to Poland in 1998.[29]

Final assemblies and employment in Esztergom increased to 51,778 and 1,400, respectively, in 1996. A total of 38,183 of this output was exported, up from 23,873 in 1995. The top export market was Germany, where more than 10,000 were delivered Germany. The increase in production enabled Magyar Suzuki to post its first pre-tax profit of $4.6 million in 1996. This helped Suzuki buy out most of Autkonszern's shareholders, raising its stake in the Esztergom operation from 55.2% to 79.5% as of May 1996.[30]

Output continued to rise to 63,948 in 1997 and then to 74,327 in 1998. In the interim, with a 20.1% market share on deliveries of 16,040, Suzuki became Hungary's new car sales leader in 1997, followed by Opel at 16.2% and VW at 9.7%. The Japanese automaker held on to this position through 2008, before being overtaken by Ford and then Opel and VW-Skoda during the 2010s. Meanwhile, a Suzuki vehicle

[28] Ward's (1958–2014); AP (1994); BBJ (1994–1997); Havas (2000, 2007).
[29] BBJ (1994–1997); Bishop (1996a); Havas (2000, 2007).
[30] BBJ (1994–1997); Bishop (1996b); Tutak (1997); Magyar Suzuki (2015).

was the best-selling car in Hungary for nine out of ten years between 1999 and 2008, with the Swift being number one for much of this period, including capturing a 23.5% of the market in 1999.[31]

In October 1997, GM and its partner Suzuki revealed plans to jointly produce small cars in Esztergom equipped with Szentgotthard engines by 2000. Output of first jointly developed car, the Suzuki Wagon R+ MPV, launched in January 2000 and was followed by the Suzuki Ignis supermini on April, 10, 2003. With the introduction of its successor the Ignis, production of the Cultus-based Swift came to an end that same day in Esztergom. In a related matter, Suzuki and Fuji extended their accord to stamp some Esztergom-built AWD cars as Subaru. This was fully supported by GM, which at the time owned 20% of both Suzuki and Fuji. Output of the re-badged Subaru G3X Justy also commenced in April 2003.[32]

The Ignis represented a prime example of the extent of Suzuki and GM's long standing multinational collaboration. The car was designed by GM's Holden division headquarters in Australia, with cars assembled in Port Melbourne marketed locally as Holden Cruze. Meanwhile, Ignis manufactured at Suzuki's Kosai Plant in Japan were either sold domestically as Suzuki or re-badged for export to the U.S. as Chevrolet Cruze. The only differences between the vehicles was that the two Cruze were: shorter in length (145 mm/5.7 inches); and more SUV-like than the Ignis, coming with slightly higher ground clearances (as much as 300 mm/one foot) and wider front/rear tracks (20 mm/¾-inch).[33]

As if these collaborations were not enough to keep the Esztergom Plant busy, Suzuki entered into a third tie-up in 2003, this time with Fiat to jointly develop a supermini crossover. The agreement called for Magyar Suzuki to annually produce 120,000 of the car, half badged as Suzuki and half stamped as Fiat. Output of the Fiat Sedici mini CUV commenced in October 2005, with 350 Sedici built in that year.

[31] Ward's (1958–2014); BBJ (1994–1997); Tutak (1997); ITDH (2006); Gasnier (2010–2016); Magyar Suzuki (2015).

[32] BBJ (1994–1997); Havas (2007); Magyar Suzuki (2015); Suzuki (2016b).

[33] Ward's (1958–2014); Magyar Suzuki (2015).

Production of the Sedici twin, the Suzuki SX4 followed on February 27, 2006. Both versions came equipped with Japanese-made Suzuki petrol engines and optional diesel motors manufactured by Fiat-GM Powertrain in Bielsko-Biala, Poland (See Chapter 3).[34]

In contrast to the additions, production of the Suzuki Wagon R+ was ended in Hungary in December 2004 after only four years. Thereafter, through February 2007, assembly of the microvan was shifted to Opel Gliwice in Poland, where it was built alongside its re-skinned twin, the Opel Agila I. Whereas the shuffling of the Wagon R+ appeared to be orchestrated by GM, Suzuki officials stated that this change was necessary to create production space for its totally re-engineered and redesigned Swift model.[35,]

As a result of the new models, and the February 4, 2005 re-launch of the Suzuki Swift, output at Magyar Suzuki expanded from 87,400 in 2001 to 135,224 in 2005 followed by 163,964 in 2006. Confident in continued future growth, in July 2006, Suzuki announced plans to invest an additional $70 million to add a second production line at the Esztergom facility. When completed, the new project was to increase annual vehicle capacity from 170,000 to 300,000 by 2008. This was accomplished on schedule, with output jumping from 232,480 in 2007 to 281,686 in 2008 and employment rising to 6,000 as December 31, 2008.[36]

With the new expanded production capacity, GM transferred assembly of its second-generation Opel Agila from Opel Gliwice to Esztergom (See Chapter 3). Production of the Suzuki Ignis/Subaru G3X Justy was then ended at the factory in 2007. Output of the Agila II commenced in December 2007 and 69,499 were built in 2008. By that time, the Agila II had been transformed into a reskinned clone of the Suzuki Splash and had grown in eight inches in length to become a supermini. Serial

[34] Ward's (1958–2014); OICA (1999–2016); Magyar Suzuki (2015).

[35] Magyar Suzuki (2015, 2016b); Suzuki (2016a).

[36] GM Europe (2001–2009); Magyar Suzuki (2015, 2016b); Suzuki (2016a).

production of the Splash began in Esztergom in February 2008, with 51,499 assembled in that year.[37]

Unfortunately, outside events, particularly the 2009 Great Recession and GM's subsequent bankruptcy resulted in 2008 representing peak vehicle output for Suzuki in Hungary. As shown in Table 7.2, after building 50,691 in 2009, production of the Agila II in Esztergom gradually declined to 28,124 in 2010 and then to only 10,890 in 2014. Thereafter, the Agila was discontinued and replaced in March 2015 by a new model, the Opel Karl, now built by GM Korea in Changwon, South Korea.[38]

For similar reasons as GM's cutbacks, as well as Fiat's takeover of Chrysler Motors, output of Fiat brand vehicles in Esztergom never approached their projected 60,000 units per year. Production of Fiat Sedici in Hungary peaked at 35,451 units in 2007, before falling to 16,851 by 2010, and finally to only 2,182 in 2014 (See Table 7.2). In the interim, total output at Magyar Suzuki was cut significantly to 170,011 in 2010 and then to just 146,480 in 2014. Employment followed suit, contracting to 3,100 as of December 31, 2014.[39]

A final important factor driving the overall decline in production in Esztergom was Suzuki's souring relationship with GM. The long-standing collaboration between the two automakers to turn south in the early 2000s, when Suzuki began questioning the product quality of Suzuki brand vehicles produced by GM at its own plant. The biggest concerns were cars built at GM Daewoo's Bupyeong Plant in Incheon, Korea and at the two automaker's joint venture CAMI Plant in Ingersoll, Ontario, Canada. The latter facility built the first generation Swift/Geo Metro, and the jointly developed Suzuki Vitara/Geo Tracker SUV, among other vehicles.[40]

Things took a turn for the worst on March 6, 2006, when in the midst of Suzuki's growing global success, GM reduced its stake in

[37] GM Europe (2001–2009); Magyar Suzuki (2015, 2016b); Suzuki (2016a).

[38] GM Europe (2001–2009); Opel (2010–2016); Ernst & Young (2010); Magyar Suzuki (2015, 2016b); Suzuki (2016a).

[39] OICA (1999–2016); Opel (2010–2016); Magyar Suzuki (2015, 2016b); Suzuki (2016a).y

[40] Jacobs (2016).

Table 7.2 Suzuki Esztergom Car Production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
Suzuki Esztergom	**185,533**	**146,480**	**161,106**	**155,995**	**171,700**	**170,011**	**180,111**
Suzuki S-Cross	42,827	60,249	48,163	—	—	—	—
Suzuki Splash	—	10,932	19,454	23,292	18,011	24,468	36,552
Suzuki Swift	53,000	48,007	42,161	55,594	63,313	62,312	57,283
Suzuki SX4	—	14,220	33,151	48,922	47,475	38,630	21,953
Suzuki Vitara	89,706	—	—	—	—	—	—
Fiat Sedici	—	2,182	4,637	8,857	14,777	16,851	13,632
Opel Agila	—	10,890	13,540	19,330	28,124	27,750	50,691

Sources: Adapted by author from Opel (2010–2016); MAGE (2016); Magyar Suzuki (2016); Suzuki (2016a).

Suzuki Motors from 20.4% to 3.0%. By December 4, 2009, the two companies had parted ways completely. Rumors suggested that the final straw was Suzuki's refusal to build its new Kizashi sports sedan in Canada, fearing that the CAMI plant's constant product quality issues, low productivity, high defect rates, and labor unrest would damage the model's reputation in America.[41]

While the 2010s started off rocky for Magyar Suzuki, there have been some bright signs. In September 2013, serial production commenced of Suzuki's new SX4 S-Cross crossover. Next, following the discontinuation of the Opel Agila II/Suzuki Splash and original SX4 in December 2014, serial production of the fourth-generation Suzuki Vitara SUV was introduced in Esztergom on March 5, 2015. The Japanese automaker planned to produce 70,000 Vitara in Hungary in the first year, achieving this goal with the help of its 74 domestically-based components suppliers.[42]

As again presented in Table 7.2, vehicle output expanded to 185,533 in 2015. A total of 93.7% of these cars were exported out of Hungary. Conversely, Magyar Suzuki was now producing only three vehicles at its 3,100-worker, 300,000 capacity plant and 57-hectare (141-acre) site in Esztergom. In 2015 this included: 89,706 Suzuki Vitara SUV; 53,000 Swift superminis; and 48,827 S-Cross. As of December 31, 2015, Suzuki Motor Corporation controlled a 97.52% stake in Magyar Suzuki Rt, Itochu owned 2.46% and private Hungarian shareholders.02%.[43]

In addition to the increase in output in 2015, if there were any worries about Suzuki's future in Hungary they were allayed by the automaker's October 2016 technology tie-up with Toyota Motor. What was ironic about the Toyota-Suzuki partnership was that came on the heels of Suzuki' split not with GM, but with VW. On December 9, 2009, the two automakers announced a comprehensive tie-up that was to see VW acquire a 19.89% stake for $2.5 billion and become Suzuki's largest shareholder. This relationship quickly turned ugly, with

[41] Jacobs (2016).
[42] Magyar Suzuki (2015, 2016b).
[43] Magyar Suzuki (2015, 2016a, 2016b); MAGE (2016).

the Japanese automaker terminating the agreement on November 18, 2011 and demanding the right to buy back its shares. Suzuki also initiated a complaint in the International Chamber of Commerce's, International Court of Arbitration in London, accusing VW of bad faith for withholding the hybrid powertrain technology it had agreed to share with Suzuki. After four years of waiting, the arbitrators ruled in Suzuki's favor on August 29, 2015. With these hurdles overcome, the Japanese automaker can now be expected to again expand output in Hungary in the near-term.[44]

VW's Audi Gyor

With the German and European economies in the midst of a major recession and business sentiment in the prosperous western part of Germany at its worst in a decade, automakers began scaling back their planned new investments in the former East Germany. Citing falling demand, on November 2, 1992, Daimler-Benz cancelled its proposed new $628.3 million, 4,000-worker truck plant in Ahrensdorf (now Ludwigsfelde), Brandenburg. Meanwhile, on November 19, 1992, VW's Audi division declared that it was reducing its workforce by between 3,000 and 4,000 by 1993. That made it all the more startling when in that same month Audi revealed plans to build a new engine in Gyor, Hungary (See Table 7.1).[45]

Company officials claimed to have come to their decision after two years of evaluating nearly 180 European sites. Initial reports suggested that the plant was almost assuredly going to be built in eastern Germany. Audi management, however, stated that even if his firm received the maximum 30% subsidy-to-investment package from the German Government, such incentives could not counterbalance the significant

[44] Magyar Suzuki (2015, 2016b); Jacobs (2016).

[45] Aeppel (1992a, 1992b); Since February 8, 1991, Daimler had been producing LCV at the former IFA Industriewerke in Ludwigsfelde. By January 1, 1994, the plant had become a 100% subsidiary of Mercedes-Benz and in 2015 employed 1,868 assembling 50,000 Mercedes-Benz Sprinter commercial vans.

wage advantages that Hungary offered. At an average of $1.38 per hour in 1991, Audi estimated that labor costs in Hungary would be approximately half that they would have been in eastern Germany (by comparison, West German average wages were $22.49 per hour in 1991). Another important consideration was the fact that Hungarian labor regulations allowed for a three-shift, 24-hour continuous operation at the plant. In contrast, German law limited factories to two-shifts of 16 combined hours and prohibited work on Sunday. Finally, similar to GM-Opel and Suzuki, Audi received a ten-year abatement from the Hungarian Government.[46]

Interestingly, Gyor was not the lowest cost option for Audi in Hungary, as at 8%, the unemployment rate in the wider Gyor-Moson-Sopron County was significantly lower than the national average of 13%. Audi officials later revealed that they had selected Gyor for its: well-qualified workforce; its highway, rail, and river transport connections with other parts of Hungary, Slovakia, Czechia and Western Europe; its tax advantages as compared with Germany; and its lower overall cost structure, including its building, infrastructure, and labor costs. Also important was VW's then highly-underutilized 200,000-capacity car plant in Bratislava, Slovakia, situated just 97 km (60 miles) north of Gyor and a prime candidate for Hungarian-built engines. This connection was made much easier by the Hungarian Government's completion of 14 km (8.5-mile) long M15 (E65/E75) motorway linking National Motorway M1 to Bratislava in July 1998 (See Chapter 6).[47]

On February 18, 1993, Audi Hungaria Motor was officially incorporated as a 100% subsidiary of Audi AG. Two months later, on April 21, 1993, the German automaker signed an agreement to purchase industrial tract containing a vacant 114,000 m^2 (1.23 million ft^2) facility that had been constructed by Magyar Waggon's Raba division during the late-1980s. Located on the east side of the city and near the banks of the

[46] Aeppel (1992b); Swain & Sadler (1994).

[47] This remainder of this section was based primarily upon: VW (2000–2016); Audi (2004–2016, 2013); Audi Hungaria (2005–2013, 2015–2016, 2016a, 2016b); Jacobs (2013). Additional sources are cited were appropriate.

Moson-Danube River, the site also contained access to a historic rail line built in 1861. The purchase agreement also established the general conditions for Audi's stated $580 million long-term investment at the $700 million complex in Gyor.[48]

With a production hall in place, Audi was quickly able to get things up and running (on September 24, 1993) and prototype testing underway (in December 1993). Serial production of four-cylinder petrol engines at the 202-worker Audi Hungaria followed in August 1994, with the official public opening of factory taking place on October 12, 1994. Initial capacity was expected to be 225,000 engines per year rising to 450,000 when the so-called 'super-automated' factory of only 850 workers was fully operational.[49]

Total engine output was not reported for 1994, but was 104,206 in the first-full year, 1995. At that time, Audi claimed that it had invested $387 million in the plant. Engine output rose to 196,352 and employment to 1,011 in 1996. That year 1996, however, was more significant for the Gyor factory following two other reasons, both announced in May 1996. First, Audi declared that it was transferring production of six- and eight-cylinder engines from Ingolstadt to Gyor by 1998. Second, and more groundbreaking, the German automaker revealed that it had decided to produce its newly developed Audi TT sports car at Audi Hungaria complex. These expansions were expected to increase the German automaker's investment in Hungary to $683 million overall by 1998.[50]

Serial output of the six-cylinder engines launched in Gyor in August 1997, with mass production of eight-cylinders beginning at the then 2,204-worker complex in October 1997. Also during the second half of that year, pre-production versions of Audi TT sports cars were prepared, with assembly of full-fledged TT coupe hardtops commencing in April 1998 (See Table 7.1). The Gyor plant built 13,682 Audi TT in 1998, including 89 roadster convertibles prototypes. Car output expanded to

[48] Ward's (1958–2014); Stevenson (1993); Csizmadia & Dusek (2014).
[49] BBJ (1994–1997); Tuckey (1994).
[50] BBJ (1994–1997); Hooker (1995); Bishop (1996b).

52,579 in 1999, including 8,557 roadsters, launched in July 1999. With volume still small, the TT coupes and convertibles assembled in Hungary were fitted with car bodies manufactured and painted at Audi's main plant in Ingolstadt. On the other hand, with car production now up and running, foreign automotive suppliers, such as the seat maker Lear of the U.S., joined Raba by locating in and around Audi Gyor.

As TT production ramped up, engine output soared to 584,665 in 1997, then to 986,773 in 1998 and 1,001,912 in 1999. Also in 1999, Audi began construction on another major expansion to the engine factory and of an engine development center. The manufacturing hall dedicated to the production of four-cylinder turbocharged direct injection diesel (TDI) motors was ready in the spring 2000, followed in June 2001 by the development center. Additionally, in April 2001, the vehicle hall took on some overflow output of Audi A3/S3 hatchback from Ingolstadt. A total of 55,296 cars were built the then 4,848-worker Audi Hungaria in 2001.

In 2002, two more engine assembly lines were dedicated, including one for Audi's newly developed Fuel Stratified (direct) injection motors (FSI, later turbocharged TSFI) and another for eight-cylinders. This helped propel engine output to 1.69 million by 2005. In terms of the destination of these engines, roughly 60% were installed in VW's SEAT, Skoda, and Volkswagen models. The remaining 40% were mounted in Audi brand vehicles, with many of these motors, along with other Gyor-built components, shipped to Ingolstadt via railway. Conversely, the 55,000-capacity vehicle hall was re-tooled for the next-generation TT model in 2005, resulting in only 12,307 sports car being assembled in that year.

On September 16, 2005, Audi Gyor continued its expansion by inaugurating a $49 Million, 400-worker 18,000 m^2 (193,750 $ft^{2)}$ tool-making facility with large-scale presses capable of manufacturing body parts for Audi Hungaria vehicles. This raised employment to 5,022 and the faculty built-up area to 38.8 hectares (95.5 acres) at the now 66-hectare (409-acre) industrial site.

Also in 2005, Gyor was designated by the Hungarian Government as one of its six regional growth poles of competitiveness under the 2007–

2013 New Hungary National Development Plan. Once approved by the EC on August 1, 2007, this designation enabled the municipality to tap into some of the $545 Million in community assistance subsidies allocated to the area through the EC European Regional Development Fund's Economic Development Operational Programme. This and other State incentives encouraged provoke further expansions at Audi Gyor.[51]

With the retooling complete, vehicle output rebounded to a new plant record 56,892 in 2007. This trajectory was buoyed by the November 2007 launch of the newly developed Audi A3 Cabriolet. Engine output also hit a new peak of 1.91 million in 2007, aided by the October introduction of a new generation of four-cylinder Common-Rail TDI motors. Praised for their combination of quick acceleration (high-torque ratio), fuel-efficiency, and low hydrocarbon emissions, the new TDIs were installed in A3, VW Beetle, Golf, Jetta, and Passat models and became very popular among European consumers. Unfortunately, those same 'clean' turbodiesels would later come back to haunt Audi and VW.

Engine output remained at 1.9 million in 2008, with serial production of 6.0L, 12-cylinder TDI engines commencing that September. Thereafter, in the midst of the Great Recession, it fell off sharply to 1.38 million in 2009, before rebounding to 1.65 million in 2010. Similarly, after hitting a new high of 60,369 in 2008, as shown in Table 7.3, car output was cut to 32,603 in 2009, before increasing slightly to 38,541 in 2010. In the process, employment at Audi Hungaria seesawed from 5,897 in 2008 to 5,624 in 2009 and then to a new high of 6,138 as of December 31, 2010.

Nevertheless, despite the slumping European economic climate, on September 28, 2010, Audi announced plans to invest another $1.21 billion to further expand its Hungarian operations. This was to include the acquisition of an additional 370 hectares (914 acres) of industrial land within the municipality of Gyor. When completed in 2013, this new enlargement was expected to raise annual vehicle capacity at Audi

[51] Csizmadia & Dusek (2014).

Table 7.3 Audi Hungary car production, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
Audi Gyor	**160,206**	**135,232**	**42,851**	**33,553**	**39,518**	**38,541**	**32,603**
Audi A3	124,696	117,578	24,493	11,673	14,010	12,324	9,782
Audi TT	35,510	17,654	18,358	21,880	25,508	26,217	22,821

Sources: Adapted by author from Audi (2004–2016); Audi Hungaria (2005–2013, 2015–2016).

Hungaria to 125,000, create 1,800 new jobs, and transform the operations into a full-fledged assembly plant. Shortly thereafter, it was revealed that in its environmental permit document filings, Audi had outline a second phase of investment in Gyor that was to potentially raise vehicle capacity to 339,264 by 2017 or 2018.

In exchange for its new commitment, Hungary's Ministry for National Economy granted the German automaker, then Hungary's second largest company in terms of revenue, a new incentive package worth $179.5 million. This was to include $11 million to aid in the construction of the complex's first on-site car bodies stamping plant, and $9 million to support automotive-related educational/job-training workshops and to create engine and vehicle design centers in Gyor.

Please with the government support, on January 31, 2013, an Audi spokesman revealed to the press that upon the completion of the current expansion project, the Gyor factory would be not only producing TT and A3 Cabriolet models, but also the automaker's newly developed A3 sedan. Less than five months later, on June 12, 2013, output of the new A3 sedan commenced at Audi Hungaria, followed in October by the launch of the second-generation A3 Cabriolet followed in October 2013. These cars thus became the first locally produced vehicles assembled with car bodies manufactured in Gyor.[52]

In July 2014 by the third-generation Audi TT was introduced. That same month, on July 9, 2014, the EC's Competition Commission launched an investigation to determine if the subsidy package was consistent with the EU's rules for fair competition. Almost 19 months

[52] Mihalascu (2013).

later, on February 1, 2016, the EC finally approved Hungary's Government allocation, stating that the regional development benefits of the project clearly outweighed any negative market distortions that it may have on inter-state competition.[53]

The wait did not deter Audi, and as a result of all its new investments, vehicle output jumped from 42,851 in 2013 to 135,232 in 2014, and then to a new plant record of 160,206 in 2015 (See Table 7.3). The 2015 figure consisted of 124,696 A3 and 35,510 Audi TT. Among the A3 were 107,834 A3 sedans and 16,682 A3 Cabriolet. The engine factory also hit a new record high in 2015, when 2.02 million motors were produced. To accommodate these new capacities, overall employment at the complex was expanded from 7,322 in 2011 to 10,336 in 2013, and then to 11,411, as of December 31, 2015.[54]

As mentioned earlier, the year 2015 was period of both optimism and concern for Audi Hungaria. The same TDI engines that had been such a hit in Europe now placed the factory's engine works in the middle of an 11 million vehicle worldwide recall dubbed the 'VW Diesel Crisis.' The scandal broke following the September 18, 2015 declaration by the U.S. Environment Protection Agency that VW Group vehicles sold in America between 2008 and 2015 had been using defeat device software that greatly underrepresented the amount of Nitric Oxide (NOx) their tailpipes were emitting; when in use, the cars produced up to 40 times the legal limit for NOx emissions (See Chapter 4). Also of particular note was the fact that Audi Hungaria received significant tax deductions related to the research, development, and production of these so called environmentally friendly engines. Most prominent among these was legislation that came into effect in 2011 and that has come to be known as 'Lex Audi.' This entitled the Audi to recoup a share of the excise taxes it paid on fuels utilized in the development of these TDI engines.[55]

In October 2015, Audi disclosed that approximately three million of the diesel engines at the heart of VW's Group's emission scandal were

[53] BBJ (2016).
[54] VW (2016).
[55] See Csizmadia & Dusek (2014) for discussion of 'Lex Audi'.

manufactured at Audi Hungaria. To help allay any local fears emanating from this revelation, on October 19, 2015, Audi revealed that it had agreed to invest another $118 million and create 380 new jobs at its Gyor operations. In return, the central government offered Audi $22.5 million in subsidies to support the project.[56]

As part of this next expansion, Audi was to begin producing its Q3 compact crossover in Gyor by 2018, although company officials have indicated this may occur even earlier. The move was part of a larger vehicle reshuffling program following the VW's March 2015 announcement that it will begin building its new Audi Q6 electric crossover at its Audi Vorst Plant in Brussels beginning in 2018. At that time, output of the Audi A1 supermini will shift from the Belgium plant to VW's SEAT Martorell near Barcelona and production of the Q3 will be transferred from the Spanish factory to Gyor. These move suggests continued near-term growth for the now for 160,000-vehicle, two million engine capacity, and 516-hectare (1,276-acre) Audi Hungaria site in Gyor.

Mercedes-Benz Kecskemet

On June 17, 2008, Daimler became the newest foreign automaker to commit to Hungary (See Table 7.1). The next day, the German conglomerate revealed that it planned to invest up to $1.24 billion to build a car factory on a 441-hectare (1,089-acre) tract in Kecskemet, a city in Bacs-Kiskun County, located about 98 km (61 miles) southeast of downtown Budapest. Construction of the complex was expected to begin in 2009, with the first 2,500-worker, 100,000-vehicle capacity phase to commence output of Mercedes-Benz A-Class and B-Class small cars in 2011. If all went as scheduled, phase two was to consist of a second assembly hall that raised annual capacity in Kecskemet to 300,000. Daimler was expected to receive $228 million in incentives from the Hungarian Government, thereby staying within the 20% of project investment maximum limit allowed by the EC Competition

[56] Reuters (2015).

Commission. This was to include a tax abatement and other undisclosed subsidies.[57]

The selection of Kecskemet came as a surprise to many industry pundits. Most expected Daimler to locate the factory in either Cluj, Romania or Wroclaw, Poland, both of which had lower labor costs and tax rates than Hungary and which had offered similar incentive packages. The Works Council at Mercedes-Benz Rastatt in Germany also was seeking to secure the project for its plant. Company officials suggested that the combined quality and quantity of area's available land, utilities, road and rail infrastructure, supplier network, and workforce were what attracted Mercedes-Benz to Kecskemet. This included motorway M5/E75, which connected the city not only to components suppliers in Budapest, but also to networks in Gyor and Bratislava to the northwest, and along M3/E71 toward Miskolc to the northeast.[58]

On October 27, 2008, Daimler and the Hungarian Government officially signed their accord, with initial site preparation for the project beginning in December of that year. Construction commenced in July 2009 and the factory, including its press plant was completed in October 2010. By April 2011, the first 1,000 employees had been hired, with the testing of the first pre-production car models beginning in July 2011. Phase two of the project was put on hold, a casualty of the 2009 Great Recession/world financial crisis.[59]

On March 5, 2012, the first B-Class hatchback rolled off the assembly line at Mercedes-Benz Manufacturing Hungary's Kecskemet Plant, with serial production of the car and the official plant opening celebrated on March 29, 2012 (See Table 7.1). A little more than two weeks later, on April 14, the first B-Class models were delivered to the company's dealer network.[60]

As illustrated in Table 7.4, a total of 41,035 B-Class were built at Kecskemet in 2012. Also, on July 29 of that year, the first prototypes of

[57] Escritt & Reed (2008); Reuters (2008); Mercedes-Benz Hungary (2014–2015, 2014–2016).
[58] Cienski et al. (2008); Krust (2008).
[59] Eddy (2011); Mercedes-Benz Hungary (2014–2015, 2014–2016); Mercedes (2014–2016).
[60] Gorondi (2012); Sika ViscoCrete Technology (2012); Mercedes-Benz Hungary (2014–2015, 2014–2016).

Table 7.4 Mercedes-Benz Kecskemet car production, 2012–2015

	2015	2014	2013	2012
M-B Kecskemet	**183,046**	**150,287**	**109,266**	**41,035**
M-B B-Class	*	*	*	41,035
M-B CLA	*	*	—	—
M-B CLA Shooting Break	*	—	—	—

Sources: Adapted by author from OICA (1999–2016); Daimler (2015–2016).
* Daimler did not disclose figures by car model

the factory's second model, the Mercedes-Benz CLA executive coupe were tested at the then 3,416-worker complex. Serial production of the CLA launching on January 25, 2013, with export to the car's largest target market, America, beginning in September 2013. These developed pushed Kecskemet past its originally planned 100,000-vehicle capacity with output of 109,266 in 2013. Output of the third-generation A-Class supermini did not commence at the facility, however, and instead was contracted out to Valmet Automotive in Uusikaupunki, Finland.[61]

Brisk demand for the B-Class in Europe and for the CLA in the U.S. and China prompted Daimler to add a third shift in Kecskemet on May 5, 2014, spurring an increase in total car production to 150,287 in that calendar year. Output of the CLA derivative, the 'Shooting Brake' wagon commenced on January 20, 2015, lifting output to 183,046 at the 4,000-worker, 255,789 m^2 (2.75 million ft^2) complex in 2015. As a result of the delay to the project's second phase, however, at that time the German carmaker had received only $135 million of the $228 million in State incentives it was initially promised.[62]

On the other hand, with foreign demand continuing to rise, Daimler has continued to incrementally move toward its original objective of building 300,000 cars in Kecskemet. This began on December 17, 2015, when the vehicle maker announced plans to spend $16.4 to build a new logistics hall and install autonomous robots in the production plant to quicken the delivery of parts. This was followed by bigger

[61] Mercedes-Benz Hungary (2014–2015, 2014–2016); Daimler (2015–2016b); HIPA (2016).
[62] OICA (1999–2016); *Automotive News Europe* (2014); Mercedes (2014–2016); Mercedes-Benz Hungary (2014–2015, 2014–2016); Daimler (2014–2016, 2015–2016a, 2015–2016b).

announcement on March 22, 2016, when Daimler revealed plans to invest another $281 million to increase the complex's vehicle capacity, efficiency, and flexibility through the construction of an on-site, state-of-the-art car bodies manufacturing plant. When completed in 2018, the new project was expected to bring Daimler's total investment in its Hungarian unit to $1.5 billion.[63]

Despite the size of the new investment, in early-2016 some government officials in Hungary were growing concerned that Daimler might not come through with the second half of its pledge to build a second vehicle assembly and expand capacity in Kecskemet to 300,000. The German carmaker sparked these fears when it revealed publicly that it was shopping Central and Eastern European sites for two new facilities: an engine factory and a new vehicle assembly plant. This meant that Hungary would now have to compete fiercely with sites in Poland, Romania, and Slovakia for what it believed was a promised expansion, greatly raising the incentive stakes ante.

With Slovakia's recent winning of the $1.5 billion Jaguar Land Rover Plant sweepstakes in August 2015, Poland and Romania were viewed as the favorites for any new Mercedes-Benz car plant. Working in Romania's favor was the fact that Daimler already had two plants in Alba County, one which was producing gearboxes in Cugur and a second which opened in Sebes in April 2016 and was building the company's newly developed nine-speed 9G-TRONIC automatic transmissions (See Chapter 9). Daimler also was rumored to have purchased several large tracts of land adjacent to the Sebes complex that could potentially host another major facility. Working in Poland's favor was Mercedes-Benz's May 2016 announcement that it was investing $575 million to construct a new engine factory in Jawor, Poland. Again, rumors suggested that Daimler also was supposedly considering the site for a new vehicle assembly plant (See Chapters 3, 8).[64]

Nonetheless, despite the fierce competition, Daimler followed through with their promise to the Hungarian. The announcement was

[63] Mercedes-Benz Hungary (2014–2015, 2014–2016); Daimler (2014–2016, 2015–2016a); BBJ (2015).

[64] *Automotive News Europe* (2016); IntelliNews (2016).

forthcoming on July 29, 2016, when a member of Mercedes-Benz Cars production board revealed that his company planned to invest $1.1 billion to build a second assembly plant in Kecskemet. The new 150,000-capacity car factory was scheduled to employ 2,500 when it opens in 2020. It also was to contain its own car bodies manufacturing works, a paint shop, and a supplier park. Daimler was offered a $45.8 million incentive package by the Hungarian Government. This suggests a bright future for Mercedes-Benz Kecskemet's twin car plants.[65]

Conclusion: Near-term Future Outlooks for the Hungarian Car Plants

As of December 31, 2015, the three active passenger car assembly plants in Hungary—Magyar Suzuki Esztergom, Audi Hungaria Gyor, and Mercedes-Benz Kecskemet—collectively employed 18,511 workers and had the capacity to produce 540,000 cars annually (See Table 7.1). The newly announced Mercedes-Benz Kecskemet Plant 2 was expected to expand these totals by another 2,500 jobs and 150,000 in capacity by 2020.

Hungary's approximately 700 producers, suppliers, and accessory businesses employed 125,000 nationwide in 2015. This included 1,200 at Opel Szentgotthard's powertrain complex, which no longer produces cars. This support network included facilities operated by 43 of the globe's 100 largest foreign automotive components. These developments have transformed the automotive industry into one of Hungary's leading economic sectors, generating 30% of the nation's industrial output and nearly 12% of the its GDP.[66]

As illustrated in Table 7.5, the three active assembly plants produced a combined 528,785 passenger cars in 2015. This represented an increase of 386,089 or 270.57% as compared with output in 2001, when Audi Gyor and Magyar Suzuki assembled 142,696 cars. These figures were

[65] Szakacs & Taylor (2016).
[66] See HIPA (2016).

Table 7.5 Foreign car production in Hungary, 1989–2015

	2015	2010	2005	2001	1989	Change 2001–2015	% Change 2001–2015
Hungary Total	**528,785**	**208,552**	**148,531**	**142,696**	**0**	**386,089**	**270.57%**
Audi Gyor	160,206	38,541	12,307	55,296	0	104,910	189.72%
M-B Kecskemet	183,046	0	0	0	0	183,046	———
Suzuki Esztergom	185,533	170,011	136,224	87,400	0	98,133	112.28%

Sources: Adapted by author from OICA (1999–2016); Audi (2004–2016); MAGE (2016); Magyar Suzuki (2016); Suzuki (2016a).

even more remarkable considering that in 1989, no passenger cars and only 17,000 commercial vehicles, 14,400 buses and 2,600 commercial trucks, were produced in the country.

In addition, 2.53 million Audi and Opel-built car engines were built in Hungary in 2015, up from 1.7 million in 2001 and less than 100,000 in the Socialist Period. Approximately 93% of the automobiles and 93% of automotive components manufactured in the Hungary were exported in 2015, with 87% of the total output shipped to Europe.

Overall, the future prospects for vehicle expansions at all three existing car plants appear promising, with VW Diesel Crisis and Suzuki's recent technology tie-up with Toyota adding interesting twists to the Audi Gyor and Suzuki Esztergom's situations. As to whether or not Hungary will attract a new foreign automaker assembly plant in the next ten years, these prospects also appear promising. This positive outlook was only tempered by the expected fierce competition for such facilities from Poland, Romania, Slovakia, and possibly Serbia and Slovenia.

References

Aeppel T (1992a) Mercedes-Benz Scraps Plans for New Factory. *Wall Street Journal*, 3 November, A13.

Aeppel T (1992b). Worries Grow That German Companies Will Retreat from Eastern-Sector Plans. *Wall Street Journal*, 2 December, A6.

AP (1994) Fuji in Deal with Suzuki. *New York Times*, 3 September, 36.

Audi (2004–2016) *Audi Annual Reports*, for 2003 to 2015 (Ingolstadt: Audi AG).

Audi (2013) *Four Rings: The Audi Story* (Bielefeld: Delius Klasing Verlag GmbH).

Audi Hungaria (2005–2013) *Audi Hungaria: Eves Jelentes* 2004 through 2012 (Gyor: Audi Hungaria Motor Kft).

Audi Hungaria (2015–2016) Fokuszban az Audi Hungaria 2014 and 2015, http://audihungaria2015-hu.audiportal.hu/, last 15 December 2016.

Audi Hungaria (2016a) Audi Hungaria—The Company. https://audi.hu/en/the-company/the-story-of-audi-hungaria/, last 15 April.

Audi Hungaria (2016b). Audi Hungaria Motor Kft Milestones. Email correspondences from External Communications/PR, 15 April to 26 April 2016.

Automotive News (2003) Ford in Europe—An Historical Time Line, 2 June, http://www.autonews.com/article/20030602/SUB/306020857/ford-in-europe—an-historical-time-line, last 9, May 2016.

Automotive News Europe (2014) Daimler Adds Third Shift in Hungary to Meet Compact-car Demand, 19 March, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20140319/ANE/140319823&template=printartANE last 15 December 2016.

Automotive News Europe (2016) Daimler Plans to Boost Efficiency at Hungary Compact Car Plant, 23 March, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20160323/ANE/160329943&template=printartANE last 23 March.

BBJ (1994–1997) Business & Finance Notes, *Budapest Business Journal*, various dates.

BBJ (1996) Earning & Dividends. *Budapest Business Journal*, 12 February, 27.

BBJ (2015) Mercedes to Expand its Hungarian Plant, *Budapest Business Journal*, 17 December, http://bbj.hu/business/mercedes-to-expand-its-hungarian-plant_1089, last 17 December.

BBJ (2016) European Commission OKs Hungarian State Aid for Audi, *Budapest Business Journal*, 1 February, http://bbj.hu/business/european-commission-oks-hungarian-state-aid-for-audi_110785, last 12 May, 2016.

Bishop A (1996a) Parts Subcontracting Turns Brisk Business. *Budapest Business Journal*, 29 April, 29.

Bishop A (1996b) Customs to stall out Audi plant expansion? *Budapest Business Journal*, 5 August 2.

Bohlen C (1991) Suzuki Starts Joint Venture in Hungary. *New York Times*, 25 April, D8.

Camuffo A and G Volpato (2002) Partnering in the Global Auto Industry: The Fiat-GM Strategic Alliance. *International Journal of Automotive Technology and Management*. 2 (3/4), 335–352.

Cohen R (1992) Suzuki in Hungary: Team Spirit Sags. *New York Times*, 16 May, 37.

Cienski J, T Escritt, R Milne, and S Wagstyl (2008) Daimler has East Europe in its Sights for New Plant. *Financial Times*, 31 January, November, 6.

Csizmadia Z and T Dusek (2014). The Gyor Automotive District (Gyor: Universitas-Gyor Nonprofit, Ltd).

Daimler (2015–2016a) *Mercedes-Benz Cars at a Glance*, Editions 2015 and 2016, https://www.daimler.com/company/business-units/mercedes-benz-cars/, last 13 May 2016.

Daimler (2015–2016b) Mercedes-Benz Kecskemet Output, 2012–2015. Email from Mercedes-Benz Car Operations, Corporate Communications, 5 October 2015 and 11 April 2016.
Escritt T and J Reed (2008) Daimler Chooses Hungary as Site for Eastern Europe Plant, *Financial Times*. 19 June, 4.
Eddy K (2011). Hungary's Auto Sector Quietly Goes on Growing. *Financial Times*, 7 October, 2.
Ernst & Young (2010) The Central and Eastern European Automotive Market (Detroit and Stuttgart: Ernst & Young).
Gasnier M (2010–2016) Hungary Full Year (Car Sales), 2010 to 2015, http://bestsellingcarsblog.com, last 5 May 2016.
Gaspar M (1994) Potential Tariff Hike Fuels Importers' Ire. *Budapest Business Journal*, 9 December, 2.
Georgano N, ed (2000) *The Beaulieu Encyclopedia of the Automobile* (Chicago: Fitzroy Dearborn).
GM Europe (2001–2009) *GM in Europe: Overview/Facts & Figures*, 2000 to 2008 (Russelsheim: GM Europe Communications).
Gorondi P (2012) Mercedes-Benz Opens New Plant in Hungary. *Yahoo Finance*, 29 March, http://finance.yahoo.com/news/mercedes-benz-opens-plant-hungary-105539951.html, last 15 September 2015.
Havas A (2000) Local, Regional and Global Production Networks: Reintegration of the Hungarian Automotive Industry, in C Von Hirschhausen and J Bitzer (eds.), *The Globalization of the Industry and Innovation in Eastern Europe: From Post-socialist Restructuring to International Competitiveness* (Basingstoke: Macmillan), pp. 95–127.
Havas A (2007) The Interplay between Innovation and Production Systems at Various Levels: The Case of the Hungarian Automotive Industry. Paper presented at The 5th International GLOBELICS Conference, Saratov, Russia, September 19–23, 2007.
HIPO (2015) Hungarian Inventors and Inventions: Jonas Csonka. Hungarian Intellectual Property Office, http://www.hipo.gov.hu/en/hungarian-inventors-and-inventions/janos-csonka, 15 February, last 15 December 2016.
HIPA (2016) *Automotive Industry Hungary*. (Budapest: Hungarian Investment and Promotion Agency).
HITA (2012) *Auto Industry in Hungary, 2012* (Budapest: Hungarian Investment and Trade Agency).
Hooker L (1995) Audi Increases Investment in Hungary by DM 250 million, *Budapest Business Journal*, 9 June, 10.

IntelliNews (2016) Daimler Announces €250mn Expansion of Hungarian Plant, 23 March, http://www.intellinews.com/daimler-announces-250mn-expansion-of-hungarian-plant-93443/, last 13 May.
ITDH (2006) *Auto Industry in Hungary, 2005*. (Budapest: The Hungarian Investment and Trade Development Agency).
Jacobs A J (2013) The Bratislava Metropolitan Region. *Cities*, 31, 507–514.
Jacobs A J (2016) *The 'New Domestic' Automakers in the U.S. and Canada: History, Impacts, and Prospects* (Lanham, MD: Lexington Books).
Kanabayashi M and T Aeppel (1992) Volkswagen and Suzuki to Develop Car. *Wall Street Journal*, 24 July, A7.
Krust M (2008) Works Council Urges Rastatt Expansion. *Automotive News German Auto Industry Newsletter*, 11 February.
Laszlo E (1993) Hungarian Government Helping Suzuki Plant. *UPI Archive: International*, 5 November, *Infotrac Newsstand*, last 12 Apr. 2016.
MAGE (2016) Hungarian Automotive Production Data. Email from Magyar Gepjarmuipari Egyesulet, 5 May, 2016.
Magyar Suzuki (2015) *Magyar Suzuki Corporation Ltd.: Company Profile 2015* (Esztergom: Magyar Suzuki).
Magyar Suzuki (2016a) Magyar Suzuki Production by Model. Email Correspondent from Corporate Communications, 15 December 2016.
Magyar Suzuki (2016b) Magyar Suzuki Corporate Website, News, http://www.suzuki.hu/pages/display/corporate, last 15 December.
Mercedes (2014–2016). MercedesBlog, various dates, http://mercedesblog.com, last 15 December 2016.
Mercedes-Benz Hungary (2014–2015) Mercedes-Benz Manufacturing Hungary: Jahresbericht 2013 and 2014, http://gyar.mercedes-benz.hu/uber-uns/jahresbericht-2013 last 15 December 2016.
Mercedes-Benz Hungary (2014–2016) Mercedes-Benz Gyar Kecskemet—Fooldal, http://gyar.mercedes-benz.hu/fooldal, last 12 December 2016.
Mihalascu D (2013) Exclusive: Audi A3 sedan will be Built at the Gyor Plant in Hungary. *INAUTONEWS*, 31 January, http://www.inautonews.com/exclusive-audi-a3-sedan-will-be-built-at-the-gyor-plant-in-hungary#.UXlPZ0qmxWE, last 11 May 2016.
Mikuni O (1992). Suzuki Hangari—no Gouben-gaisha shidou. *Asahi Shimbun*, 23 October, 10.
Negyesi P (2016a) Hungarian Microcars of the 50s, http://www.theautochannel.com/vehicles/coll/mikro.html, last 26 April.

Negyesi P (2016b). The History of the Biggest Pre-War Hungarian Car maker, http://www.theautochannel.com/vehicles/coll/european/mag.html, last 17 April.
New York Times (1992) An Opel Takes Hungary Back to the Future: Opel Takes Hungarians to the Future. 14 March, 39, 41.
OICA (1999–2016). Annual Automobile Production Statistics by Nation and Manufacturer for 1999 to 2015. Paris: Organisation Internationale des Constructeurs d'Automobiles, http://www.oica.net/. last 15 December 2016.
O'Leary J (1995) More GM Motors. *Budapest Business Journal*, 31 March, 5.
O'Leary J (1996) Opel Torn between Two Attaches. *Budapest Business Journal*, 11 March, 6.
O'Leary J (1998) Szentgotthard's Astra Assembly to Cease in 1998. *Budapest Business Journal*, 11 November, 14.
Opel (2010) Opel Expands Engine Production in Szentgotthard, Hungary, 21 September, http://media.gm.com/media/intl/en/opel/news.detail.html/content/Pages/news/intl/en/2010/OPEL/09_21_Opel_Expands_Engine_Production_in_Hungary.html, last 15 December 2016.
Opel (2010–2016) *Opel, Vauxhall Facts and Figures: Year in Review*, for 2009–2015. (Russelsheim: Opel Corporate Communications).
Opel (2013) Opel Begins Extensive Powertrain Renewal. 10 April, http://media.opel.com/media/intl/en/opel/news.detail.html/content/Pages/news/intl/en/2013/opel/04-10-powertrain-workshop.html, last 10 April 2016.
Opel (2014) Serial Production of the Newest Opel Engine Family Started in Hungary. 16 July, http://www.opel.com/news/index/2014/07/engine_production_hungary.html, last 10 April 2016.
Opel (2016) Szentgotthard Plant, Facts and Figures. http://www.media.opel.com/media/intl/en/opel/company_opel/plants/szentgotthard.brand_opel.html, last 10 April.
Opel Hungary (2016) Opel Magyarorszag: Tortenetunk, http://www.opel.hu/opel-elmeny/szentgotthardi-opel-gyar/tortenetunk.html, last 6 April.
Pavlinek P (2018) *Foreign Investment and Dependent Growth: The Development of the Automotive Industry in East-Central Europe* (London: Springer).
Prokesch S (1990) G.M. Plans New Link in East Bloc. *New York Times*, 12 March, D1, D3.
Protzman F (1992) Opel's Chief to Head All of G.M. in Europe. *New York Times*, 8 April, D19.

Raba (2016) Raba Automobile Holding, Plc, 1896–2016: 120 Years of Experience. http://www.raba.hu/english/en.raba.hu/doctar/120/Raba_history.pdf, last 25 April.

Reuters (1990a) Two Auto Makers Agree To Build Cars in Hungary. *New York Times*, 15 January, D8.

Reuters (1990b) G.M. is Setting up Plant in Hungary. *New York Times*. 19 September, D5.

Reuters (2008). Germany: Daimler Selects Plant Site, *New York Times*, 19 June, C4.

Reuters (2015). Audi will Invest 104 Million Euros in Hungary Plant, *Automotive News Europe*, 19 October, http://europe.autonews.com/apps/pbcs.dll/article?AID=/20151019/ANE/151019880&template=printartANE, last 8 May 2016.

Sadler D and A Swain (1994) State and Market in Eastern Europe: Regional Development and Workplace Implications of Direct Foreign Investment in the Automobile Industry in Hungary. *Transactions of the Institute of British Geographers*, 19 (4), 387–403.

Sanger D (1990) Suzuki Reaches Deal to Build Hungary's First Car Factory. *New York Times*, 10 January, A10.

SeeNews Hungary (2013) Opel Starts Engines Production at New Plant in Hungary. 11 February, http://www.aiidatapro.com/en/products/seenews/seenews%20world/, last 10 April 2016.

Sika ViscoCrete Technology (2012) Sika at Work: New Mercedes-Benz Plant, Kecskemet, Hungary. 17 March, https://www.sika.com/dms/getdocument.get/9e57c12e-e63d-3342-b8b6-a7e9d6fdd0ee/No17_saw_mercedes-benz_hungary_low.pdf, last 15 September 2015.

Stevenson R (1993). East Europe's Low Wages Luring Manufacturers from West Europe. *New York Times*, 11 May, A1, D2.

Suzuki (2016a) Magyar Suzuki Production, 2001 to 2014. Email correspondence from Suzuki Plaza Museum in Hamamatsu, Japan, 15 December.

Suzuki (2016b) Suzuki Motor Corporate History, http://www.globalsuzuki.com/corporate/history/index.html, last 6 December.

Szakacs G and E Taylor (2016) Daimler will build second Mercedes plant in Hungary. *Automotive News Europe*, 29 July, http://europe.autonews.com/apps/pbcs.dll/article?AID=/ 20160729/ANE/160729823&template=printartANE, last 30 July.

Tagliabue J (2000) Some See Takeover of Fiat in Details of Deal with G.M. *New York Times*, 14 March, C4.

Toronto Globe & Mail (1990) Suzuki to Assemble cars in Hungary, 9 January, B6.
Tuckey B (1994). Making a Marque on World Stage. *Age*, 1 December, 31.
Tutak R (1997) Suzuki Earns 1st Local Profit. *Budapest Business Journal*, 10 February, 11.
VW (2000–2016) *Volkswagen AG: Annual Reports, 1999 to 2015*. Wolfsburg: Volkswagen Group.
VW (2016) Volkswagen Group Production Plants, http://www.volkswagenag.com/content/vwcorp/content/en/the_group/production_plants.html, last 10 December.
WJS (1998) Opel Adds Shift at Hungarian Plant. 8 December, *Wall Street Journal*, Europe Edition, 31.
Ward's (1958–2014). *Ward's Automotive Yearbook*, from 1958–2014 (Detroit: Ward's Communications).
Wright R (1999) Rich Expertise is Tapped. *Financial Times*, 1 March, 5.

8

The Next Ring:The Emerging Southeast Europe Auto Zone

Introduction

This chapter provides a brief history of foreign passenger car plants in Romania, Serbia, and Slovenia, or the area dubbed in Chapter 2 as the SEE Auto Zone. Its discussion focuses upon: (1) Renault-Dacia Pitesti in Mioveni, Romania; (2) Ford Craiova in Romania; (3) Fiat-Zastava Kragujevac in Serbia; and (4) Renault-Revoz Novo Mesto and the rumored Magna Steyr Hoce-Slivnica in Slovenia. Similar to other chapters, the narrative concludes with a summary of passenger car output in this emerging next ring of Europe's automobile production chain after 1989.

Renault-Dacia Pitesti in Romania

Dacia Beginnings as UAP Mioveni

During the late-1950s, Romania was given approval by the CMEA to launch a small passenger car industry to accommodate local demand. This began at the *Intreprinderea Mecanica de Stat* (IMS) motorcycle factory in

A.J. Jacobs, *Automotive FDI in Emerging Europe*,
DOI 10.1057/978-1-137-40786-3_8

Campulung, Arges County with IMS-57 mini jeeps in 1957. The IMS-57 were derived from Soviet GAZ 69-based 4X4. The IMS-57 was succeeded by the Automobile Romanescu (ARO) M461 in 1963, a vehicle that helped create a niche for Romania in the CMEA. ARO continued building passenger jeeps and off-roaders in Campulung until 2003, when it was sold to an American businessman and production was shifted to Brazil.[1]

In 1966, news out of Europe suggested that the Romanian Government had established its first passenger car company, *Uzina de Autoturisme Pitesti* (UAP), situated 120 km northwest of the capital of Bucharest in the country's historic region of Dacia. By August 1966 negotiations involved British Motors (Austin), Alfa Romeo and Fiat of Italy, and Peugeot and Renault of France regarding the construction of a 50,000-capacity joint venture car factory. To help the government decide, it tested the Austin Mini, Alfa 1300, the Renault 10, and Peugeot 204. The government made its decision on February 8, 1967, selecting the France's State-run Renault to collaborate with on the plant. Plans called for the facility to be erected 15 km (9.5 miles) north of Pitesti in the Arges County settlement of Colibasi, in today's Mioveni municipality. Production of the soon-to-be released Renault 12 (R12) was scheduled to begin by no later than 1969, with annual car output to gradually rise to 40,000 by the early-1970s.[2]

As presented in Table 8.1, output of licensed Renault 8 (R8) small sedans badged as Dacia 1100 commenced at UAP's Mioveni Motorcar Works on August 20, 1968. The R8, which at the time also was being assembled in Lovech, Bulgaria, was considered a stopgap measure until UAP was fully equipped to build the upcoming R12. This came on August 23, 1969, when assembly of CKD kits of the R12 stamped as Dacia 1300 *Li Berlina* (sedan) launched in Mioveni. Over time, local components replaced imports from France, and by 1972 the Romanian factory had ended kit production and manufacturing full-fledged Dacia 1300. A total of 37,546 Dacia 1100 were produced when its three-plus year run concluded in 1972.

[1] Dacia Beginnings was based primarily upon: Georgano (2000); Thompson (2011); Agerpres (2014); other citations are provided where appropriate.

[2] WJS (1966), UPI (1967).

Table 8.1 Foreign passenger car plants in SEE Auto Zone

Firm	Origin	Place, Nation	Announced	Production launched	Emp. 31 Dec 2015	Vehicle output 2015	Vehicle capacity 2016
SEE Nations					**21,388**	**608,471**	**1,160,000**
Romania							
Renault-Dacia Renault	France	Colibasi, Mioveni (renamed Pitesti Plant)	Feb-1967	Aug-1968 (Dacia)			
			Jul-1999	Sep-1999 (Dacia)	11,108	339,204	450,000
PSA-Oltcit	France	Craiova	Jul-1976	Oct-1982 (olicit)			
Daewoo/Olicit	Korea		Nov-1994	Mar-1995 (Daewoo)			
Ford[a]	USA		Sep-2007	Sep-2009 (Ford LCV) Jun-2012 (cars)	4,002	47,967	300,000
Serbia							
Zastava-Fiat FCA[b]	Italy	Kragujevac	Aug-1954	Nov-1954 (Zastava)			
			Apr-2008	Mar-2009 (Fiat)	3,100	91,895	200,000
Slovenia							
Auto Union-IMV[c]	Germany	Novo Mesto	Nov-1954	1955 (DKW LCV)			
			1962	1962 (DKW cars)			
British Motors	Britain		1967	1968 (Austin)			
Renault-IMV	France		Jan-1973	1973 (Renault)			
Renault Revoz			Jun-1988	Dec-1989 (Renault)	3,178	129,405	210,000

Sources: Compiled and adapted by the author from OICA (1999–2016); Renault (2006–2016); Ford (2008), Zastava (2008); Dacia (2016); FCA (2016); Revoz (2016a, 2016b).

[a] Employment includes engine plant opened in 2012.

[b] Factory opened in 1853; its first vehicles were assembled (400 Chevrolet military trucks) in 1939, followed in 1953 by 162 Willy-Overland Jeeps.

[c] Joint venture with Agroservis until 1959, when company renamed IMV.

In 1978, Renault's licensing agreement with Dacia expired, and Dacia went forward on its own. From that point on until 1994, with the exception of a small allotment of Dacia 2000 executive cars (Renault 20), the Mioveni Plant solely built the 1300-series. This briefly included a *Break* (wagon) in 1973, a pickup in 1975, and a coupe in 1981, enabling output to rise to 90,000 in 1986 and 1987. Finally, eight years in the planning, the Dacia 500 Lastun was launched in 1988. The microcar had been prompted by a March 1980 national proclamation calling for the creation of a Romanian 'people's car. The Lastun, however, which designed through a joint venture between the Soviet vehicle makers Lada and Kamaz, was not assembled by UAP Mioveni. Rather, it was built by the state-run Tehnometal at its facility in Timisoara, Timis County, located 444 km (276 miles) northwest of Colibasi. The little 'martin' lasted only to 1991, with just 6,532 assembled.

Including the Lastun, Dacia produced a Socialist Era peak of 121,400 cars in 1988. As shown in Table 8.2, this declined to approximately 100,000 cars in 1989. Dacia easily could have sold many more cars, as similar with other CMEA nations, it took years for domestic customers to receive their orders, even though the vehicles contained shoddy workmanship and were unreliable. The problem again was the fact that more than half of what Mioveni produced were shipped out of the country. Exports primarily went to Eastern Europe, but between 1982 and 1983 some 1300 models were shipped to Britain and sold as the Dacia Denem. A rebadged ARO 10 SUV also was marketed there as the Dacia Duster. Both soon disappeared because of their poor quality.[3]

Renault Wins Post-Socialist Dacia

With the Fall of Socialism in 1989, Romania was thrust into political and economic turmoil. Compounding matters was the fact that Romania had the lowest its per capita income among CMEA nations. Moreover, although receiving minor updates and editions in 1979

[3] Ward's (1958–2014, 2014); Autoevolution (2016).

Table 8.2 Car production in the SEE Auto Zone, 1989–2015

	2015	2010	2005	2001	1989	Change 2001–2015	% Change 2001–2015
SEE Auto Zone Total[a]	**608,471**	**549,631**	**365,528**	**180,524**	**386,950**	**427,947**	**237.06%**
Romania[b]	**387,171**	**323,587**	**174,598**	**56,774**	**160,000**	**330,397**	**581.95%**
Ford/Daewoo-Oltcit Craiova	47,967	0	22,319	12,520	60,000	35,447	283.12%
Renault-Dacia Pitesti	339,204	323,587	152,150	43,253	100,000	295,951	684.23%
Serbia-Slovenia	**211,805**	**226,044**	**190,930**	**123,750**	**226,950**	**97,550**	**78.83%**
Fiat/Zastava Kragujevac, Serbia	91,185	14,551	12,979	7,668	180,950	84,227	1,098.42%
Revoz Novo Mesto, Slovenia	129,405	211,493	177,951	116,082	46,000	13,323	11.48%

Source: Adapted by author from Ward's (1958–2014, 2014); OICA (1999–2016); Renault (2006–2016); Revoz (2016a, 2016b).
[a] 1989 figures rounded by the source.
[b] Includes ARO-brand SUV for 2001–2005.
x Inactive.

(Dacia 1310-sedan), 1987 (1320 hatchback) and in 1991 (the 1325 Liberta liftback), the Dacia 1300-series was long past its time. One of the main problems was that Dacia was utilizing the old designs and platform from the same R12 models built when its licensing agreement with Renault ended in 1978. Secondly, Dacia was gravely short of funds to support a new model, and the nation's economic distress made it difficult for it even to acquire quality components for its vehicles. Unable to compete with the growing choices in a more market-oriented economy, production by Automobiles Dacia, as it was now known, declined to 62,940 in 1990 and then to 60,000 in 1991.[4]

Realizing that the Dacia could not continue on its own, the Romanian Government negotiated with several foreign automakers in hopes of forging a joint venture arrangement to operate its renamed Pitesti Motor Works in Mioveni. Talks with Renault, PSA, Fiat, and others failed, however, when none of the foreign suitors was willing to take on Pitesti's 27,000-plus workforce, nor preserve the Dacia brand name. Output in Mioveni surpassed 80,000 between 1992 and 1994, but still fell far short of the plant's planned capacity of 150,000 cars per year.[5]

One positive sign occurred in 1995, when the Pitesti Motor Works introduced the sporty Dacia Nova fastback. Ten years in development, the successor to the Dacia 1310 represented the first car designed and mass produced solely by the Romanian automaker. Despite its serious flaws, the Nova helped pushed total vehicle output in Mioveni past 100,000 in 1997, with three-quarters of these cars sold domestically. Nonetheless, Dacia was still teetering on the brink of bankruptcy and desperate for a foreign automaker to save it. In October 1997, the automaker signed an agreement with Hyundai to assemble Hyundai Accent at the Pitesti Works in 1997. Production was to begin in 1999 and ramp up to 50,000 units per year within a few years. It also entered in to talks with PSA to possibly build cars in Romania. With the Hyundai deal falling apart in early-1998 due to the impacts of the

[4] Georgano (2000); Thompson (2011); Agerpres (2014); Autoevolution (2016).
[5] Ward's (1958–2014, 2014); Thompson (2011).

1997 Asian Fiscal Crisis, neither it nor PSA ever produced a car at Pitesti. Nevertheless, bigger things awaited the Dacia Plant.[6]

With Hyundai out of the picture, in August 1998 the Romanian Government began soliciting participants for a December 8, 1998 privatization tender for a 51% stake in its state-run carmaker. Although others supposedly expressed interest, Renault was the only vehicle maker that ultimately entered a bid for Dacia. Renault's Chairman Louis Schweitzer viewed the acquisition of Dacia as an inexpensive method in which to secure an economy car brand, reduce production costs, and raise sales in emerging markets. The French automaker also was negotiating an alliance with Nissan of Japan, as it tried to build the capacity to achieve its target goal of roughly doubling sales to four million by 2010. According to Schweitzer, one major stipulation needed to be met in order for the deal for Dacia to be completed: Guarantees of significant labor cuts and efficiency gains at the 27,560-worker Pitesti factory.[7]

Negotiations began in January 1999, but the situation grew more complicated the following month when the IMF remained non-committal on whether it would grant Romania emergency loans to prevent a default on its foreign debt. The IMF hesitated because it was unhappy with the national government's failure to carry out its promised market-oriented reforms. On the other side, the bureaucracy feared the consequences of the IMF's austerity measures, which they estimated would eliminate 140,000 jobs over a five-year period.[8]

Things seemed more settled on March 11, 1999, when Renault signed a memorandum of understanding for 51% of Dacia; Renault consummated its alliance with Nissan on March 27, 1999. The Renault-Dacia tie-up was expected to be closed on April 13, with reports suggesting that Renault was to pay $30 million for the stake and commit to invest significantly more to upgrade the Pitesti Works and output to international quality and competition standards. Nonetheless, talks soon stalled over the extent of the tax breaks

[6] Ward's (1958–2014); Bloomberg (1995); CEAR (1998); Thompson (2011).
[7] Simonian (1998, 1999); Egresi (2008); Thompson (2011); Agerpres (2014).
[8] Egresi (2008); Thompson (2011).

Romania was willing to provide the French conglomerate, itself still 44% owned by the French Government.[9]

Finally, after 27 years adrift, Dacia and Renault were reunited on July 2, 1999, when the two sides signed their joint ownership agreement. The accord became official on September 29, 1999, with Renault's total investment in Dacia tagged at $270 million. Renault was to pay $50 million for its controlling 51% share, or about one-third what Romania was originally seeking. It was then to commit $220 million toward factory upgrades over five years and thereby, raise annual car output to 200,000 by 2010. It was expected that approximately 80,000 of these cars were to be exported to emerging markets. In exchange for the injection of funds, Renault received a five-year tax abatement on domestic profits, import tariffs, capital goods sourced locally, and any value-added taxes on imported components and plant equipment.[10]

In 2000, the first car in the new collaboration emerged from the Pitesti assembly line: the Dacia SupeRNova supermini. A total of 42,603 cars were built in Mioveni in that year followed by 43,253 in 2001 (See Table 8.2). The main difference between the SupeRNova and its predecessor the Nova was that the new release came equipped with the same engine and transmission and the Renault Clio. No matter, the unreliable SupeRNova did not last long, as it was replaced by the restyled Solenza in April 2003. The Solenza, also being built at ZAZ in Russia, was essentially a rebadged Renault Clio.[11]

On July 24, 2004, the last of 1.98 million Dacia 1300-series cars was produced. Galvanized by the launch of its successor the Dacia Logan on June 2, 2004, along with the restoration of a third work-shift, output at the 12,828-worker Pitesti Works expanded to a plant-record 172,170 in 2005. This included 152,150 cars and 19,871 panel vans, with the former consisting of 146,456 Dacia Logan and 5,695 Dacia Solenza (See Table 8.2). The Solenza was discontinued in March 2005.[12]

[9] Owen (1999); Egresi (2008); Thompson (2011).
[10] Egresi (2008); Thompson (2011); Agerpres (2014).
[11] Ward's (1958–2014); Thompson (2011); Agerpres (2014).
[12] Renault (2006–2016); Thompson (2011); Agerpres (2014); Autoevolution (2016).

Renault reported its investments to modernize and the Pitesti factory, and to revamp its supplier and dealer networks, at $624 million in 2005. By that time, it also had gradually increased its equity stake in Dacia to 99.43%. This continued to bear fruit in 2007, when Pitesti vehicle output steamed ahead to 234,103. The complex's two-year old CKD Exports Center also shipped another 96,000 KD kits for finally assembly to Russia, Africa, and the Middle East.[13]

As shown in Table 8.3, Vehicle production expanded further to 340,937 in 2010, including 323,237 passenger cars. This record was then again surpassed in 2013, when 343,213 vehicles, all cars, were produced. This included three recently launched models: the second-generations Dacia Logan and Sandero supermini, both launched on November 13, 2012; and the Logan MCV wagon, introduced on May 29, 2013. Output then flattened through 2015, when 339,204 cars were built at the now 11,108-worker, 350,000-capacity Pitesti Works. Nonetheless, despite the small decline, annual car output at Dacia Pitesti in 2015 still represented an increase of 295,951 or 684.25% as compared with 2001 (See Tables 8.1–8.2). This total was up by 239,204 or 239.20% from 1989. More specifically, in 2015 Dacia Pitesti produced: 170,328 Duster SUVs, introduced on November 17, 2009; 70,231 Logan; 58,030 Sandero; and 40,614 Logan MCVs. The complex also manufactured a record 435,885 engines along with 514,256 gearboxes in that year (See Table 8.3).[14]

As of 2016, Renault had invested more than $2.5 billion at its 62-hectare (153-acre) factory situated on its 290-hectare (716-acre) site off National Route 73D in Mioveni. In return, Dacia has become Europe's fastest growing car brand, a highly profitable by building economy frills models that have appealed to both budget-weary Western Europeans and emerging market customers. Whereas approximately 75% of Dacia cars built during the 1990s were sold domestically, 90.5% of 2015 production was exported out of Romania to 34 countries on four continents.[15]

[13] Renault (2006–2016); Egresi (2008); Thompson (2011).
[14] Renault (2006–2016); Dacia (2008–2016, 2016); Thompson (2011); Foy (2013).
[15] Dacia (2008–2016, 2016); Romania (2016).

Table 8.3 SEE Auto Zone car production by Plant, 2009–2015

	2015	2014	2013	2012	2011	2010	2009
Romania							
Dacia Pitesti	**339,204**	**338,879**	**343,213**	**296,645**	**309,984**	**323,237**	**279,301**
Dacia Duster	170,328	174,269	119,814	132,999	168,554	86,130	—
Dacia Logan I/II	70,231	77,451	91,811	57,921	41,729	50,938	50,538
Dacia Logan MCV	40,615	42,631	17,761	34,947	39,147	44,508	80,251
Dacia Sandero I/II	58,030	44,528	113,827	70,778	60,554	141,661	148,512
Ford Craiova	**47,967**	**52,829**	**68,339**	**30,591**	**LCV only**	**LCV**	—
Ford B-Max	47,967	52,829	68,339	30,591	—	—	—
Serbia							
FCA Kragujevac	**91,985**	**101,576**	**113,487**	**23,336**	**10,227**	**14,551**	**16,337**
Fiat 500L	91,185	101,576	113,487	23,336	—	—	—
Fiat Punto Classic	—	—	—	—	10,227	14,551	16,337
Slovenia							
Revoz Novo Mesto	**129,405**	**118,578**	**93,733**	**130,947**	**174,127**	**211,493**	**212,680**
Renault Clio II	4,550	7,711	9,858	32,213	26,773	47,485	30,296
Renault Twingo II/III	—	98,781	83,630	97,813	141,739	157,666	182,384
Renault Wind	83,376	—	245	921	5,615	6,342	—
Smart Forfour	41,479	12,086	—	—	—	—	—

Sources: Adapted by Author from OICA (1999–2016); Ward's (2014); Renault (2006–2016); Revoz (2016a, 2016b).

Including KD kits assembled elsewhere, a total of 533,146 Dacia cars and LCV were produced and 511,510 sold worldwide in 2015. Therefore, it could be reasonably argued that Dacia's expanding profitability, along with Renault's alliance with Nissan, has also helped save the French automaker from being absorbed by a larger Western competitor. Similarly, Renault's investments have more than just saved Dacia. It also has numerous attracted numerous French components manufacturers to Romania, such as Elba, Euro Auto Plastic (now part of Faurecia), Michelin, and Valeo, as well as scores more from Europe, North America, and Asia. This has greatly impacted the SEE nation's economy, as Romania's 600-plus automotive suppliers generated $15.3 billion in revenue in 2014. Almost 69% of this 2014 value was garnered from exports, meaning that their export sales were more than twice that of total supplier revenues of $6.5 billion in 2009.[16]

Finally, despite management complaints that wages have been rising too fast and the shift of some Logan MCV production from Pitesti to Renault's new Moroccan Plant, at $5.90 per hour, Romanian labor costs have remained lower than all other former CMEA nations except Bulgaria.[17] These facts suggest a bright near-term future for Dacia's Pitesti Works. The same applies for the Romanian auto industry, in general, which now hosts the Ford Craiova Plant and likely another foreign car factory by 2020.

Ford Craiova and Romania

Ford Motor Company of America first came to Romania in 1931, when it established a sales office in Bucharest. In 1935, Ford of England received permission to develop an assembly facility in the country. It then purchased land in the Floreasca district of Bucharest and constructed Ford Werke Romania. There, in May 1936, it launched Eastern Europe's first car production line. The American automaker

[16] Dacia (2008–2016); Romania (2016).
[17] Romania (2016).

assembled about 2,500 cars and trucks annually until the plant was overrun by the Nazis in 1939. After WW-II, in November 1947, the Romanian Government nationalized the Bucharest factory. Ford would not build another light vehicle in Romania until September 2009, when the first Ford Transit Connect LCV was produced at Ford Romania's Craiova Assembly Plant.[18]

Ford's present factory in southwestern Romania was originally established in July 1976, when PSA's Citroen division outmaneuvered VW for the rights to build a 36/64 joint venture small car plant with the Romanian Government in Craiova, Doji County. As part of the deal, PSA was to invest $85-million and assemble a replacement for its successful Citroen Ami 8 supermini. Approximately 40% of the car's components were scheduled to be domestically sourced. The new company was officially established in December 1977 as Oltcit SA, the name a portmanteaux combining syllables from Romania's ancient province, OLTena and CITroen.[19]

Construction of modern 130,000-capacity assembly and 158,000-capacity engine halls were completed in 1981, with production of Oltcit Club superminis finally commencing in Craiova in October 1982. A total of 5,400 cars were built in 1983, jumping to 37,000 in 1984. By 1985, the plant also was stamping some of its Oltcit Club models as Citroen Axel, for sale in Western Europe. Unfortunately, despite factory's modern equipment, the reliability and quality of the cars built at the plant were not up to Western standards. As a result, neither the Club nor the Axel sold well and output was reduced to just 16,463 in and 15,458 in 1987. Production also was greatly inhibited by the company's lack of hard currency, which made it difficult to purchase components from Citroen or elsewhere.[20]

Following the fall of Socialism in 1989, the Craiova factory and its cars were rebranded as Oltena. During that year, output was reported at a record 60,000 vehicles, or double the 29,400 produced in 1988

[18] Georgano (2000); Thompson (2011).

[19] Georgano (2000); Egresi (2008); Thompson (2011).

[20] Ward's (1958–2014); Georgano (2000); Ford (2008); Thompson (2011).

(See Table 8.2). This figure seemed hard to believe considering the political and economic chaos confronting Romania during this period. The four two years were further evidence of this, when output of Oltena were reported as just 21,671 in 1990, 15,000 in 1991, and then only 5,400 in 1993. This drop occurred despite the Romanian Government's implementation of a $100 duty on imported new cars, a substantial sum for a country where they average working was making only around $100 per month. Instead of protecting its ailing automakers, the tariff served to trigger a flood of used cars into the country.[21]

In the meantime, PSA had had enough, and in 1990 informed the government that it was withdrawing and selling it back its 36% stake in the joint venture. This occurred in December 1991, upon which the Oltena plant was promptly renamed Automobiles Craiova. The factory remained independent until January 10, 1994, when the Daewoo Group of Korea announced its intentions to acquire a 51% stake in the Romanian automaker for $156-million. Output was expected to launch in autumn 1994, with Daewoo initially utilizing only a portion of the Craiova Plant. The Korean conglomerate was then to raise its commitment to more than $900 million by modernizing and expanding the plant in order to produce 200,000 cars annually by 1998. Via the Black Sea Port of Mangalia and the Danube River Port of Oltenita, more than half of the cars were to be exported to Eastern and Western Europe, respectively, with the rest sold to what was projected to be a rapid growing domestic market.[22]

On September 7, 1994, however, the new venture was in flux, when the Romania Government passed a 20% customs tax and 18% value added tax on imported new cars to protect its nearly bankrupt domestic producers. The move prompted chaos and a wave of protests at country's western border controls, when hordes of Romanians tried to return home with second-hand cars that had purchased in Western Europe but could not pay the tariffs on. Daewoo officials also objected to the plan, and broke off negotiations for the 4,000-worker Craiova factory

[21] Ward's (1958–2014); Georgano (2000); Ford (2008); Thompson (2011).

[22] Reuters (1994); Lee (2001); Egresi (2008); Georgano (2000); Thompson (2011).

when the Government refused to accept their request to import 20,000 South Korean-built cars into the country duty-free. Cooler heads prevailed and an agreement was signed creating Rodae Automobile SA (ROmanian DAEwoo) on November 16, 1994. In exchange for its pledge to modernize the factory, Daewoo received a five-year corporate tax exemption and a seven-year waiver on duties on imports of its own vehicles.[23]

Over the next few years, Daewoo injected more than $870 million to refurbish and upgrade the factory in order to build cars that met Western quality standards. Production of Oltena brand models in Craiova ended in early-1996 and was succeeded by the launch of KD kits of Daewoo Cielo on March 11, 1996. The compact was derived from GM's Opel Kadett E and stamped for Europe as Daewoo Nexia (See Chapter 3). The Nexia was followed in December 1996 by the Daewoo Espero. Meanwhile, in October 1996, Rodae Automobile was reincorporated as Daewoo Automobile Romania.[24]

In December 1997, Daewoo brought a new powertrain plant online in Craiova. In contrast, the country's political and economic instability was constraining output, as it provoked a major decline in the value of the Romanian Lei currency. This made the import of necessary automotive components to build cars in Craiova much more expensive. On top of that, Daewoo was displeased that government tax breaks provided only to Dacia had made their car much less cost-competitiveness in the domestic market. In reaction to these changing conditions, Daewoo decided expand the model line at the factory, but also to scaled back its production plans, resulting in only 16,386 cars being produced in 1998 and 17,593 in 1999.[25]

In the meantime, as described in Chapter 3, the 1997 Asian Fiscal Crisis had pushed the 12-company Daewoo Group on brink of bankruptcy, with $89 billion in collective debts. Suffering massive red ink of its own, due to its ill-timed, over-zealous expansion plans in emerging

[23] Rodina (1994); Daewoo (2000); Thompson (2011).
[24] Georgano (2000); Daewoo (2000); Thompson (2011).
[25] Ward's (1958–2014); Green (1999); Daewoo (2000); Thompson (2011); Jacobs (2016).

Europe, Africa, and Asia, Daewoo Motors was placed in receivership. It was then auctioned off, with Ford initially gaining the exclusive rights to negotiate and purchase Daewoo Motors in June 2000. The American automaker eventually walked away from its offer in September 2000, leaving the door opened for GM to scoop up the embattled Korean automaker.

Negotiations with Daewoo's creditor, the government, and labor union representatives dragged on until September 17, 2001, when an agreement was finally reached. As part of the deal, which closed on April 10, 2002, GM seized control of Daewoo's Korean car factories, but showed no interest in its facilities in Poland, Ukraine, or Uzbekistan (See Chapter 3). The same applied to Daewoo Craiova, which employed 4,100 and listed its annual production capacity as 200,000 cars, 300,000 engines, and 200,000 gearboxes. GM allowed the facilities to continue to build Daewoo models, but Craiova and the other plants were prohibited from selling cars in any countries where the new GM Daewoo was selling its models.[26]

Uncertain about its future, output at the renamed Automobile Craiova shrunk to 12,520 in 2001, before gradually rebounding to 26,656 in 2004 and 22,319 in 2005 (See Table 8.2). Interested in expanding capacity quickly to meet growing demand for Dacia, in November 2005, Renault and its partner Nissan expressed interest in buying the then 3,900-worker Craiova factory. With the licenses to build Daewoo Cielo expiring in 2005 and the plant's production effectively held hostage by GM, the Romanian Government decided it was time to unload its troubled carmaker.[27]

In February 2006, Romania's Office of Privatization began negotiating with the necessary parties in Korea to re-acquire Daewoo's 51% share in the Craiova complex. An agreement with Daewoo's creditors was reached in June, then approved by the Korean courts, and signed on August 30, 2006. Consummated in early-October, the Government paid $60 million in total, including $50 million for Daewoo's stake in

[26] Thompson (2011); Jacobs (2016).

[27] Ward's (1958–2014); Mackintosh (2005); Egresi (2008); Thompson (2011).

the automaker and $10 million to restructure its related debts. This then enabled the State to negotiate with foreign investors interested in taking over the factory. The acquisition process also revealed for the first time that Daewoo Romania had received nearly $1 billion in State tax and other incentives, or nearly equivalent to the $1.1 billion it had invested in Romania.[28]

In 2006, the renamed Automobile Craiova produced 24,656 cars, 140,000 engines, and 180,000 transmissions. By the end of that year, the process to liquidate the complex was underway in order to meet the privatization authority's stated goal of June 2007. In January 2007, it was reported that Chery of China, Ford, GM, Renault, and Tata Motors had expressed interest in the operations, with the Chery and the two American automakers submitting letters of intent to buy the company in January 2007. Two months later, the government closed the bidding to Ford and GM. Only interested in securing the supply of 60,000–70,000 engines it annually purchased from Craiova, GM ultimately withdrew from the process, leaving Ford as the only participant when the bidding closed on July 5, 2007.[29]

On September 12, 2007, Ford of Europe announced that it had signed an agreement with the government to pay $78 million for a 72.4% stake in Automobile Craiova (See Table 8.1). In the accord, Ford acquired the Craiova factory complex, an apartment block in the city, and land at the Port of Constanta, located 445 km (277 miles) east on the Black Sea. Ford also committed to invest $932 million over the next four years to boost annual car and engine capacity to 300,000. It also pledged to directly employ 3,100 workers, growing to as many as 7,000 in the future, and to purchase $1.38 billion in domestic supplies to build its vehicles.[30]

The final transaction was delayed by an EC Commission's Competition Committee inquiry related to the state aid package, Ford's employment and production guarantees, and other promises

[28] Istrate (2006); *Revista Business Magazine* (2006); Egresi (2008); Pavlinek (2015).
[29] Ward's (1958–2014); Istrate (2006); Datta (2007); Condon (2007).
[30] Frink (2007, 2008); Reed (2007); Ford (2008); *Financial Times* (2009).

safeguarding Ford from Daewoo's prior debts. In February 2008, the EC ruled that Ford's offer was inadequate, and declared that it should pay an additional $40 million to the Romanian Government for Automobile Craiova. The final transaction was then completed on March 21, 2008 and the company's fixed assets were then transferred to the newly established Ford Romania. The following month, the EC approved $225 million in State aid for the project and related draft legislation that stipulated that Ford must annually expend $237 million in the car factory and $7 million in the engine plant through 2012.[31]

Automobile Craiova produced 18,825 Daewoo in 2007 and its final 2,498 in 2008, when car output was suspended. In the meantime, Ford Europe began recruiting suppliers, many of which were already in Romania serving Dacia Pitesti. This included the giant American components manufacturers, Delphi, Dura Automotive, Johnson Controls, Lear, Tenneco, and TRW Automotive. In October 2008, Ford proclaimed that it planned to begin output of Ford Transit Connect LCV in Craiova in mid-2009. The production lineup was then to be expanded in mid-2010, by the addition of its new successor to the Fusion minivan, the Ford B-Max.[32]

Between March 21, 2008 and April 13, 2009, Ford paid another $26 million to raise its stake in Automobile Craiova to 95.63%. Nonetheless, output of LCV was delayed at Ford Romania until September 8, 2009, due to the major losses suffered by Ford Europe during the 2009 Great Recession and its parent Ford Motor Company Chapter 11 bankruptcy filing on June 1, 2009. When it did start, only 9,558 Transit Connect were produced in 2010 and 7,547 in 2011. LCV output was then discontinued to re-tool for the B-Max, of which serial production commenced in Craiova on June 24, 2012. The MPV was preceded by output of Ford EcoBoost engines, which began at the complex's new $235 million engine hall on May 10, 2012. These commitments enlarged the automaker's investment in Ford Romania to $875 million in 2012.[33]

[31] Ford (2008).

[32] Ward's (1958–2014); Ford (2008); Ciferri (2008); Pavlinek (2015).

[33] Ward's (1958–2014); OICA (1999–2016); Ford (2011–2016); Pavlinek (2015).

A total 30,591 of the B-Max were assembled in 2012, before rising to a peak of 68,339 in 2013, accompanied by 250,000 engines. Falling European demand then prompted a reduction in output of B-Max to 47,967 in 2015, far below annual capacity of 300,000. No other vehicles were assembled during these three years and 100% of this output was exported out of the country. Production at the 300,000-capacity engine plant also decline to and 155,000 motors in 2014 and further in 2015, when Ford announced a combined 500 planned layoffs at two facilities. As a result, the Ford Craiova complex employed 4,002 people as of December 31, 2015, including 3,600 at the car plant and 402 at the engine factory (See Tables 8.1–8.3).[34]

Just as things seemed bleakest, on March 22, 2016, Ford announced that it will inject a fresh $225 million in Craiova in order to prepare its operations to launch assembly of Ford EcoSport CUV in late-2017. The retooling will raise the automaker's investment at the 109-hectare (269-acre) complex on National Route 6 to more than $1.13 billion.[35] This is a good sign for the entire Route 6 corridor, an important 639 km (400 miles) but only partially divided roadway that originates in Bucharest, joins E70 in Craiova, and then connects to Timisoara, Belgrade, Zagreb, Ljubljana, Turin, and points west.

Overall, Romania's two foreign car assembly plants produced 387,171 passenger cars in 2015 and employed a 15,108 people on December 31, 2015. A total of 91.8% of these cars were exported. The nation's 600-plus automotive components suppliers, including more than 100 foreign manufacturers, engaged 198,000 more workers.[36] While Romania recently lost in its bid to land Mercedes-Benz and Jaguar Land Rover facilities, its combination of low wages and high level of industrial productivity suggest its near-term prospects for landing a third car plant were very high.[37]

[34] OICA (1999–2016); Ford (2011–2016); *Romanian Journal* (2015–2016).
[35] OICA (1999–2016); Ford (2011–2016); *Romanian Journal* (2015–2016).
[36] APIA (2016).
[37] Ilie (2016).

FCA Kragujevac in Serbia

Fiat-Zastava and Yugo

The state-owned *Zavodi Crveni Zastava* (Zastava) was established on August 26, 1953, when the Yugoslav Government renamed an existing agricultural machinery and small arms factory in Kragujevac, and its plant's workers voted to produce automobiles. The complex had originally opened in 1853 and prior to WW-II in 1939, had produced 400 Chevrolet military trucks. Another 162 licensed Willys-Overland Jeeps were assembled after the war in 1953.[38]

The government and company management then quickly moved forward, spending the next year flirting with Alfa Romeo, Austin, Renault, and Rover before signing an agreement with Fiat of Italy on August 12, 1954. By November 1954, the first Fiat 1400 had rolled off the Zastava assembly line and was marketed domestically as the Zastava 1400 BJ. The sedan was followed in 1955 by the Zastava AR-51 mini 4X4 Jeep (Fiat Campagnola) and the Fiat 1100T military van. The real breakthrough came on October 18, 1955, when output commenced of the popular Fiat 600 mini, badged locally as the Zastava 600 (See Chapter 3). A total of 1,044 vehicles were built in 1955, of which, 760 were passenger cars, including 735 Zastava 1400 and 25 Zastava 600.

Production in Kragujevac rose to 3,596 in 1958 and 13,719 in 1960, when serial production of the 600 commenced. In 1962, the 600 was upgraded to Fiat's 767 cc engine and renamed the Zastava 750 (Fiat 770 elsewhere). Output then steadily grew to 50,000, with the 750 gaining a new nickname, the 'Fica,' after a character in a newspaper's comic strip. The Fica also became Yugoslavia's people's car, credited with leading the nation's motorization drive during the Socialist Era. Beginning in 1961, the Fica was complemented by the Zastava 1300 and 1500 sports coupe.

[38] Fiat-Zastava and Yugo was based primarily upon: Ward's (1958–2014); Georgano (2000); Zastava (2008); Thompson (2011); also see (Pavlinek (2002); Turnock (2004); other supplemental citations are provided where appropriate.

Together dubbed 'Jugoslovenski Mercedes,' production of these cars continued in Kragujevac through December 1979, a full 10 years after Fiat discontinued and replaced its own 1300/1500-line with Fiat 124 and 125.

A major milestone in the Fiat-Zastava relationship came in 1968, when the Italian automaker pledged to invest $10 million to expand output in Kragujevac from 52,000 in 1967 to 85,000 and then to 130,000 by 1973. It also committed to provide technological assistance to Zastava to improve the products and production processes. The success of the Zastava 1300/1500 also helped forge ties between the Yugoslav automaker and FSO Zeran in Warsaw. Poland had become the first market for Zastava exports in 1965, when 6,000 cars were shipped to the CE Nation. This led to a 1969 subcontracting deal that saw Zastava Kragujevac assemble KD kits of the Polski-Fiat 125p. This was not difficult, as the 125p, which was sold in Yugoslavia as the Zastava 125pz, shared many components with the 1300/1500 and (See Chapter 3).

On May 16, 1971, the fwd, front-engine Zastava 128 small sedan was introduced at Kragujevac. It was joined on October 15, 1971 by the Zastava 101, a four-door hatchback version of the Fiat 128 designed in Turin but never sold in Italy. Along with the Fica, the 101/128-series helped double factory production from 111,725 in 1973 to 243,639 in 1978, and then to nearly 250,000 in 1979. It the latter year, a record 88,918 of the 101/128 line were built in Yugoslavia, including revved-up 'Special' edition aimed at customers of the VW Golf GTI 'hot hatch.'

By the end of 1970s, Zastava was shipping cars to 23 countries in Western Europe and North Africa (sold as Zastava Yugo). It also was out-producing most other Socialist nations. As a result, despite the export-orientation, domestic customers had to wait only about two months for their car orders, a short queue compared with the year or longer suffered by buyers in CE nations. Of course, the Soviets had little control over Yugoslavia's production schedule or sales market. So in addition to Zastava, local buyers also could purchase Renault and VW Golf produced domestically (in Slovenia and Bosnia), as well as Soviet-built Lada, Czech Skoda, and Polish Polski Fiat.

In 1980, the Fico was fitted with a larger 843 cc Fiat engine and rechristened the Zastava 850. This iteration was built until November 18, 1985, when the last of 923,487 Fico left the Kragujevac assembly line. By that time the plant's focus had already shifted to a new mini, the Zastava 102. Based upon the designs of the Fiat 144 that was never produced, but 11-cm (4.3-inch) longer, and sharing components with the Fiat 127, the first Zastava 102 prototype was tested on October 2, 1978. By the time serial production launched in October 1980, however, the 45-hp supermini had received a new moniker: the Zastava Yugo 45 at home and the Yugo 45 in foreign markets.

As part of the licensing agreement with Fiat, exports of the car to Europe were delayed until 1983, in order to allow Fiat's own updated 127 to gain a foothold on the continent. This barely affected sales, however, as the Yugo was praised by pundits for its ride and handling and quickly put the Zastava on the map in Western Europe. This push was aided by Zastava's corporate sponsorship of the 1984 Winter Olympics in Sarajevo.

The Yugo also was a smash hit in America, where dealer sales of the unusually affordable ($3,990) 55-hp Yugo GV ('Great Value') commenced in September 1985 and rapidly rose to peak of record 48,813 in 1987. The factory's workers were so overjoyed by the first shipment to the U.S. that they supposedly cried when the cars left the factory for America in the summer of 1985. After falling below 200,000 in the early-1980s, output at Zastava Kragujevac rebounded to 210,330 in 1987. To further capitalize on the success of the Yugo in America, Zastava also began stamping its cars with 'Ys' for Yugo instead of 'Zs' for its corporate name in 1987. It then rebranded new editions of its models with names rather than numbers. For example, to better differentiate the Zastava 101 small car series from the Yugo 45/55/65 (GV) line in Europe, the 101 was renamed the Yugo Skala in 1988; the four-door hatchback edition of the 101 already had been introduced in 1984 as the Zastava Skala. Similarly, in May 1991, the Yugo 45 was rebranded the Zastava Koral at home and the one sold in Britain redubbed the Yugo Tempo.[39]

[39] Moberg (1988).

In addition to the name changes, the Yugoslav automaker injected a fresh $150 million in its Kragujevac Plant in 1987, in order to launch output of the company's largest car ever: the Zastava Florida compact hatchback. Prototypes for the car named as a tribute to the American state and derived from the Giugiaro-designed Fiat Tipo, began on February 19, 1987. Serial production of the Florida commenced on October 2, 1988, with exports to Britain as the Yugo Sana began in January 1990. Shipments to the U.S. of an affordable $8,000 sedan were set for later that year. At the time, the Zastava Group of factories had grown to become Yugoslavia's largest firm, employing 53,300 people directly and creating thousands more jobs at its 280 suppliers and related companies.

Also in 1988, a few licensed Fiat Uno superminis were assembled in Kragujevac in 1988, with Fiat promising more in the future. Local banks also were excited about the Yugo's prospects, offering loans to raise annual capacity at the plant to 350,000 by 1990. In the meantime, a new and improved Yugo GV Plus line, including a convertible, were now being shipped to America, injecting new spring into the company's step.

Unfortunately, due to complaints from buyers about frequent maintenance issues and the bankruptcy of Zastava's U.S. import agent in 1988, American sales sank to 10,576 in 1989 and then just 6,359 GV in 1990, shelving exports of the Florida. By the end of 1990, however, Zastava had more pressing concerns to worry about, as its home county, along with those in the former Eastern Bloc, were suffering the aftershocks brought on by the Fall of Socialism.

Zastava and the Breakup of Yugoslavia

Again, this situation was further complicated by the strings attached by the IMF to its $1 billion subsidy package intended to aid Yugoslavia through its transition to capitalism. Although the IMF stipulations were aimed at ridding its state-run enterprises of its production inefficiencies and debt, the consequences of the ensuing rapid privatization and austerity measures implemented in 1989 and 1990 were dire for

Yugoslavia. This included massive layoffs to the tune of nearly one-quarter of the country's 2.7 million workforce. In response, Zastava's annual passenger cars output declined to 180,000 in 1989 and then to 153,017 in 1990 (See Table 8.2).[40]

As if things were not unsettled enough, without the safety net provided to these workers by State Socialism, the ensuing malaise pushed the country toward an economic collapse that combined with inter-ethnic conflict provoked a more hideous response: a long-drawn out civil war. Yugoslavia's Republic of Serbia stood in the middle of this, utilizing political and military force in an attempt to squash the independence movements launched by the nation's other republics and autonomous regions.[41]

To briefly summarize, as 1988 came to a close, Yugoslavia was suffering from an annual inflation rate of 236% and $21 billion foreign debt. Nearly one-fourth of two million residents in the capital of Belgrade were without unable to pay even their basic utility bills, causing power companies to shut off power. Mine and railroad workers were staging strikes over unpaid salaries, asking for raises to meet their bulls, and/or the productivity bonuses they fairly earned. Thousands more marched on Parliament demanding relief. Violence followed a miners strike and other calls for greater local self-governance by ethnic Albanians in Kosovo, further stoking already frayed intersectional tensions nationwide.

The situation spiraled out of control in January 1990, when calls by Croat and Slovene leaders to split the country into separate independent nations or for the creation of a loose federation with greater local autonomy were rejected by Serb President Slobodan Milosevic. Hostilities escalated further in August 1990, when Croat police forces skirmished with ethnic Serbs in Croatia. This turned into violent clashes between the Yugoslav army and Croatian paramilitary forces and ultimately into demonstrations in Belgrade against Milosevic and Serb

[40] Ward's (1958–2014); Turnock (2004); Thompson (2011).

[41] The paragraphs on the breakup of Yugoslavia and civil war draw upon Wolchik & Curry (2011).

hegemony. Similar protests were held in Croatia by Serbs, with the latter spiraling out of control into violent confrontations between Serb and Croat forces on March 31, 1991.

The conflict was followed on June 25, 1991 by secession proclamations by Croatia and Slovenia on June 25, 1991 (reconfirmed on October 8, 1991). By September 8, Macedonia had had done the same, shadowed by Bosnia and Herzegovina on March 3, 1992. The Croatian War of Independence, however, dragged on until November 12, 1995. Meanwhile, tensions to the southeast between Bosnian and local Serbs and Croats escalated into the Bosnian War on April 6, 1992.

The Zastava's Kragujevac operations were at the forefront of these battles. By November 1992, the workforce had been slashed from 49,000 to 30,000, with the complex having been transformed into a military operation. Of the 30,000 working at the facility, only 2,000 were assembling Yugo. The remainder were assembling AK-47 assault rifles and other handheld weapons for the war in Bosnia. Not surprisingly, the civil unrest in Yugoslavia prompted sanctions from the West, which resulted in significant shortages in raw materials. This included embargos on automotive components imports and on finished vehicle exports. As a result, car production in Kragujevac plunged from 107,000 in 1991 to 25,271 in 1992 and then 7,500 in 1993 and 1994. Zastava closed its American imports office in April 1992 and sold only 1,412 Yugo there in that year. The sanctions also squashed negotiations with Daewoo, PSA, and Fiat regarding a long-term partnership with Zastava.[42]

The Bosnian conflict finally ended on December 14, 1995. Over the next two years, output in Kragujevac rose slightly to 11,124 in 1997. Nonetheless, this ceasefire was not the last battle for Serbia, which up until then had suffered relatively less war-damage than neighboring Croatia and Bosnia-Herzegovina. Beginning on February 28, 1998 through June 11, 1999, the Yugoslav Army (representing Serbia and Montenegro), clashed with Rebels from Kosovo. This prompted NATO

[42] Ward's (1958–2014); Stojanovic (1992); Georgano (2000); Zastava (2008); Thompson (2011).

(North Atlantic Treaty Organization) to begin sending aerial forces backed by ground troops from the Albanian army on March 24, 1999. Over the next three months, NATO bombed Belgrade and other strategic locations in Serbia. This included Zastava Kragujevac, whose car and truck assembly halls, paint shop, forging factory, and power plants all were heavily damaged by bombing raids between April 9 and 12, 1999.[43]

Besides the war, other events also were conspiring against Zastava. Due to its own financial difficulties stemming from the 1997 Asian Fiscal Crisis, Hyundai pulled out of discussions with Zastava about building cars in Serbia. In contrast, the fighting with Kosovo had not prevented PSA of France from forging a preliminary agreement to produce between 10,000 and 40,000 KD kits of Peugeot 106 cars annually in Kragujevac in December 1998. This would have helped Zastava repay its outstanding debts to Fiat, which were estimated at between $36 million and $84 million. With NATO's entrance in the war, however, the arrangement was cancelled.[44]

On June 11, 1999, Yugoslav forces withdrew from Kosovo ending the conflict. By August 1999, output slowly resumed at the bombed-out Zastava factory, with the Serbian Government pledging $800,000 and other credits through the Serbian Development Fund toward its reconstruction. This barely made a splash, however, as company officials estimated that the costs of just re-launch production at $87 million and to restore the facility to its 220,000-plus pre-war capacity at $650 million. What was left of the factory was capable of building maybe 60,000 cars per year, after assembling only 3,816 in 1999.[45]

Output in Kragujevac increased to 11,175 in 2000, before collapsing based upon various estimates to somewhere between 5,000 and 7,668 in 2001. In that same year, the Serbian Government drastically downsized the workforce of their near bankrupt automaker. Production rebounded

[43] King (1998); Zastava (2008); Thompson (2011).

[44] Bursa & Farhi (1999); Zastava (2008); Thompson (2011).

[45] The remainder of this section draws upon: Ward's (1958–2014); Zastava (2008); Thompson (2011).

to around 13,000 annually between 2002 and 2005, but were greatly inhibited by newly instituted emission standards in the EU (See Table 8.2). To rectify this situation, Zastava signed an agreement to source 5,000 engines per year from PSA in 2002.

In contrast to the PSA deal, a $200 million deal with a U.S. import firm to upgrade and produce 10,000 cars annually in Kragujevac for distribution in America fell through in 2004. Moreover, negotiations with Fiat on how to address a $51 million debt still owed the Italian automaker stalled. In response, in March 2004, the Serbian Government announced plans to inject $300 million in Zastava Kragujevac to raise output at the 4,300-worker plant gradually to 120,000 by 2007. Encouraged, Zastava entered into discussions with GM, Hyundai, Renault, and with the three Indian automakers, Ashok Leyland, Mahindra & Mahindra, and Tata Motors, about establishing a production alliance. None of these talks prove fruitful, resulting in the government reneging on its promised plant enhancement funds.

In September 2005, Fiat entered into an arrangement with Zastava to annually produce 16,000 second-generation Fiat Punto superminis in Kragujevac as the Zastava 10. The accord restricted sales of the cars to the Balkan states and Russia, but allowed for imports to Serbia of Italian-built Fiat Punto stamped as Zastava 10. This enabled Zastava to pay off its debt with the Italian automaker by June 2006. Nonetheless, despite the accord, Zastava's financial position continued to stymy production, with car output contracting to 10,252. According to company estimates, to survive and protect the approximately 100,000 job nation-wide dependent upon the 3,400-worker Kragujevac factory's success, Zastava needed access to $1.5 billion in funds in order to develop a completely new model and build at least 50,000 cars per year.

Production of the Zastava 10 commenced in Kragujevac on June 4, 2007, but had very little impact on total output in that year. At that time, rumors now linked Hyundai and Tata Motors, as well as an unnamed Japanese automaker and GM as possible suitors to outright acquire the soon-to-be privatized Zastava. On July 19, 2007, Zastava and GM announced publicly that they had agreed on a five-year deal to produce Opel Astra Classic II in Kragujevac, with output expected to gradually increase to 10,000 annually by 2012.

This was to mark GM's second entrance into Serbia. Between December 1979 and the imposed war-related sanctions in May 1992, GM had assembled 38,700 KD kits of Opel Corsa, Kadett, and Vectra at their $78.5 million IDA-Opel joint venture plant with Kikinda Iron Foundry IDA in Vojvodina Province. As part of GM's new deal with Zastava, the Serbian Government agreed to waive tariffs on the first 3,300 Astra imported into the country in 2007 and first 5,000 in 2008. The first Astra entered the market on July 30, 2007. Meanwhile, news reports added Fiat, Ford, VW, Magna-Steyr of Austria, and even the Chinese automaker FAW as potential bidders for Zastava.

Fiat Takes Zastava

By the end of December 2007, Serbia's Privatization Agency went forward with the privatization tender for the national government and Serbian Development Fund's combined 99.0% share of Zastava. Anxious to get the process completed, the central government set May 31, 2008 as the date for final bids for its automaker. In the meantime, the Opel Astra deal appeared to be in jeopardy, when rumors suggested that Opel Gliwice in Poland would take on the production promised Zastava.[46]

On April 30, 2008, Fiat appeared to have won the right to takeover Zastava, signing a memorandum of understanding to invest $1.1 billion for a 67.33% stake in a new company set to operate the automaker and the Kragujevac Plant. Fiat was to spend $624 million over three years to retool the factory, with the Serbian Government contributing an additional $156 million for a 33.67% share in the venture. Production of Fiat 500 minis was expected to start by the end of 2009, with the plant capacity scheduled to expand by 100,000 annually to 330,000 by 2012.[47]

On September 29, 2008, Fiat signed the contracts formalizing its 67/33 controlling interest in Zastava's automobile division, and establishing

[46] Zastava (2008); Thompson (2011).

[47] Michaels (2008); MINA (2008); *Serbia Today* (2008–2015); Zastava (2008); Thompson (2011); Pavlinek (2015).

Fiat Automobiles Serbia. At part of the deal, the Government pledged to spend $435 million on new roads, railways, power transmission, and environmental mitigation in the Kragujevac Area to support the project. In addition to the government subsidies, Serbia's labor costs, equivalent to $400 per month for assembly workers, as compared with $2,600 in Italy and $1200 monthly in Poland, was considered a key factor motivating Fiat's decision.[48]

With the joint venture consummated, the central government approached GM about potential other sites in Belgrade, Kragujevac, and Sombor for its Opel assembly plant. These discussions, however, never advanced past the talking stages. Meanwhile, over the next month what was left of Zastava's legacy was wound down, with the last Zastava 10, Skala, Florida, and Yugo all rolling off Kragujevac's assembly line between November 8 and November 21, 2008. As a result, only 9,818 cars were built at the factory in 2008. Four months later, on March 30, 2009, output of the Fiat Punto Classic commenced in Serbia. To encourage purchases of the car at home, on April 15, 2009, the government established a program allowing customers to trade-in their old Zastava models for Punto. Additionally, following Fiat's finalization of its bid to take control of America's Chrysler Motors in June 2009, the government vowed to contribute another $156 million toward the project.[49]

A total of 16,337 Fiat were assembled in Kragujevac in 2009 (See Table 8.3). The next spring, Fiat announced plans to launch the European edition of its brand new Fiat Novo Uno supermini in Serbia. This never became a reality, with output of the Fiat 500, similar to the Punto a year earlier, delayed by the aftershocks of the 2009 Great Recession and major factory renovations. In the interim, car assemblies dipped to 14,551 in 2010 and 10,227 in 2011. Production of the Punto Classic ended on March 25, 2011 in order to prepare the factory for a new model, the Fiat 500L MPV.[50]

[48] *Serbia Today* (2008–2015); Zastava (2008); Thompson (2011).
[49] *Serbia Today* (2008–2015); *eKapija.com* (2009–2016); Thompson (2011).
[50] OICA (1999–2016); *Serbia Today* (2008–2015); *eKapija.com* (2009–2016); Ward's (2014).

The total revitalized Fiat Serbia Kragujevac Plant re-opened on April 16, 2012, with output of the Fiat 500L finally commencing in July 4, 2012. At that time, Kragujevac was the only plant building the plant worldwide. Output accelerated thereafter, jumping from 23,336 in 2012 to 113,487 in 2013 and then 101,576 in 2014. At the time, 70% of the parts installed in the 500L were domestically produced. The related expansion and modernization of the complex ultimately to the planned 300,000 vehicles per year was funded by a $600 million loan from the European Investment Bank (maturing in 2021). Meanwhile, after meeting all the thresholds stipulated by the U.S. Government, Fiat acquired the outstanding 41.46% share of Chrysler held by America's United Auto Workers Union Trust, giving it 100% ownership of Chrysler on January 21, 2014. Eight days later, Fiat Chrysler Automobiles was established in the Netherlands. This moniker lasted only until December 16, 2014, when Fiat Chrysler officially changed its name to FCA Italy SpA. Three months later, on March 19, 2015, its Serbian operations were renamed FCA Serbia.[51]

As shown in Table 8.3, FCA Serbia built 91,895 Fiat 500L in 2015. Approximately 99% of these MPV were exported out of the country. The plant's 70-plus components suppliers employed another 35,000 nationwide. Nearly one-third of these workers were engaged by German-based firms, including Bosch, Continental, and Leoni. On the other hand, the government subsidized Kragujevac Industrial Park hosted included Magneti Marelli, Gruppo Proma, and Sigit of Italy and Johnson Controls of America. Suppliers at other locales included Delphi and Lear of America, Yura of Korea, Michelin, and Magna, among others. Many of these firms have located in the Serbian Motorway A1/E75 highway corridor that spans the length of the country from Macedonia north to Hungary, and ultimately links to major automotive clusters in CE, including Austria.[52]

While the future of the 3,100-worker, 200,000-capacity, FCA Serbia Kragujevac appeared promising in 2015, plummeting sales of the 500L

[51] OICA (1999–2016); *Serbia Today* (2008–2015); e*Kapija.com* (2009–2016); Jacobs (2016).
[52] OICA (1999–2016); RAS (2016); Sekularac (2016).

the first five months of 2016 changed that outlook. On June 15, 2016, FCA announced plans to lay off one of its three 900-worker shifts in Kragujevac by September. To help reduce staff and dislocations, FCA encouraged workers to apply for voluntary separation packages in compliance with Serbian law, which was equal to one-third of their annual wages per year of service, plus other payments. This ranged from around $379 to $2,020 per year of service, with amount dependent upon whether or not those years were for FCA or Zastava; Zastava years were reward at the lower end of the range.[53]

Fiat was on pace to produce another 87,500 in Kragujevac in 2016, or roughly one-fourth its planned progression to 330,000-capacity by 2012.[54] Moreover, while the 2015 figure was more than ten times the 7,668 car produced in 2001, it was still less than half the 180,950 built by Zastava in 1989 (See Table 8.2). Nonetheless, the plant's strategic location, coupled with Serbia's government subsidy programs, low wages, and available labor force (an 18% unemployment rate), has continued to tempt other foreign automakers to transplant some of its car assembly to the country. In addition to GM, Chinese, and Indian automakers, in 2014 VW's Skoda was rumored to be considering building cars at an Auto Cacak facility in Belgrade. This suggests that the Serbia's near-term prospects for car production may be more promising than FCA lets on.

Renault-Revoz Novo Mesto and Possibly Magna in Slovenia

On November 27, 1954, the local agricultural machinery firm Agroservis entered into an agreement with Auto Union to produce licensed copies of the West German automaker's DKW F89L Schnellaster vans in Yugoslavia. The following year, output of Moto Montaza delivery vans commenced at the venture's plant on Route 105

[53] *B92* (2011–2016); FCA (2016); Homola (2016a); Sekularac (2016).
[54] OICA (1999–2016).

in Novo Mesto, Slovenia. Situated between Ljubljana and Zagreb, the location proved strategic when the Yugoslav Government constructed the A2 Motorway (now also E70) through Novo Mesto in 1958, connecting it with the country's major cities.[55]

Following Daimler-Benz's takeover of Auto Union in 1958, the Novo Mesto Plant was renamed *Industrija Motornih Vozil* (IMV). DKW light van output continued and by 1962 included DKW F91 Universal station wagons. The tie-up was terminated, however, following Daimler-Benz's January 1, 1965 sale of Auto Union to VW, which subsequently ended production of the obsolete DKW two-stroke civilian models. In the meantime, IMV designed passenger vans were introduced in Novo Mesto.

IMV signed on with British Motors in 1967 (later British Leyland) and by 1968 was building licensed Austin IMV 1300 and the Austin IMV Maxi a year later. This arrangement lasted until 1972 with the Novo Mesto assembling 21,379 Austin-brand cars during the life of agreement. IMV then turned to Renault, which since November 1969 had been assembling Renault 4 minis with a company named Litostroj at a plant in Ljubljana. The Litostroj factory also manufactured gearboxes for the car that was affectionately known in Yugoslavia as 'Katrca' (Katherine).

Production of licensed Renault 4 commenced at IMV in early-1973 and in 1975 a new 100,000-capacity factory was built on-site. During the mid-1970s, another 7,278 Renault 12 (R12) and 342 R16 also were assembled, with IMV employing more than 6,500 people at its peak. These vehicles were succeeded by the R18, of which 18,714 were built by IMV between 1980 and 1987. In the latter year, financial problems at IMV necessitated it taking on a foreign partner.

On June 22, 1988, Renault became a minority shareholder in IMV and the Novo Mesto operations were reincorporated as Revoz. Eighteen months later, in December 1989, the plant launched output of the R5 supermini. A total of 46,000 cars were produced by Revoz in 1989 (See Table 8.2). Approximately two-thirds of these were exported out of the

[55] The first three paragraphs in this section were based upon: Thompson (2011); Revoz (2016b).

country, primarily to France and Italy. The R5 became an important vehicle for the factory in the early Post-Socialist Period, cushioning the blow of the loss of the R4, which was discontinued in December 1992 after 575,824 Katrca were built in Novo Mesto. Approximately 45,000 R5 were built annually by Revoz and a total of 295,863 overall through the end of its production run in July 1996.[56]

Similar to Renault's pattern at Dacia, the R5 was built alongside it successor, Renault Clio supermini, when production of the Clio launched at Revoz in April 1993. Similarly, after the first five Clio II were tested in December 1997, the Clio was still produced until serial output of its successor commenced in March 1998. During this period, car output in Novo Mesto rose to 95,956 in 1997, with 93.18% of these cars exported in that year. In the interim, not long after Slovenia's June 25, 1991 split from Yugoslavia, Renault acquired a 54% majority stake in IMV. The French automaker then raised this share to 66.68% in 2001 and then to 100% on December 22, 2003, effective January 1, 2004.[57]

During this transition, output at Revoz expanded to 126,397 in 1998, then seesawed down to 116,082 in 2001 and back up to 131,752 in 2004 (all Clio II). Over 90% of these cars were exported out of the country, primarily to Western Europe. Over the next five years, aided by the introduction of the Renault Twingo II mini city car in March 2007, factory output gradually increased to 177,951 in 2005 and then to 212,680 in 2009 (See Table 8.3). In exchange for Renault's transferring production of the Twingo II to Novo Mesto, the Slovenian Government pledged to subsidize 10% of the expansion project's costs provided that domestic content of Twingo produced at the plant was 30% or higher. At the time, only 15% of value of Clio II were sourced locally. Interestingly, despite the Twingo related plant enlargement, year-end employment at the factory declined slightly between 2005 and 2009, from 2,621 to 2,480.[58]

[56] Ward's (1958–2014, 2014); CEAR (1998); Turnock (2004); Thompson (2011); Revoz (2016b); Pavlinek (2015).

[57] Ward's (1958–2014, 2014); Revoz (2016b).

[58] Ward's (1958–2014, 2014); Renault (2006–2016); Revoz (2016a, 2016b).

Following this growth period, Revoz and its suppliers were hit especially hard by the 2009 Great Recession, with production halved to just 93,733 in 2013. During this period, 850 Revoz workers were laid off and another 1,300 lost at suppliers. The situation was compounded by the rumored $3.8 billion aid package provided Renault by the French Government to convince the automaker to repatriate/maintain its French workforce.[59]

As shown in Tables 8.3, output at Revoz rebounded slightly to 129,405 in 2015. As illustrated in Table 8.3, this consisted of: 83,376 Twingo III; 4,550 of the outgoing Clio II; and 41,479 Smart Forfour EV. The latter were built through a joint venture contract manufacturing arrangement with Daimler. Launched in September 2014, the Smart Forfour EV has shared 70% of its parts with the Twingo III, which also will have an EV edition. Related to this, Renault invested a fresh $550 million in its 20-hectare (49-acre), 210,000-capacity Revoz Plant to bring its 'Edison' EV project to the factory and was awarded $31 million in state subsidies for doing so. To accommodate the new car models, employment at the 67.6-hectare (167-acre) site was raised to 3,178, as of December 31, 2015 (See Table 8.1). This included 2,100 Revoz employees and 1,078 contract workers. Employment increased to 3,600 in 2016. Another 5,000 people were engaged by suppliers and other firms connected to the automaker, and 16,370 people overall in Slovenia's 245-firm automotive industry in 2015.[60]

Approximately 85% of Revoz production in 2015 was exported out of the country, primarily to Western and Central Europe. This figure was 98% in both 2012 and 2013. In addition, 2015 production represented an increase of 13,323 or 11.48% as compared with the plant's car output in 2001, and nearly triple the 46,000 produced in Novo Mesto in 1989. This was expected to expand further in the near future as a result of Renault's March 17, 2016 announced of its intentions to again re-tool its Revoz Novo Mesto complex in order to add output of the Clio IV supermini in February 2017. The Clio II was last produced at the factory

[59] *Slovenia Times* (2009–2016); Renault (2006–2016); Revoz (2016a).
[60] *Slovenia Times* (2009–2016); Renault (2006–2016, 2016); Revoz (2016a).

on May 5, 2015. The move was deemed necessary to meet demand for the vehicle, which has outstripped capacity at Renault's related plants in Flins, France and Bursa, Turkey. Company officials also praised the quality of the workforce in Slovenia, although the nation's significantly lower labor costs relative to Renault's plants in France and Spain also was surely attractive to the automaker.[61]

Overall, the future appears bright for the former Yugoslavia Republic that between 1960 and 1980 also assembled licensed Citroen superminis at its Citroen-*Tovarna Motornih Koles Sezana* (Cismos) joint venture in the port city of Koper, Slovenia. This outlook grew even brighter on September 21, 2016, when Magna Steyr, a subsidiary of Magna International of Canada, announced that it was considering building a car plant in a special industrial zone in Hoce-Slivnica. Poland's former FSO Warsaw-Zeran and an unknown greenfield in Hungary also were considered as contenders for the facility.[62]

Located less than 10 km (six miles) from the City of Maribor in eastern Slovenia, Hoce-Slivnica was situated only 77 km (48 miles) south of Magna Steyr's main car factory in Graz, Austria and 122 km (76 miles) northeast of Novo Mesto. Hundreds of Slovenians already work at the 200,000-capacity Graz Plant, which produced Mercedes-Benz G-Class SUV for Daimler and Mini Countryman and Paceman crossovers for BMW in 2016. Mini output at Magna was expected to be replaced in 2017 by BMW 5-series luxury cars. The Graz factory also was scheduled to begin producing Land Rover and a new BMW-Toyota jointly developed sports car in 2018. The new plant was expected to handle overflow from these developments.[63]

On October 14, 2016, Magna officially incorporated a Slovenian subsidiary. At that time, stories circulated that the giant automotive supplier might only build a car paint shop in Hoce-Slivnica, but still large enough facility to foster the creation of 3,000 jobs in the area. In preparation for Magna's decision, or possibly to attract another foreign

[61] *Slovenia Times* (2009–2016).
[62] *Slovenia Times* (2009–2016); Homola (2016b).
[63] *Slovenia Times* (2009–2016); Homola (2016b).

car factory, the central government has begun preparing a 100-hectare (247-acre) industrial park near the Maribor Edvard Rusjan Airport at the junction of Motorway Al/E57, A4/E59, and National Route 430. The $11 million in funding approved to develop the tract also was expected to create accessibility to an existing rail freight line running through the Drava River Region.[64] All things considered, once the development is shovel-ready its transport infrastructure and proximity to Western and CE markets should make it an attractive magnet for attracting a second passenger car plant to Slovenia.

Conclusion

As of December 31, 2015, the four active passenger car plants in the SEE Auto Zone—Renault's Dacia Pitesti, Revoz Novo Mesto, Ford Craiova, and FCA Kragujevac—collectively employed 21,388 people and had an annual vehicle capacity of 1.16 million vehicles (See Table 8.1). The factories were supported by a combined 900-plus automotive components suppliers engaging nearly 250,000 workers in in Romania, Serbia, and Slovenia.

Despite this capacity, the potential of the SEE Auto Zone has remained partially untapped, as the area's four car factories produced 608.471 passenger cars in 2015. On the other hand, this output represented an increase of 427,947 or 237.06% as compared with 2001, when only 180,524 cars combined were produced in these three territories (See Table 8.2). This jump in annual output was somewhat overshadowed by the political-economic turmoil that these areas experienced following the fall of Socialism, which resulted in annual car production declining by 53.35% or 206,426 units in 2001 from 386,950 in 1989.

Barring something unforeseen, its lower wages and abundant supply of labor should insure that Europe's next ring of auto producing nations does not suffer a similar contraction in the near-term. In fact, wages and

[64] *Slovenia Times* (2009–2016); Slovenia (2016).

productive labor should prove especially valuable during an era when the world's largest automakers continue to seek ways in which to both cut overall production costs and expand sales in Emerging Europe. FCA's uncertain future remains the only question mark for the existing plants, but even this should not inhibit expansion in the SEE during the next decade. As if FCA were to abandon its Kragujevac plant, its place will be gladly taken by Skoda, Hyundai, or by a globally expanding Chinese and Indian automaker.

References

Agerpres (2014). Dacia, Romania's Enduring Car Trademark. *Romanian National News Agency*, 20 January, http://www.agerpres.ro/english/2014/01/20/dacia-romania-s-enduring-car-trademark-19-07-17, last 15 December 2016.

APIA (2016) Romanian Automotive Manufacturers and Importers Association Website, http://www.apia.ro/statistical-bulletin/, 15 November.

Autoevolution (2016) Dacia Models & History, http://www.autoevolution.com/dacia/, last 15 December.

Bloomberg (1995) Renault will invest in Dacia. *Automotive News*, 5 July, 1.

B92 (2011–2016) Various Business & Economy News Articles on Fiat Serbia between 2011 and 2016, http://www.b92.net/eng/

Bursa M and S Farhi (1999) Zastava Auto Deal is Likely Casualty of Yugoslav War. *Automotive News*, 19 April, 6.

CEAR (1998) *Central Europe Automotive Report*, 3 (3), http://www.cear.com

Ciferri L (2008) A Romania-built Minivan for Ford. *Automotive News Europe*, 13 October 3.

Condon C (2007) Ford Sole bidder for Romanian Daewoo Plant. *Financial Times*, 6 July, 16.

Dacia (2008–2016) Dacia Group Press Releases, March 2008 to November 2016, http://www.daciagroup.com/en/press/press-releases/, last 15 December 2016.

Dacia (2016) Automobile Dacia, http://www.daciagroup.com/en/, last 14 November.

Daewoo (2000) 100,000 Customer has Confidence in the Future. Daewoo Automobile Romania, 12 December, Web Archive, https://web.archive.org/web/20010406142304/http://www.daewoo.ro/News/default.htm#6ani, last 14 November 2016.

Datta K (2007) Tata Vies for Daewoo Romania. *Mumbai Business Standard*, 15 January, http://www.business-standard.com/article/companies/tata-vies-for-daewoo-romania-107011501064_1.html, last 15 December 2016.

Egresi I (2008) *Geographical Dynamics of FDI in Romania*. Ph.D. Dissertation (Ann Arbor: UMI).

eKapija.com (2009–2016) New stories on Fiat Serbia from 2009 to 2016. eKapija Business Portal, http://www.ekapija.com/, last 15 December 2016.

FCA (2016) *FCA Annual Report.at December 31, 2015* (Turin: FCA).

Financial Times (2009) Logan's Run: Success of Dacia Has Attracted Ford to Invest in the Country. 28 September, 27

Ford (2008) @Ford: Romania Expansion, May (Ford Europe: Koln: Germany).

Ford (2011–2016) Press Releases on Ford Craiova, https://media.ford.com/, last 15 November 2016.

Foy H (2013) Dacia Leads Charge of Emerging Market Cars in Europe. *Financial Times*, 22 August, https://www.ft.com/content/5b7d14b8-feb3-11e2-97dc-00144feabdc0, last 15 December 2016.

Frink L (2007) Ford to Romania: Forgive Plant Debt. *Automotive News Europe*, 3 September, 3.

Frink L (2008) Readying for Romania: Ford Recruits Suppliers. *Automotive News Europe*, 21 January, 3.

Georgano N ed (2000) *The Beaulieu Encyclopedia of the Automobile* (Chicago: Fitzroy Dearborn).

Green P (1999) For Daewoo Group, Eastern Europe Remains Mostly in the Red. *New York Times*, 7 November, BU7.

Homola P (2016a) FCA Offers Voluntary Exit Package to Serbian Workers. *WardsAuto*, 8 July, http://wardsauto.com/industry/fca-offers-voluntary-exit-package-serbian-workers, last 21 September.

Homola P (2016b) Magna Steyr Mulls Plant in Slovenia. *WardsAuto*, 21 September, http://wardsauto.com/industry/magna-steyr-mulls-plant-slovenia, last 21 September 2016.

Ilie L (2016) Romania Seeks to Attract Further Automakers. *Automotive News Europe*, 11 July, http://europe.autonews.com/article/20160711/ANE/160719994/romania-seeks-to-attract-further-automakers-minister-s, last 15 December 2016.

Istrate M (2006) Various Articles on the Sale of Daewoo Craiova, *Bucharest Daily News*, http://tribunecontentagency.com/last 15 December 2016.

Jacobs A J (2016) *The 'New Domestic' Automakers in the U.S. and Canada: History, Impacts, and Prospects* (Lanham, MD: Lexington Books.

King N (1998) To Understand Yugoslavia's State, Visit the Yugo Plant. *Wall Street Journal*, 16 June, A12.

Lee Y (2001) *Does Geographical Proximity Matter? The Spatial Dynamics of the South Korean and Japanese Automobile Industry*. Ph.D. Dissertation (Ann Arbor: UMI).

Mackintosh J (2005) Carmakers Eye Romania Factory. *Financial Times*, 25 November, 26.

Michaels A (2008) Rating Agencies Respond after Fiat Turnround, *Financial Times*, 1 May, 21.

MINA (2008) Fiat Investing $1b into Zastava. Macedonian International News Agency, 28 July 2008, http://macedoniaonline.eu/content/view/2551/2/, last 15 December 2016.

Moberg K (1988). Cars, Parts top Yugoslavia's Export List. *Automotive News*, 2 May, 32.

OICA (1999–2016). Annual Automobile Production Statistics by Nation and Manufacturer for 1999 to 2015. Paris: Organisation Internationale des Constructeurs d'Automobiles, http://www.oica.net/, last 15 December.

Owen P (1999) Renault Profits Rise 63% as Margins Close. *Financial Times*, 2 March, 25.

Pavlinek P (2002) Restructuring the Central and Eastern European Automobile Industry: Legacies, Trends, and Effects of Foreign Direct Investment. *Post-Soviet Geography and Economy*, 43 (1), 41–77.

Pavlinek P (2015) Foreign Direct Investment and the Development of the Automotive Industry in Central and Eastern Europe, in B Galgoczi, J Drahokoupil, and M Bernaciak (eds), *Foreign Investment in Eastern and Southern Europe after 2008: Still a Lever of Growth* (Brussels: ETUI), pp. 209–255.

RAS (2016) Automotive Industry Serbia. Development Agency of Serbia. http://ras.gov.rs/uploads/2016/09/automotive-site-3.pdf, last 15 December.

Reed J (2007) Ford Looks East with Romania Deal. *Financial Times*, 13 September, 24.

Renault (2006–2016) *Renault Atlas*, 2005, 2009–2015 Editions, http://media.renault.com, last 15 December 2016.

Renault (2016) Novo Mesto, Revoz Plant, https://group.renault.com/en/our-company/locations/renault-locations/novo-mesto-revoz-plant/, last 3 November.

Reuters (1994) Daewoo to invest in Romania South Koreans in Joint Venture to Build cars for Europe. *Toronto Globe & Mail*, 11 January, B7.

Revista Business Magazine (2006) Daewoo Craiova, In Bani Marunit. 23 October, http://www.businessmagazin.ro/actualitate/daewoo-craiova-lt-br-gt-in-bani-marunti-1007236, last 15 December 2016.
Revoz (2016a) Renault Revoz Car Production 2004 to 2015, email from Corporate Communications, 2 September.
Revoz (2016b) Renault Revoz d.d. History, http://www.revoz.si/en/index.cp2, last 3 November.
Rodina V (1994) Romanian Custom Tax Makes Car a Luxury. *UPI Archive*, 8 September, http://www.upi.com last 15 December 2016.
Romania (2016) Romania—An Emerging Auto Hub, Invest Romania http://investromania.gov.ro/web/business-in-romania/automotive/ last 15 December.
Romanian Journal (2015–2016). Various Articles on Ford Craiova, 2015 to 2016, http://www.romaniajournal.ro last 15 December 2016.
Sekularac I (2016) Fiat Chrysler to Lay off 30% of Workforce at 500L Plant in Serbia. *Automotive News*, 15 June, http://www.autonews.com/article/20160615/COPY01/306159919/fiat-chrysler-to-lay-off-30-of-workforce-at-500l-plant-in-serbia last 15 December.
Serbia Today (2008–2015) Various non-byline articles on Fiat Serbia, bne IntelliNews, http://www.intellinews.com/serbia/last 15 December 2016.
Simonian H (1998) Renault still interested in Dacia. *Financial Times*, 6 October, 34.
Simonian H (1999) Renault Sights on Romanian Carmaker Dacia. *Financial Times*, 10 March, 46.
Slovenia (2016) Invest Slovenia, http://www.investslovenia.org, last 8 November.
Slovenia Times (2009–2016) Various non-byline articles on Renault-Revoz and Magna in Slovenia, http://www.sloveniatimes.com/, last 15 December 2016.
Stojanovic D (1992) Civil War Destroys Yugo Workers' Dreams. *Automotive News*, 30 November, 8.
Thompson A (2011) *Cars of Eastern Europe: The Definitive History* (Newbury Park, CA: Haynes).
Turnock D (2004) *The Economy of East Central Europe, 1815–1989* (London: Routledge).
UPI (1967) Renault Factory Set for Rumania. *Washington Post*, 9 February, D19.
Ward's (2014) *Ward's World's Vehicle Data 2014* (Southfield, MI: Ward's Communications).

Ward's (1958–2014). *Ward's Automotive Yearbook*, from 1958–2014 (Detroit: Ward's Communications).

WJS (1966) Rumania is Evaluating Offers of Western Aid in Building Car Factory. *Wall Street Journal*, 5 August, 2.

Wolchik S and J Curry, eds (2011) *Central & East European Politics: From Communism to Democracy* (Lanham, MD: Rowman & Littlefield).

Zastava (2008) *Zastava, 55 Years of Affordable Motoring, 1953–2008*, https://web.archive.org/web/20150104015944/http://zastavanacionale.com/Default.aspx?lng=en-us, last 15 December 2016.

9

Conclusions and Future Auto FDI Prospects for CE and SEE Nations

Introduction

Drawing upon the histories contemporary presented in Chapters 3–8 and contemporary data, this chapter examines the near-term prospects for passenger car production in each of the former Socialist CE nations chronicled in the book: Poland, East Germany, Czechia, Slovakia, and Hungary. It then speculates on the role SEE will play in this future. For this purpose, in addition to reviewing Romania, Serbia, and Slovenia, the outlooks for Croatia, Bosnia-Herzegovina, and Bulgaria are also discussed. In order to accomplish this task, a back-of-the envelope scoring system is offered that rates the potential for plant expansions and for attracting a new car factory (producing 150,000 to 300,000 cars per year) for each of the ten nations and East Germany. The chapter and book then closes with some thoughts regarding the future geography of auto production in Europe.

A.J. Jacobs, *Automotive FDI in Emerging Europe*,
DOI 10.1057/978-1-137-40786-3_9

Evaluating the Near-term Prospects for Passenger Car Production in the CE and SEE

Table 9.1 lists some basic 2015 labor and other data for CE, SE, and Western European auto producing nations. With the exception of the World Bank's Gross Domestic Product (GDP) and Gross National Income (GNI) per capita and the United Nations' Industrial Production Index—Manufacturing, all data were compiled from Eurostat. To match the earlier chapters of the book and World Bank reports, all figures were converted into US Dollars. The exchange rate utilized was from December 31, 2015 and was €1 = $1.09254 and again obtained from Oanda.com.[1]

Before deciding whether or not to expand their existing assembly plants or build new facilities, car companies take into consideration existing capacity constraints, plant efficiencies, projected worldwide and regional sales data, economic growth trends, bi- and multilateral trade relations, transport costs, and so on. If they decide to erect a new factory, their site selection teams detailed, in-depth evaluations utilizing schemata that include cost-benefit analyses for site preparation, proximity to target customers, supply bases, labor costs, skills, availability, productivity, and power, the quality of local infrastructure, and government's willingness to support such projects. In an attempt to mirror this process, the following criteria were utilized to evaluate each nation's attractiveness/likelihood to a new car assembly plant[2]:

1. *Labor Costs*—The desire to cut labor costs has been a prime motivating factor driving automaker plant decisions in recent years. This especially has been the case for low-margin economy/small cars produced for sale in Western Europe and Emerging Europe. As presented in Table 9.1, among CE and SEE nations, Bosnia-Herzegovina and Serbia, at $2.70 and $2.77 per hour, respectively, had by far the lowest hourly manufacturing labor costs in 2015. Bulgaria and Romania

[1] See Oanda.com (2016).

[2] The criteria and the prospects ratings in the next sections are based upon my earlier book on foreign car plants in the U.S. and Canada, see Jacobs (2016).

Table 9.1 Comparing labor in Central, Southeast, and Western Europe, 2015[a]

CE and SEE nations	Hourly labor costs total	Hourly labor costs mfg.	Industrial production index	Unemp (%)	Unemp (1,000)	% at risk poverty	GDP per capita	GNI per capita
Bosnia-Herzegovina	$4.33	$2.70	113.5	27.7	308	17.2	$4,198	$4,680
Bulgaria	$4.48	$3.71	129.5	9.1	305	22.0	$6,820	$7,220
Croatia	$10.38	$9.07	97.1	16.3	309	20.0	$11,536	$12,690
Czechia	$11.03	$10.71	121.7	5.1	268	9.7	$17,231	$18,050
East Germany	$26.83	$26.61	129.0	6.6	359	19.7	$28,533	$29,400
Hungary	$8.85	$8.52	124.1	6.8	308	14.9	$12,259	$12,990
Poland	$9.18	$8.30	123.4	7.5	1,304	17.6	$12,495	$13,370
Romania	$5.46	$5.90	134.1	6.8	624	25.4	$8,973	$9,500
Serbia	$3.29	$2.77	107.6	19.0	724	25.4	$5,144	$5,500
Slovakia	$11.36	$11.14	133.2	11.5	314	12.3	$15,963	$17,310
Slovenia	$17.15	$16.83	107.5	9.0	90	14.3	$20,713	$22,610

(*continued*)

Table 9.1 (continued)

CE and SEE nations	Hourly labor costs total	Hourly labor costs mfg.	Industrial production index	Unemp (%)	Unemp (1,000)	% at risk poverty	GDP per capita	GNI per capita
Western Europe								
Austria	$35.51	$38.24	110.7	5.7	252	13.9	$43,439	$47,120
Belgium	$44.90	$47.31	107.7	8.5	422	14.9	$40,231	$44,360
France	$39.00	$40.42	101.5	10.4	3,057	13.6	$36,248	$40,580
Germany (total)	$35.73	$41.52	110.5	4.6	1,950	16.7	$41,219	$45,790
Great Britain	$31.68	$30.92	102.7	5.3	1,747	16.7	$43,734	$43,340
Italy	$29.72	$29.94	92.7	11.9	3,032	19.9	$29,847	$32,790
Netherlands	$36.27	$38.24	103.2	6.9	614	12.1	$44,433	$48,940
Portugal	$14.09	$12.02	101.2	12.4	648	19.5	$19,223	$20,530
Spain	$23.05	$24.80	95.4	22.1	5,056	22.1	$25,832	$28,520
Sweden	$43.81	$44.79	94.5	7.4	387	14.5	$50,273	$57,810
EU 28	$28.30	$28.73	—	9.4	22,887	17.3	$31,843	$34,435

Sources: Adapted by the author from Eurostat (2016a); UN (2016); World Bank (2016).
[a] Conversion rate: €1= $1.09.

were next, with Poland having the lowest level in CE. By comparing their labor costs against one another, each of the 11 CE and SEE nations (including the States of the former East Germany as a nation) was assigned a score for Labor Costs ranging from one to five. As presented in Table 9.2, a score of five was assigned to the lowest labor cost countries (i.e. Bosnia-Herzegovina, Serbia, Bulgaria and Romania) and one to the highest (East Germany).[3]

2. *Labor Availability*—This factor takes into account the size of the available labor pool of and skills of a nation's labor force. As shown in Table 9.1, Poland at 1.3 million, had by far the most unemployed persons in the CE and SEE in 2015, followed by Serbia and Romania. The workforce of all three nations also have long histories in car production. Conversely, although Czechia's and Slovakia's ties to auto industry were just as deep as Poland, these nations received lower labor availability scores because their remaining labor reserves were much smaller and because their existing assembly plants already have experienced difficulties finding enough qualified workers (i.e., have suffered from major labor shortages).

3. *Labor Productivity*—This measure was based primarily upon the Industrial Production-Manufacturing Index (IPMI) utilized by the United Nations (UN) in their Monthly Bulletin of Statistics. It attempts to assess a nation's productivity by measuring the change in the value added of workers in the manufacturing sector over time. The UN's baseline (100) for calculating the index for 2015 was 2010.[4]

Based upon the average IPMI in the EU of around 110 and considering other productivity data from the World Bank, each nation's Labor Productivity was graded according to the following scale: 1 = <100; 2 = 100 to 109; 3 = 110 to 119; 4= 120 to 129, and 5= ≥130. As shown in Table 9.2, Romania (134.1) and Slovakia (133.2) had the highest IPMI and received scores of five and Croatia (97.1) had the lowest IPMI in CE and SEE and was assigned a score of one. Only Italy, Sweden, and Spain had lower figures. Bulgaria (129.5) and East Germany (129.0) received

[3] Unless otherwise noted, all labor costs and availability data were obtained from Eurostat (2016a).
[4] See UN (2016).

Table 9.2 CE and SEE labor, accessibility, and government attractiveness for car plants

	Labor			Access to		Government	
Nation	Costs	Availability	Productivity	Customers	Suppliers	Capacity	Motivation
Bosnia-Herzegovina	5	3	3	2.5	5	2	5
Bulgaria	5	3	4.5	2	1	2	5
Croatia	3.5	3	1	3.5	5	3	5
Czechia	3	1	4.5	4	5	5	2
East Germany	1	3	4.5	5	5	5	3
Hungary	4	2	4	3	5	5	3
Poland	4	5	4	3.5	5	5	5
Romania	5	4	5	1	3	3	4
Serbia	5	4	2	2	5	2	5
Slovakia	3	1	5	3	5	5	3
Slovenia	2	2	2	4	5	5	3

Note: Scale of 1–5, with 5 the highest score.

scores 4.5 because their IPMI were effectively 130. Czechia was awarded a bonus of +0.5 for producing the second most cars per capita in the world behind Slovakia.

4. *Access to Customers*—Utilizing Eurostat population data, the 30 largest urban areas in the EU were identified.[5] A total of 28 of two million or more in population. Since most cars were shipped to market by rail or truck, each nation was evaluated based upon their distances from these largest 30 customer markets. This also required identifying available sites in each country that potentially could host a new car plant. This was accomplished by a search of the Invest Promotion Agency's databases of all 11 CE and SEE nations targeting only shovel-ready 200-hectare or larger tracts that were/could be reasonably served by road and rail infrastructure. These attributes were considered necessary to quickly accommodate a full-fledged car assembly plant complex. Highly touted sites that have unsuccessfully competed for assembly plants in the past were also included.

Once three top sites per nation were determined, driving distance was measured to each of the 30 largest urban areas. Cities were considered accessible if they were within 1,200 km (750 miles) and 12 hours (one-day truck drive) of the potential site. If there were significant differences within nations, the score for the most accessible site was utilized.

Once accessibility sums were compiled for the 11 nations, a mean and standard deviation was calculated to create a scale. The average score among the 11 nations was 13.73 markets, with East Germany receiving a five—24 markets were within 1,200 km/12 hours—and Bulgaria received a one—only two of 30 urban areas were within this distance. Scores then were adjusted ±0.5 based upon: the EC World Economic Forum's surveys evaluating each nation's road, rail, air, and water transportation networks; and on-site field observations and map.[6]

5. *Access to Existing Suppliers*—Each nation's top sites also were evaluated for the speed in which a new final assembly plant could receive

[5] See Eurostat (2016b).

[6] See EC (2016) for country infrastructure ratings.

the necessary automotive components to assemble a car. Therefore, similar to access to customer markets, each site was scored based upon its proximity within 1,200 km of existing automotive components clusters and car assembly plants. CE is already densely packed with suppliers and most sites in the region, as well as many in SEE, have excellent accessibility to components supplier sheds (and will attract their own). As a result, nine of the 11 nations scored a five on this measure. Only the southeastern most countries of Romania and Bulgaria scored otherwise, with both losing points for their very lowly regarded transportation infrastructure as per EC surveys (See Table 9.2).

6. *Government Capacity*—This measure was based upon an evaluation of a central government's political stability, economic capacity (GDP), historical involvement in recruiting foreign automakers, and of its willingness to subsidize a new car plant (based upon both past activity and newly adopted incentive programs). With their stable governments, expanding GDPs, extensive collective histories of recruiting foreign automakers, and aggressive incentive programs, all four CE nations and East Germany received scores of five in this category. Slovenia also received a five because of its one existing car plant (possibly two) and its relatively higher GDP per capita of $20,713. Conversely, Bosnia-Herzegovina, Bulgaria, and Serbia received scores of two in Government Capacity. Romania's two existing plants helped raise its score to three.[7]

7. *Government Motivation*—Based upon the unemployment data, percent at-risk poverty, and GNI per capita rates presented in Table 9.1, this measure attempts to assess the factors that induce national governments to compete for foreign automaker plants no matter the subsidy costs.[8] Poorer nations with the highest vulnerable populations and the lowest GNI per capita therefore, received the highest scores in this category. Poland also received a five for two distinct reasons. The first is the fact that its number of unemployed persons was far greater than any of the 11 nations. The second is because it is highly

[7] GDP data obtained from World Bank (2016).

[8] Unemployment and poverty were obtained from Eurostat (2016a). GNI data were obtained from World Bank (2016).

motivated to lessen the sting of its three recent competitive losses to Slovakia (JLR), Hungary (Mercedes-Benz), and Czechia (Hyundai).

Based upon the scores of these seven factors and other considerations, the next section provide near-term future outlooks for each of the ten CE and SEE nations and East Germany.

Ranking the Near-term Prospects for Auto FDI in CE

What are the near-term prospects for new foreign passenger car plants and existing capacity expansions in CE and East Germany? The following descriptions and Table 9.3 present speculative ratings for these nations and six other in SEE. These ratings, however, are not purely a numeric summation of the seven categories from Table 9.2. Rather, they consider all seven factors within the contemporary and future context for automobile production in Europe and worldwide (i.e., the potential need for capacity expansions within the EU, impending expansion of the EU and expected production shifts in response to cost cutting and competitiveness, etc.). Each nation's near-term prospects for new factories and for expansion of existing ones are rated separately and as either

Table 9.3 CE and SEE near-term prospects for new car plants and expansion

	Prospects rating for:	
Nation	New plant	Expansion
Bosnia-Herzegovina	Fair	NA
Bulgaria	Very Low Fair (Small)	Fair
Croatia	Good	NA
Czechia	Low	High
East Germany	Low	High
Hungary	Good	High
Poland	High	Fair
Romania	Fair High (Small)	Good
Serbia	Fair	Fair
Slovakia	Fair	High
Slovenia	High	Fair

Note: (Small) is prospects for a small/economy car plant.

high, good, fair, low **or** ***very low***. Mirroring the book chapters, the descriptive summaries to follow proceed begin with Poland.

Poland

As described in Chapter 3, Poland's three current passenger car factories—Fiat Tychy, Opel Gliwice, and VW Poznan—produced a combined 534,700 passenger cars in 2015. This represented a 228,208 or 74.46% increase as compared with the last year of Socialism, 1989.

One of Poland's most attractive qualities is its numerous shovel-ready parcels of 200 ha (494 acres) or more that could accommodate a new car factory. Most notable among these are tracts in the highly incentivized, nationally designated SEZs of Katowice, Legnica, Pomeranian, and Wałbrzych. Depending upon the number of jobs they create, firms locating in SEZ can qualify for substantial income, value-added, and property tax exemptions, as well as land, capital equipment, and job training subsidies.[9]

Wroclaw in Legnica and Jawor in the Wałbrzych SEZ are among the most prominent subareas within these multi-provincial regions. Wroclaw competed for the recent Mercedes-Benz Kecskemet expansion and Jawor for three others and currently hosts a Daimler engine plant. All four SEZs have excellent access to customer markets and supplier clusters, within a 1,200 km drive of 18 of Europe's 30 largest metropolitan markets and more than 20 existing car plants in CE and West Germany. Finally, these SEZs are within 650 km (406 miles) of the Baltic Sea Port of Swinoujscie, with the 390-hectare (963-acre) publicly-owned Stargard Szczecinski Kluczewo Site in the Pomeranian SEZ being only 120 km (70 miles) from the port.

In addition to its SEZ, other potential advantages for Poland are its labor pool of 1.3 million unemployed workers and its average manufacturing labor costs of $8.30 per hour. This means it has both the largest reserve labor force and the lowest manufacturing labor costs among CE nations. Moreover, the Polish Government has a long history of working with and subsidizing foreign automakers. As a result, Poland's Labor Availability, Access to Suppliers, and Government

[9] See PAIiIZ (2016).

Capacity and Motivation factors all received scores of five in Table 9.2. Conversely, from a purely market-oriented viewpoint, its competitive disadvantages are its relatively active labor unions and below average road network, with the latter ranked in EC surveys as 24th out of 28 EU nations and the worst in CE. Although the central government is working feverishly to upgrade its national highway system, its infrastructure shortcomings slightly lowered its Access to Customer Markets score from four to 3.5.

Overall, as presented in Table 9.3, Poland's advantages clearly outweigh its disadvantages, suggesting that it prospects are ***High*** for landing a new foreign car factory in the next five to ten years. A site in Lower Silesia Province (Jawor or Wroclaw) is the most likely destination for this new plant. On the other hand, Poland's prospects for existing car plant expansions are only **Fair**. Whereas GM has recent promised to expand Opel Gliwice, the steady decline in output at Fiat Tychy during the 2010s and VW's Diesel Crisis may inhibit the nation's overall net growth in passenger car output in the near-term.

East Germany

As discussed in Chapter 4, the former East Germany's five current car plants—VW Dresden and Zwickau, Porsche and BMW Leipzig, and Opel Eisenach—collectively produced 819,427 passenger cars in 2015. This total represented an increase of 606,223 or 284.34% as compared with 1989 and a gain of 397,177 or 94.06% as compared with 2001. A number of factors suggest this growth may continue in the near future, albeit much more slowly.

First, at $26.61, East Germany has by far the highest hourly labor costs in manufacturing among CE and SEE nations (See Table 9.1). Conversely, it has the best road network and accessibility to consumer markets and supplier sheds, and one of the most productive industrial labor forces among these nations (See Table 9.2). Considering that the State of Saxony already has four car factories and Thuringia one, the States of Brandenburg, Mecklenburg-Western Pomerania and Saxony-Anhalt appear better bets to get any new plant. All three states are keen

to land their own car plant and have prime sites that could readily a full-fledged production complex.

Saxony-Anhalt has the most competitive sites, with tracts in Halle and Magdeburg especially attractive because of: their state's higher than national average unemployment rates, which will enable it to offer higher incentives than other areas: their location adjacent to the Saxony Triangle (Leipzig-Dresden-Chemnitz); and Halle/Saxony-Anhalt's prior involvement in the recruitment of BMW to Leipzig.[10] BMW also considered sites in Berlin and Erfurt, Thuringia. Nonetheless, whichever of these eastern Germany states takes the lead, it can be expected that the federal government also will be highly involved in the process, especially if the competition is for a factory of a German automaker. In other words, its Government Capacity and Motivation to secure a new auto plant warrant scores of five.

Overall, as presented in Table 9.3, the former East Germany's advantages clearly outweigh its disadvantages. Nonetheless, wage issues suggest that it has a ***Low*** chance of landing a new foreign car factory in the next five to ten years. On the other hand, despite the mixed future outlooks of its five plants, prospects for net expansion among its existing car plants are ***High***. This growth will be led by its two Leipzig factories. On the other hand, the outlooks for VW Zwickau and Dresden are clouded by their parent company's worldwide diesel crises. This may prompt VW to shift some of its Zwickau Golf or Passat production to its lower cost outposts in Czechia, Hungary or Spain, or to re-open its dormant Sarajevo plant in Bosnia-Herzegovina. VW recently lessened some of these concerns by announcing plans to build EV in Dresden and Zwickau and by forging an agreement with its German unions to limit layoffs nationwide through 2025. Its lower cost eastern German plants should benefit most from this accord. Meanwhile, Opel Eisenach seems to have stabilized, although GM's continues its never ending quest to reshuffle the location of some models to cut labor costs. This was again evident in its recent announcement plans to send Opel Corsa and Adam economy car production to Spain in exchange for Mokka CUV output.

[10] See Saxony-Anhalt (2016); labor costs, unemployment, and poverty data for the former East Germany were adapted by the author from DeStatis (2016) and Saxony (2016).

Czechia

As discussed in Chapter 5, Czechia's four current car plants—Skoda Mlada Boleslav and Kvasiny, TPCA Kolin, and Hyundai Nosovice—collectively produced 1.14 million passenger cars in 2015. This output represented an increase of nearly 1.06 million or 577.77% as compared with the state-owned AZNP's (Skoda) plants including Vrchlabi in 1989 and a rise of 803,915 or 183.90% as compared with 2001. Growth was expected to proceed full-speed ahead toward the present four factories' annual capacity of 1.43 million cars by 2020, meriting Czechia a ***High*** rating for its prospects for plant expansion in Table 9.3.

Czechia has a highly productive and skilled workforce, and although its manufacturing labor costs are slightly higher than average for the CE, these costs remain approximately one-fourth of that in Germany and less than one-half of that in eastern Germany. Compensation is even lower at automotive supply firms. Czechia also has a stable political-economic context, a long history in the auto industry, and several dense automotive components clusters that could supply new car operation. Additionally, although below Western European levels, its transportation network is considered by EC Forum survey as the best in the CE outside of East Germany; Czechia was rated 21st out of 28 in roads, but 12 in rail quality. Planned enhancement should improve this ranking.

For example, when the important D8/E55 motorway corridor is completed between Prague and Dresden/Saxony, it will improve import-export movements between Skoda's factories in Central Bohemia and VW's facilities in eastern and central Germany. Originally planned for completion in 2015, the last segment between Bilinka (Exit 52) and Rehlovice (exit 64) was delayed by protests from environmental groups, cost overruns, and a major landslide.[11] Still, this problem should be ameliorated in the immediate future and has not significantly inhibited automotive FDI into the country.

In contrast to its many strong points, Czechia has the lowest unemployment and poverty rates in the CE-SEE and the highest GNI per

[11] For motorway and site information in Czechia see Czechia (2016a, 2016b).

capita. As was the case with the competition for JLR, this suggests its government will be less motivated than others in the region to participate in an all-out bidding war over a new car plant. With four factories already pumping out cars, it might be better served to help subsidize expansions of existing facilities rather than chase a new plant. Nonetheless, to improve its competitiveness, on May 1, 2015 the government amended national regulations to broaden the scope of incentives it could offer FDI projects.

Czechia's biggest disadvantage and the primary reason why it prospects for a new car plant are rated as ***Low*** in the near-term is its chronic labor shortages. With only 268,000 actively unemployed persons in the country, the labor market is probably too tight to accommodate a new assembly complex. On the other hand, Czechia's Moravia-Silesia and Usti nad Labem Regions both have above average unemployment rates to go along with labor costs that are more similar to Poland and Hungary. Whereas Moravia-Silesia already hosts Hyundai and abuts Poland's Silesian Auto Agglomeration (Bielsko-Biala, Gliwice, Tychy), Usti sets on the country's northwestern border with Germany's prosperous Saxony Triangle, providing ready-made access to important supplier sheds. Korea's Nexen Tire also recently broke ground on a 1,000-worker plant in Zatec, Usti. In sum, Czechia's advantages remain far too attractive for any automaker not to at least take a serious look at sites in a country with a more than 110-year history in the auto industry.

Slovakia

As discussed in Chapter 6, Slovakia three current car plants—VW Bratislava, PSA Trnava, and Kia Zilina—collectively 1.0 million passenger cars in 2015. This represented a similar size increase from 1989, when no cars were assembled, and a gain of 818,357 or 450.43% as compared with 2001, when only VW Bratislava built cars. JLR Nitra is scheduled to become Slovakia's fourth car factory in late-2018 and ramp up national output to at least 1.15 million by 2020. These facts alone resulted in Slovakia receiving a ***High*** rating for its prospects for existing plant expansion (actually Very High).

Nevertheless, Slovakia has numerous other attractive features. First, its industrial labor force is not only the most productive in the CE based upon IPMI (133.2), but also continues to produce more passenger cars per-capita population than any other nation in the world. In fact, at 184 cars per-capita it easily outdistanced Czechia's second place of 118 per-capita. Second, although at $11.14 Slovakia has the highest manufacturing labor costs in CE, these costs remain only about 27% that of Germany and less than half that of eastern Germany. Next, the nation has a stable political-economic context and its own dense automotive supply chain, with more than 300 Tier-I and Tier-II components manufactures and access within 300 km (186 miles) to major clusters in Poland, Hungary, and Austria.

Finally, since its adoption of its 'Program for the Development of the Automotive Industry' October 1998, the Slovak Government has played a highly active role in developing its automobile industry. It has done this by offering large incentive packages to recruit new foreign car plants and components manufacturers, as well as subsidizing existing plant expansions, building industrial parks, and upgrading transportation infrastructure (See its score of five in Table 9.2). Its aggressive determination was clearly evident in the competition for JLR, which it grossly outbid its neighbors to lure the factory to its declining Nitra Region.

In contrast to its many strong points, with only 314,000 unemployed persons in its active workforce, Slovakia's car plants continue to suffer from chronic labor shortages. As a result, similar to Czechia, its factories recruit workers from other parts of Emerging Europe. Moreover, Slovakia still suffers from a very unequal distribution of wealth and resources, which is evident in a number of socio-economic indicators and its infrastructure. In all cases the eastern part of the country is far less advantaged as compared with western sections of the country.

As a result, despite having an above average rail network, Slovakia ranked 22nd among 28 EU nations in EC surveys for its road quality. Until this is remedied, particularly the completion of east-west motorways extending from Zilina to Presov (D1/E50) and possibly Bratislava to Kosice (planned R7 and R2), only the Trencin Region is truly well-served enough to host a major car complex (and perhaps Banska Bystrica). Eastern Zilina also has the capacity, but Kia has an agreement

with the Slovak Government which prohibits another car factory from locating within 100 km (62 miles) of its plant (See Chapter 6).[12]

In should be noted that because of their proximity Kosice's U.S. Steel factory, Presov was in the running for the BMW Leipzig Plant and Kosice was rumored to have been considered for Mercedes-Benz Kecskemet. However, both eastern sub-regions remain greatly underserved by transport infrastructure, making their accessibility to Europe's largest customer markets less than competitive with other prime sites in CE and SEE (See Slovakia's access rating in Table 9.2). Therefore, at this time it seems premature for the Slovak Government to throw hundreds of millions of dollars in subsidies at a fifth car factory. Similar to Czechia, it would be better served to expend these monies toward expansions of existing facilities.

Overall, its combination of chronic labor shortages, new plant in Nitra, and highly uneven inter-regional development patterns suggest Slovakia's near-term prospects for attracting a fifth car factory are only ***Fair***. On the other hand, it would not be totally surprising if its government ignores these warnings and lands a Chinese manufacturer in the near future. Such rumors have circulated recently, as well those suggesting Slovakia is competing with Hungary over a possible new BMW Plant. If so, Trencin or Presov could be the location, with the government finding the funds to both subsidize and build the necessary infrastructure to service the project ahead of schedule (ex. complete D1 to Ruzomberok before its planned 2019).

Hungary

As discussed in Chapter 8, Hungary's three car factories—Suzuki Esztergom, Audi Gyor and Mercedes-Benz Kecskemet—produced a combined 528,785 passenger cars in 2015. Mercedes-Benz also will add a second 150,000-capacity assembly hall in Kecskemet by 2020.

[12] For motorway, site, and regulation information in Slovakia see SARIO (2016a, 2016b); Slovakia (2016).

This represents an increase of 386,089 or 270.57% from 142,696 in 2001. No cars and only 17,000 commercial vehicles were produced in Hungary in 1989. Additionally, Opel Szentgotthard and Audi Gyor produced more than 2.5 million automobile engines in 2015.

The Audi and Mercedes plants both have very bright near-term futures, although Audi's outlook is clouded by VW's Diesel Crisis. Conversely, the future prospects of Suzuki Esztergom depend upon heavily on whether or not Suzuki produce enough cars on its own, as the plant has historically also built Opel, Fiat, and Subaru cars through partnerships with those automakers. The Japanese automaker did, however, produce 185,333 Suzuki brand vehicles at the factory in 2015. This growth coupled with Suzuki's recent technology tie-up with Toyota may help put the Magyar plant on more solid footing, although Toyota has its own small car joint venture factory with PSA in Czechia. Nonetheless, as shown in Table 9.3, Hungary's overall prospects for expansions of its existing passenger car plants grade as ***High.***

As to whether or not Hungary can attract a new car plant over the next five to ten years, that potential appears ***Good***. The country's workforce is skilled and highly productive, and at $8.52 an hour has manufacturing labor costs significantly lower than in Slovakia and Czechia, as well as Slovenia and Croatia.

Additionally, Hungary's rail and water transportation network are well developed, although road and highway infrastructure are only average as compared with other CE nations. Magyar Suzuki certainly could use better motorway connections in the rural north than it presently has. Nonetheless, Hungary's central location provide any new factory with excellent access to numerous automotive supply clusters and average access to customer markets, although not on par with Czechia, East Germany, Poland, and Slovenia.

Finally, the Hungarian Government warrants a rating of 5 for its track record of successfully attracting Automotive FDI with large incentive packages, even drawing the rebuke of the EC's Competition Committee. It now plans to focus its efforts on improving conditions in industrially underdeveloped areas with high levels of unemployment. As a result the government has begun offering larger incentive packages to businesses willing to locate in the country's Northern Hungary (Miskolc), Southern Transdanubia (Pecs), and Central Transdanubia Regions (Szekesfehervar,

Esztergom, and Fejer), among others. The latter area of is especially attractive as it already hosts an ample supply of automotive related factories.[13]

This positive outlook is only potentially inhibited by two issues: (1) years of emigration to Western Europe that has resulted in industrial labor shortages; and (2) the quality of its road infrastructure which ranked 20th in the EU. Whereas the latter may slow deliveries, the former recently has provoked wage increases at existing plants. Neither issue, however, prevented Daimler from doubling its commitment in Kecskemet in 2016, nor BMW short-listing the country for a possible new car plant. Moreover, the Hungarian authorities have stated that they hope to overcome their labor and transport deficiencies in the near future. As part of this objective they plan to enhance highway networks to encourage workers from more distant regions to accept positions at existing factories. Additionally, they have committed to expanding housing and school options near existing plants to enable workers with families to move closer to work.

If these goals are achieved, then Hungary's only challenge to continuing its future growth in car production will be enhanced competition from lower wage nations in Europe's next ring of auto producing nations, the SEE Auto Zone.

The Next Ring: Ranking the Near-term Prospects for Auto FDI in the SEE

This section provides near-term prospect ratings for new foreign car factory construction and existing plant expansions in the SEE Auto Zone, namely, Romania, Serbia and Slovenia, as well as in Bosnia-Herzegovina, Bulgaria, and Croatia. The only difference is that Romania and Bulgaria both have an extra rating related to their chances of attracting not just any full-fledged auto factory, but one specifically building small economy cars.

[13] See HIPA (2016).

Romania

As presented in Chapter 8, Romania's two foreign car assembly plants—Renault's Dacia Pitesti and Ford Craiova—produced 387,171 passenger cars in 2015. This represented an increase of 330,397 or 581.95% as compared with 2001, but was only 227,171 or 141.98% more than were assembled by the state-owned factories in 1989.

As shown Table 9.1, according to the UN's IMPI indicator, Romania has the most productive workforce in either SEE or CE. It also has among the lowest manufacturing labor costs in Europe at $5.90 per hour. This along, with its supply of industrial workers made the Transylvanian commune of Jucu a finalist for the original Mercedes-Benz Plant that went to Hungary in 2008. Daimler claimed to have selected Kecskemet over Jucu's Tetarom III Industrial Park in northern Romania's Cluj County for a number of reasons, most importantly because of Hungary's more developed highway network and its more central location; the giant components manufacture Bosch eventually landed in Tetarom III. Instead, Daimler opened a new nine-speed transmission factory two hours south in Sebes, Alba County. Since 2001 the German automaker also has a gearbox plant in Alba County in Cugur. The Cugur facility's success is what encouraged Daimler to consider Romania for a car plant.

Although it has not discouraged Renault expansions at Dacia Pitesti, a major drawback for Romania remains its transport infrastructure, which EC surveys rated as 28th among 28 nations in the EU in terms of road quality and 27th for its railroad infrastructure. For example, several issues have delayed the completions of Romania's National Motorways A1 and A3. These include: economic difficulties stemming from the 2009 Great Recession; austerity measures imposed on the country by IMF aid; and environmental issues related to the projects. As a result, only 360 km (225 miles) of the 576 km (360-mile) long A1 and just 110 km (69 miles) of the 603 km (375-mile) A3 were in service as of December 2016.[14]

[14] For this section see Deloitte (2016); Romania (2016).

To help rectify this situation, on July 23, 2015, the EC approved Romania's plan to spend $47.6 billion by 2030 toward improving its transportation infrastructure, including $14.5 billion for highways. Since A1 also is a high priority segment within the Pan European IV Corridor and Romania's GNI per capita is less than 90% of the EU average, the project qualified for up to 85% funding from the EU Cohesion Fund. When completed in 2020, A1 will run northward through/near Pitesti and Sibiu, where it conjoins E68 westbound to Sebes, Timisoara, and Arad before terminating at Hungary M43 in Mako. M43 then continues on to M5/E75 in Szeged, which itself proceeds northwest to Kecskemet and the M0 Budapest Bypass. E75 then follows the bypass to M1/E60, where all three conjoin then flow west to M15 in Gyor and then north to Bratislava.

Meanwhile, when A3/E60 is completed in 2018, it will travel from Bucharest northwest to Turda (Cluj County) and then west past Oradea to the border near Nagykereki, Hungary. A planned Hungarian highway will then connect to M4/E60 which connects with M1 and then E75 in Budapest before proceeding to Gyor. Once the motorway reaches Gyor, M1/E60 splits off from E75 and travels west to the Hungarian/Austria border near Hegyeshalom and then follows Austria A4 to Vienna. When fully operational, the massive Romania A3 to Austria A4 project will cut travel times between Bucharest and Vienna from 12 to nine hours. E60 then conjoins Austria A1 to Regensburg, Germany (BMW Plant) and points west. In other words, the international highway will greatly improve Romania's present and future car plants' access to CE and Western Europe markets and suppliers.

Overall, despite management threats from Renault that continued rising wages will push some Dacia output to its new Morocco Plant, relatively very low labor costs coupled with very at-risk high poverty rates (25.4%), a highly productive workforce, and major planned improvements to its highway infrastructure suggest that Romania has a ***Fair*** chance of attracting a full-fledged new car factory in the near-term. Its prospects for securing an economy car plant during this period, however, are ***High***. A1 and A3 will be key, with Alba, Arad, Cluj, and Timis (Timisoara) Counties all potential locations for this facility. In fact, Daimler already has reserved a 130-hectare site in Sebes for an

expansion, and rumors suggest that the Romanian Government is already in negotiations with another unknown foreign automaker about a potential car plant in the country.

Serbia

As presented in Chapter 8, Serbia's FCA (Fiat) Kragujevac assembled 91,895 cars in 2015, an increase of 84,227 or 1,098.42% as compared with just 7,668 in 2001. Nonetheless, this output was still only roughly half the 180,950 built by the former state-run Zastava in 1989.

The former Yugoslav republic's extremely low hourly manufacturing labor costs of $2.77, relatively low taxes, high unemployment rate of 19.0%, substantial unemployed labor pool of 724,000 workers in 2015, and long history of car production provide an attractive climate for any foreign automaker. In addition, Serbia has a sizeable automotive supplier base that includes a growing number of large foreign components manufacturers situated along the A1/E75 Motorway that connects the country with other large clusters in Hungary, Slovakia, and Poland. Finally, the government is highly motivated to subsidize industrial developments, as it must address its nation's economic difficulties including an at-risk poverty rate of 25.4%.[15]

Negative factors weighing against Serbia winning a new plant are its lower than average labor productivity, its distance from major urban customer markets, and its historical and present political differences with other former Yugoslav republics and the EU. Serbia is still trying to claim sovereignty over Kosovo, reminding the EU of the horrific legacy of Yugoslavia's Civil War. As a result, although it applied for membership in December 2009 and began negotiations in January 2014, several issues have delayed Serbia's accession into the EU until at least 2020. Among these are Croatia and Kosovo's opposition to Serbia's accession, its slow progress in achieving normalization with

[15] Data on Serbia were obtained from Serbia (2016); for site information, see RAS (2016).

Kosovo, and the need for further politico-administrative, public finance, and economic reforms.

Serbia, however, does have a Stabilization and Association Agreement with the EU (since 2013) which grants, if all conditions are met, free trade by 2019; tariffs on some automotive components ended in 2015. It also has trade agreements with Russia, other Eastern European nations, Turkey, and America. Nevertheless, until some official notification of its full acceptance into the EU is forthcoming, Serbia's prospects for a new car factory and for an expansion at Fiat Kragujevac both remain ***Fair.*** When this occurs, these prospects should improve greatly, with Vojvodina Province in the northern part of the country being the most likely candidate for a new assembly plant. This includes tracts near: A1/E75 and/or E70 in the Dobanovci-Surcin Area by Belgrade Airport; Novi Sad, Ruma, and Sombor.

Slovenia

As discussed in Chapter 8, Slovenia's Renault Revoz Novo Mesto Plant produced 129,405 passenger car in 2015, an increase of 13,323 or 11.48% as compared with 2001, and nearly triple its output of 46,000 in 1989. An EU member since 2004, Slovenia also made headlines on September 21, 2016 when the giant automotive components and contract carmaker Magna announced that it was considering building a car plant in Hoce-Slivnica. Poland's former FSO Warsaw-Zeran site, and an unknown greenfield in Hungary also were considered contenders. Located near Maribor in eastern Slovenia, the Hoce-Slivnica SEZ sets only 77 km (48 miles) south of Magna's car factory in Graz, Austria and just 122 km (76 miles) northeast of Revoz. With nearby built in suppler networks serving these plants, Hoce-Slivnica it perfectly situated for the new plant.

In addition, besides its proximity to Western Europe, Slovenia has several other competitive advantages supporting its case for a new car plant. First, its road network is more highly regarded than its CE neighbors, ranking 19th in the EU. Second, its government has a long history with dealing with Western automakers through Renault Revoz.

Finally, although its labor costs are significantly higher than in the CE, they remain less than half labor costs in Austria and less than two-thirds those in the former East Germany. Working against it is the fact that its labor force is small, its productivity is average, its rail network needs upgrading, and its economic indicators are well above its peers. This suggests that its government may not be as motivated as other nations to break the bank for a foreign car plant.

Nonetheless, Slovenia provides an attractive option for luxury carmakers or models with higher margins relative to Western Europe, suggesting its prospects to land a facility are ***High.*** In addition to Hoce, Ljubljana, and a site near the Adriatic Seaport Koper Free Trade Zone are potential locations for such a factory.[16] Conversely, as a result of its high labor costs, the prospects for Renault expanding its Revoz economy car plant are just ***Fair***.

Croatia

Croatia does not currently have a passenger car factory, but has a well-established history in automotive components production dating back to Socialist Yugoslavia; the domestic producer Rimac Automobili does build the electric supercars at a rented facility in Sveta Nedelja near Zagreb. Outside of Zagreb, the country's largest components clusters are in Nova Gradiska, Slavonski Brod, Split, all of which supply Fiat Serbia and Revoz as well as plants in the CE.[17]

Croatia is strategically located, has road infrastructure rated 10th best in the EU by EC survey, and has two Adriatic cargo/container seaports in Rijeka and Ploce. These factors provide any carmaker locating in the nation with above average proximity to customer and supplier markets. Although its workers are rated as much less productive, they are well skilled, have relatively high levels of educational attainment, and have labor costs on par with CE nations. Finally, Croatia has an unemployment rate of 16.3% and an at-risk-poverty rate of 20%, suggesting that

[16] For site information see Slovenia (2016).
[17] See AIK (2016) and HAMAG (2016).

its government may be highly motivated to subsidize a new foreign car plant. Having just achieved accession to the EU on July 1, 2013, any such efforts would be broadly supported by EU Structural Funds.

Conversely, the government needs to significantly upgrade its nation's air and rail infrastructure, which ranked 25th and 26th, respectively in EC surveys. A lack of a history building cars might actually be an attractive point for some Asian automakers, as they generally prefer to be the only game in town. Overall, Croatia's prospects for attracting a car factory in the near-term appear **Good**, with Zagreb and the aforementioned existing three supply areas as possible locations for a plant.

Bosnia-Herzegovina

Bosnia-Herzegovina (Bosnia) does not currently have a car plant, although that may change very soon. The area does, however, have a notable history for producing foreign cars dating back to 1965. It was then that NSU of Neckarsulm, West Germany expanded its joint venture with the state-run Pretis to include Prinz 1000 cars. The two firms had originally launched assembly of NSU motorcycles in 1957 at a former armaments plant in Vogosca, Sarajevo *Canton* (State), situated just north of the City of Sarajevo. The Pretis-NSU arrangement lasted until 1970 and then was taken on by NSU's new parent company, VW, in March 1972. The new 49/51 collaboration between VW and the state-run conglomerate UNIS was renamed Volkswagen *Tvornica Automobia Sarajevo* (VW TAS) and plans were made to fully utilize the 150,000-capacity plant over time. This never came to pass, as over the next 20 years the 'Car Factory Sarajevo' only built 350,000 vehicles in total, including 15,000 in 1989. When production was a suspended at VW TAS in April 1992 because of the Yugoslav War, the facility was building VW Caddy pickups using equipment transplanted from the German automaker's ill-fated Westmoreland Assembly in Pennsylvania, USA (See Chapter 3).[18]

[18] See Thompson (2011) for some history on car production in Bosnia & Herzegovina. Socio-economic data was obtained from BHAS (2016). For site information, see FIPA (2016).

The Sarajevo plant remained dormant until October 1997, when VW announced that it was re-opening the facility to assemble KD kits of Skoda Felicia prepared in Czechia. This commenced on August 31, 1998, with VW building 1,400 at its now 58% controlled, 400 worker VW Sarajevo in that year. Output year and continued until June 2008, but never surpassed 3,500 in any given. It was then mothballed again as a result of the Bosnian Government's lifting of duties on imported cars.

Since 2010, VW Sarajevo has built automotive chassis components and Bosnia's supplier base and related subsectors have gradually regained their pre-Yugoslav War footing. As a result, VW has on a number of occasions debated the idea of again re-establishing car production in Sarajevo. With the massive cost-cutting targets emanating from the company's diesel crisis, some insiders expect that the Bosnia facility will re-commence assembling of cars before 2021. The size of this endeavor remains unknown at this time.

Bosnia certainly needs such a development, as in 2015 it had the lowest hourly manufacturing labor costs, and GDP and GNI per capita among the 11 CE and SEE nations. It also had the highest unemployment rate at 27.7%. To help improve this situation, the government began talks with the EU over a Stabilization and Association Agreement in 2007. This accord, however, did not go into effect until June 1, 2015. This means that the nation is now a potential candidate, but will not become an EU member for several years to come. Infrastructure upgrades, political-economic reforms, and normalization with Serbia are still needed to make the Bosnian context more attractive to VW or another automaker. For these reasons, Bosnia's near-term prospects for landing a full-fledged foreign car plant are considered ***Fair***. If not VW Sarajevo, possible locations for such an operation include Mostar in Herzegovina-Neretva Canton and Banja Luka in Srpska Republic. The latter two areas hosted bus factories in the Socialist Era.

Bulgaria

Bulgaria currently hosts a small light vehicle plant in Lovech Province that is jointly-run by the Sofia-based Litex Motors and China's Great

Wall Motors. The joint venture agreement was signed on October 15, 2009 and construction of a $120 million, 50,000-capacity facility on a 500-hectare tract in Bahovitsa village began later that year. Output at Litex Bahovitsa commenced on February 21, 2012 when the first Great Wall Voleex C10 supermini KD kits were assembled. A pickup and SUV were added in 2013 and continued until 2015 output of the Voleex was discontinued at the plant. Litex assembled approximately 2,000 vehicles in 2015 before production was suspended in January 2016, and not yet been restarted as of December 2016.[19]

The Bahovitsa facility near Lovech is not connected to the Balkan Motors Lovech plant that began producing KD kits of Soviet Moskvich 408 in November 1966. Output at Balkan Lovech peaked at approximately 16,000 in 1984, with approximately 15,000 assembled annually in 1989 and 1990, when the last of 304,297 cars were produced. Among the cars built at the state-run Balkan plant were 758 units of the Pirin Fiat 850 which were assembled between mid-1967 and September 1971 through an agreement with the Italian automaker.

Two other known Bulgarian facilities produced foreign cars during the past 50 years. First, a plant in Plovdiv assembled approximately 6,000 licensed Renault 8 and 10 between February 1967 and 1970 that were marketed in the Eastern Bloc as Bulgarrenault. Second, and more recently, BMW in collaboration with domestic importer Daru assembled approximately 2,200 Rover Maestro KD kits at their Rodacar Varna Plant near the Black Sea between July 1995 and April 1996. The last 985 of these were built in 1996.

Chinese vehicle makers seemed to have found a home in Bulgaria, an EU member since 2007. JAC Motors was considering building an EV plant in the country and BYD already is preparing to produce electric-buses in Breznik, situated near the Serbian border. Despite its far-flung distance from Western Europe, Bulgaria has become attractive to Chinese because: (1) it has one of the most productive industrial

[19] For information on Litex, see Great Wall (2016). For some history on car production in Bulgaria, see Thompson (2011). For site and infrastructure information, see Bulgaria (2016); Deloitte (2016).

workforces in Emerging Europe; (2) it manufacturing labor costs remain extremely low at just $3.71 an hour; (3) the government has lowered taxes and appears willing to subsidize industrial developments; and (4) it became an EU member state on January 1, 2007; and (5) it recently voted to convert its currency to the Euro by 2018. In contrast, due to it being such a low-income country, with the 9th lowest GDP and GNI per capita among the 11 nations studied, Bulgaria continues to be plagued by poor infrastructure. Not surprisingly, EC surveys rated its road network as 25th among 28 EU nations and its fair rail infrastructure as 22nd, although the latter rates as the best in the SEE.

Overall, Bulgaria's near-term prospects for a new full-fledged car plant are **Very Low**, but its outlooks for a new economy car plant and for an expansion by Great Wall in Lovech appear ***Fair***. Industrial Zones near Sofia in the southwest part of the country, the Lovech Area in the north-central and in Plovdiv's Trakia Economic Zone in the south-central region are possibilities.

Conclusion: The Future of Foreign Carmakers in Europe

What will the European passenger car production map look like in ten years? The keys factors in determining this are economic and income expansion in Emerging Europe, growing sales in CE customer markets, and whether or not more management and R&D functions shifts east or not.

There currently is a large chasm between the number of new cars produced and sold in the CE. Whereas the 13 foreign car plants in Czechia, Hungary, Poland, and Slovakia produced a 4.5 times as many new passenger cars in 2015 as were registered in these four countries in that year: 3.3 million to 740,971. The worst discrepancy was in Slovakia, which built one million car and registered only 77,968 new sales, for ratio of 12.8 to 1.[20]

[20] Sales data in this chapter were adapted from ACEA (2011–2016).

If CE becomes more like developed markets, with rising incomes spurring growth in new and not used-car sales, labor costs will rise and car output in all four nations will more closely resemble Western Europe's blend of manufacturing luxury, mid-level, and superminis for Western Europe and domestic markets. The SEE will then take up the low margin economy car production role and build some luxury vehicles for upscale customers in Europe. Such a shift will impact Czechia and Poland most. Realizing this, Skoda recently began introducing more upscale models and Hyundai Nosovice has changed its production focus more heavily to SUV. Similarly, Opel has recently decided to allow its Gliwice Plant to take on more products targeting American markets. Conversely, FCA Tychy may lose out on newer Fiat models, as was the case with the 500 L supermini now being built to Serbia and the Panda mini which was repatriated to Italy.

Slovenia and Romania will be key players in this transformation, but likely follow different paths. With its much higher economic capacity, Slovenia may become the new East Germany, producing higher end models bound for Western Europe and America, while acting as the bridge along Highway E70 connecting developed Europe and Croatia and Bosnia. Conversely, Romania will fill the low-cost leadership position, with Dacia supplying economy cars for the CE, SEE, Eastern Europe, and newly emerging nations in the Global South. Dacia's continued growth may also expand opportunities in Lovech, Bulgaria, only 250 km (156 miles) to Mioveni's south, to both assemble vehicles and supply parts. Meanwhile, Serbia, if it gets its ducks in order, may be able to tap into both the CE and SEE markets and supply chain. The Serbian capital will then be in the middle of these developments with Highway E70 connecting it to Ljubljana, Zagreb, Craiova, and Pitesti, and E75 providing access to Kragujevac, Kecskemet, Gyor, and Bratislava.

If these evolutionary process takes place in the next ten years, then CE economies will become more balanced and less dependent on exports west, with SEE nations perhaps becoming overly dependent on finished cars and components exports to the EU's more developed markets, including CE. In other words, CE will gain some command and design functions from Germany, America, Japan, and Korea during the 2020s,

and the SEE will become the third-tier in a larger and more integrated European automotive division of labor.

In contrast, these events will further weaken France's hold on Renault and PSA and FCA's ties to Italy (if FCA still exists by then). Britain lost hold of its auto industry in the 1990s with the liquidation of British Leyland, and who knows what impacts Brexit may have on its vehicle production. Some British output already was shifting to CE (e.g., JLR to Slovakia and Opel to Poland). More may follow or instead land in SEE (Mini to Austria and perhaps soon to Slovenia) or to the lower cost Western European nations (Portugal and Spain). Others automakers, such as Nissan had, may just threaten to leave in order to extract larger subsidies from the British Government. On the other hand, Korean automakers may be provoked to build their first plants in UK.

Then there are the unknowns, namely Tesla of America and the Chinese and Indian carmakers. Tesla already builds EV in Tilburg, Netherlands and is now scouting sites in Europe for future battery and EV car plants. How about other manufacturers, will the bulk of EV production develop only in Western Europe or will dual cores arise with a second node in the CE? Or will the Saxony Triangle become the bridge for both regions? BMW's base for its i-series EV is already in Leipzig, Porsche also has committed to build EV in that city, and VW will build e-Golf in Zwickau and Dresden.

As for the Chinese automakers. Geely has created its own window into the EU via its Volvo plants in Sweden, Dongfeng has its partnership with PSA, and Great Wall has Litex in Bulgaria. BAIC may gain entry through its collaboration with Daimler. If and where SAIC (MG brand) and Guangzhou decide to build European output remains to be seen. Similarly, whereas Tata of India has access through JLR in Slovakia, what about Mahindra and its growing more popular Ssangyong brand? If any of these Asian carmakers land in CE or SEE, their suppliers will surely follow.

We will most likely have to wait until the 2020s for the answer to these questions. Still, if the when and where turn out to be only half as interesting as the first 28 years of the Post-Socialist Era have been, then it definitely will be a picture worth painting. Let's hope the next decade is

filled with expansion for all of EU nations and not just low-cost nations, with the latter not becoming overly dependent on FDI and exports in the highly cyclical auto industry.

References

ACEA (2011–2016) New Passenger Car Registrations European Union, 2010 to October 2016. European Automobile Manufacturers Association Press Releases, http://www.acea.be/statistics, last 20 November 2016.

AIK (2016) Croatian Agency for Investments and Competitiveness, http://www.investcroatia.hr, last 1 December.

BHAS (2016) Demography and Social Statistics. Bosnia and Herzegovina Statistics Agency, http://www.bhas.ba, last 1 December.

Bulgaria (2016) Invest Bulgaria, http://www.investbulgaria.com/, last 1 December.

Czechia (2016a) Czech Invest, http://www.czechinvest.org/, last 1 December.

Czechia (2016b) Czechia Road and Motorway Directorate, Dalnice D8, http://www.ceskedalnice.cz/dalnice/d8/, last 1 December.

Deloitte (2016) *Investing in Central Europe* (London: Deloitte).

DeStatis (2016) International Statistics: Data by Country. German Statistical Office, https://www.destatis.de/EN/FactsFigures/CountriesRegions/InternationalStatistics/Country/Country.html, last 1 December.

EC (2016) European Commission Mobility and Transport, Country Ratings of Transport Infrastructure Quality, http://ec.europa.eu/transport/facts-fundings/scoreboard/countries/czech-republic/investments-infrastructure_en, last 1 December.

Eurostat (2016a) EU Comparisons on Labor Costs and Unemployment, http://ec.europa.eu/eurostat/web/main/home, last 15 November.

Eurostat (2016b) Population on 1 January—Functional Urban Areas. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=urb_lpop1&lang=en, last update: 26 October.

FIPA (2016) Foreign Investment Promotion Agency of Bosnia and Herzegovina, http://www.fipa.gov.ba/Default.aspx?langTag=en-US&template_id=123&pageIndex=1, last 1 December.

Great Wall (2016) Great Wall Bulgaria—Litex Motors, http://greatwall.bg/en last 15 December.

HAMAG (2016) Croatian Agency for SMEs, Innovations and Investments, http://www.investcroatia.hr/, last 1 December.
HIPA (2016) Hungarian Investment and Promotion Agency, https://hipa.hu/main, last 1 December.
Jacobs A J (2016). *The 'New Domestic' Automakers in the U.S. and Canada: History, Impacts, and Prospects* (Lanham, MD: Lexington Books).
Oanda.com (2016) Historical Currency Converter. http://www.oanda.com, last 15 December.
PAIiIZ (2016) Polish Information and Foreign Investment Agency, http://www3.paiz.gov.pl/invest_sites/, last 1 December.
RAS (2016) Development Agency of Serbia, http://ras.gov.rs/invest-in-serbia, last 1 December.
Romania (2016) Invest Romania, http://investromania.gov.ro/, last 1 December.
SARIO (2016a) Slovakia Act 561 on Investment Aid, http://www.sario.sk/sites/default/files/content/files/sario-investment-aid-act-2015.pdf, last 1 December.
SARIO (2016b) Slovak Investment and Trade Development Agency, http://www.sario.sk/en/, last 1 December.
Saxony (2016) Business Saxony, https://business-saxony.com/en/, last 1 December.
Saxony-Anhalt (2016) Sachsen-Anhalt Invest and Marketing Corporation, http://www.invest-in-saxony-anhalt.com/, 1 December.
Serbia (2016) *Statistical Pocketbook of Serbia 2016* (Sarajevo: Serbia Statistical Office).
Slovakia (2016) MH Invest Website. http://www.priemyselneparkyslovenska.sk/en/, last 1 December.
Slovenia (2016) Invest Slovenia, http://www.investslovenia.org/industries/automotive/, last 1 December.
Thompson A (2011) *Cars of Eastern Europe: The Definitive History* (Newbury Park, CA: Haynes).
UN (2016) United Nations: Monthly Bulletin of Statistics Online, http://unstats.un.org/unsd/mbs/app/DataSearchSeries.aspx, last 1 December.
World Bank (2016) World Development Indicators, http://wdi.worldbank.org/tables, last 1 December.

Index

A.J. Jacobs, *Automotive FDI in Emerging Europe*,
DOI 10.1057/978-1-137-40786-3