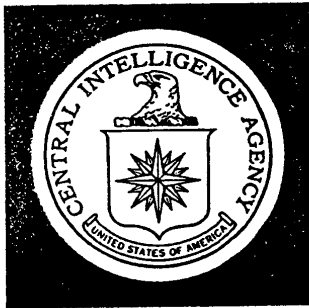


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DIRECTORATE OF  
INTELLIGENCE

# Intelligence Memorandum

*Recent Developments*

*in the Production of Passenger Automobiles  
in the European Communist Countries*

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Copy No. 22

RR IM 67-70  
November 1967

CIA HISTORICAL REVIEW PROGRAM  
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1998

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CENTRAL INTELLIGENCE AGENCY  
Directorate of Intelligence

INTELLIGENCE MEMORANDUM

Recent Developments in the Production  
of Passenger Automobiles  
in the European Communist Countries

Summary

The European Communist countries,\* recognizing the relative inferiority of their automotive technology, are calling on the developed countries of the West to help expand their production of automobiles. Contracts signed since 1966 will result in deliveries of more than \$600 million worth of machinery and equipment by 1970, with firms in Italy, France, and the United Kingdom expected to obtain the lion's share of the business. Deliveries of automotive equipment from the United States probably will not greatly exceed \$50 million.

Annual production of passenger cars in the Communist countries -- about 500,000 in 1966 -- is expected to exceed 1 million by 1970; total registrations should reach about 5 million, compared with some 3 million in 1966. Although the desire to curry consumer favor certainly has been an important factor in the decision to increase the supply of automobiles, the USSR and the smaller European Communist countries probably have been strongly motivated also by an immediate need to

\* *The USSR, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Rumania, and Yugoslavia.*

*Note: This memorandum was produced by CIA. It was prepared by the Office of Economic Research; the estimates and conclusions represent the best judgment of the Directorate of Intelligence as of October 1967.*

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provide greatly increased amounts of passenger car transportation for government and industry. Only in East Germany and Czechoslovakia can the average consumer realistically contemplate the ownership of a car, and even in these countries long waiting lists, large downpayments, and inadequate services will remain the rule. East Germany, the Communist country with the highest number of automobiles per capita, expects to have one passenger car for every 15 inhabitants by 1970, the level attained by the United States in 1919.

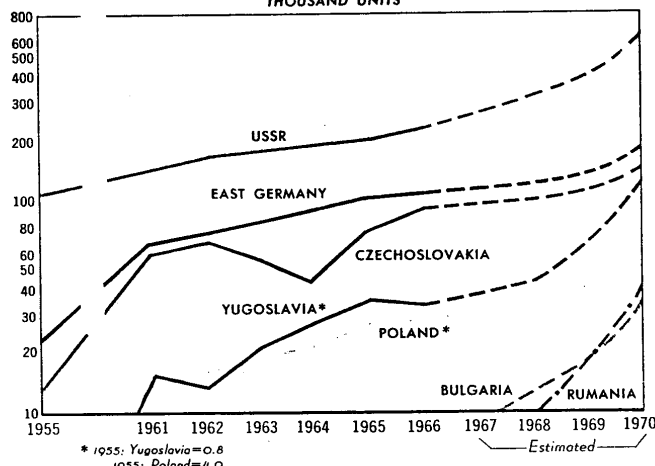
The contract in 1966 between the USSR and Fiat of Italy proved to be the first of several contracts concluded by the European Communist countries with Western European firms for the purchase of automotive plant and technology. Recent contracts with Western firms will enable Rumania to assemble automobiles for the first time and the USSR, Poland, Bulgaria, and Yugoslavia to expand greatly their automotive facilities. Much of the new equipment will be used initially to assemble vehicles from imported parts. East Germany and Czechoslovakia, the two most experienced producers of automobiles among the Communist countries, also plan to expand production, but at a slower rate and essentially from existing resources. Only Hungary has no current plans for the domestic production of automobiles, but it has contracted to increase its imports sharply. (*For the production of automobiles in the European Communist countries in 1955, 1961-66, and estimated production in 1967-70, see Figure 1.*)

The decision to initiate automobile assembly in the smaller Eastern European countries and to expand it in the other countries is economically sound. It will permit savings in foreign exchange, will help to satisfy the growing demand for automobiles, and probably will result in lower costs per unit. However, if the smaller countries persist in their plans to develop, after 1970, their own automotive industries that are based on domestically produced parts rather than on imported parts, much of the economic advantage probably will be lost. The current plans of most of the smaller countries call for a level of production that would be too low for economic efficiency. The few plants that already are producing automobiles from

domestically produced parts are not operating at an efficient level of output, although the distorted Communist price structure permits them to earn a profit. There may be some increase in efficiency, however, if more agreements are reached on international specialization in the production of automotive parts, such as the agreement concluded recently among Yugoslavia, Poland, and Fiat. The investment required in all the countries for new plants and service facilities will continue to be a very small part of total industrial investment through 1970, although pressures will mount during the 1970's to put substantially more resources into the automotive sector.

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PRODUCTION OF PASSENGER CARS  
IN THE EUROPEAN COMMUNIST COUNTRIES  
1955, 1961-66, and Estimated 1967-70



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The Lagging Automotive Sectors of the European Communist Countries

1. In European Communist countries the automobile is far from the family necessity it has become in the developed countries of the West. In 1965, there was one passenger car for 26 residents in East Germany, one car for about 230 Soviet residents, and only one car for about 760 residents in Rumania. By comparison, there was one passenger car for 2.6 persons in the United States and one for every 5 to 10 persons in France, West Germany, the United Kingdom, and Italy. (For comparative data on registration and population, see Table 1.) Moreover, many of the passenger automobiles in the European Communist countries are owned by government units or industrial institutions -- for example, in the USSR about one-half of the passenger cars are owned by government and industry.

2. Important problems faced by the motorist in the European Communist countries are poor quality of construction, lack of spare parts, and inadequate service stations and repair facilities. As a result, many cars are out of operation for long periods of time, and many others that are in good running condition are used only sparingly. Potential buyers are discouraged by high prices, large downpayments, and long waiting times for delivery. These problems are endemic even in East Germany and Czechoslovakia, where automobiles were produced in currently operative plants as far back as in the early 1900's.

3. Most citizens in the European Communist countries must pay a sum equivalent to two to four years' wages for an automobile that is purchased directly from the government, and they must often pay more in the black or grey markets that involve exchanges between individuals. In contrast, the average worker in the United Kingdom, West Germany, Italy, and France could purchase a popular domestically produced car of higher quality with only 7 to 13 months' wages in 1965. The average US worker obtained a larger, more powerful automobile at a cost of six months' wages. (For data on comparative earnings and automobile prices, see

Table 1

Passenger Car Registrations and the Number of Persons  
per Passenger Car  
in the European Communist Countries  
and Selected Western Countries  
1965

	<u>Registrations a/ (Thousand)</u>	<u>Number of Persons per Passenger Car</u>
<u>European Communist Country</u> ..		
Bulgaria	55 b/	150
Czechoslovakia	375	38
East Germany	660	26
Hungary	100	101
Poland	235	134
Rumania	25 b/	760
USSR	1,000 b/	230
Yugoslavia	190	103
<u>Western Country</u> ..		
France	8,780	5.6
Greece	105	82
Italy	5,470	9.4
United Kingdom	9,130	6.0
United States	75,260	2.6
West Germany	9,720	5.8

a. Rounded to nearest 5,000 registrations.

b. Estimated.

Table 2.) There are reports that about 600,000 East Germans were on the waiting list for automobiles in 1966, and in Czechoslovakia the 1967 waiting list for automobiles contained names of 170,000 people. East German, Czechoslovak, Hungarian, and Bulgarian residents usually must wait two to five years for delivery after the order is placed, and residents of other European Communist countries rarely wait less than six

Table 2

Comparison of Industrial Wages and Prices of Automobiles  
in the European Communist Countries  
and Selected Western Countries <sup>a/</sup>  
1965

European Communist Country	Local Currency	In Local Currency		
		Average Monthly Industrial Wage	Price of Common Domestically Available Automobile	Number of Months' Wages Required for Purchase of Automobile
Bulgaria	Lev	95	3,000	32
Czechoslovakia	Koruna	1,572	45,000	29
East Germany	Deutsche Mark East	655	8,500 b/	13
Hungary	Forint	1,767	42,000	24
Poland	Zloty	2,175	74,000 b/	34
Rumania	Leu	N.A.	40,000	N.A.
USSR	Ruble	101	4,510	45
Yugoslavia	Dinar	501	14,700	29
<u>Western Country</u>				
France	Franc	520	6,860	13
Italy	Lira	69,107	523,320	8
United Kingdom	Pound	76	515	7
United States	Dollar	415	2,600	6
West Germany	Deutsche Mark	714	5,230	7

a. The quality of passenger cars produced in the European Communist countries is substantially inferior to that of cars produced in Western Europe and the United States.  
b. The price of the cheaper model of the two types produced in large quantities. In East Germany the more expensive model is sold at almost twice the price of the cheaper model. In Poland the more expensive model sells for more than one and a half times the cheaper model.

months. Only the few professional and theatrical people who travel and work in the West and accumulate Western currency can buy Western cars without waiting. A sizable downpayment is required in all the countries, amounting to the entire purchase price in Rumania.

4. Despite a severe shortage of cars at home, Czechoslovakia, the USSR, and East Germany export a large share of the automobiles they produce. In 1965, Czechoslovakia exported 49,000 passenger cars (63 percent of production); in 1966 the USSR exported 67,000 (29 percent) and East Germany 38,000 (36 percent). Most of the trade is among the European Communist countries themselves, although Austria and West Germany are important customers for Czechoslovak passenger cars. Imports of Western automobiles are increasing, especially in Hungary, but a combination of high tariffs, a shortage of Western exchange, and political considerations keep Western imports very low. (*Imports and exports of*



automobiles by the European Communist countries for the period 1959-65 are shown in Tables 3 and 4.)

Progress in the Soviet Automotive Program

5. The USSR has taken major steps to enlarge and upgrade an automobile industry that was described by a knowledgeable observer in 1965 as incredibly archaic and inefficient. In August 1966 an agreement was concluded with the Italian firm of Fiat for the construction in the USSR of an automobile plant with an annual capacity of 660,000 cars. The USSR signed an agreement with the French firm of Renault in October 1966 for equipment and technical advice to expand the production of the *Moskvich*, the most popular model currently produced. Present Soviet plans call for the annual production of 700,000 to 800,000 passenger cars by 1970, more than three times the production in 1966. (For production of passenger cars in the European Communist countries in 1955, 1961-66, and plans for 1970, see Table 5.) The decision to increase automobile production represents a sharp turn away from Khrushchev's emphasis on public transportation. The leadership has opened up the possibility that Soviet consumers, who are becoming better supplied with refrigerators, washing machines, and television sets, will eventually own family cars. The present plans for automobile expansion are probably only a first step in this direction, however, and the planned investment in manufacturing facilities will remain a very small share of total investment for the next few years at least. In the longer term, it is almost certain that consumers will demand more automobiles and better service and that pressures will build up to devote more resources to this industry.

6. The Fiat plant, to be constructed in Tol'yatti and called the Volga Automobile Plant, will cover an area of over 1,000 acres, slightly more than the area of the Ford River Rouge Plant near Detroit. The USSR announced in August 1967 that (a) 15,000 people were working at the site; (b) foundations had been poured for the body-manufacturing and paint shop, which has an area of about 2 million square feet, or 46 acres; (c) a large concrete plant was near completion;

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Table 3  
Imports of Passenger Cars by the European Communist Countries  
1959-65

	Units							Total
	1959	1960	1961	1962	1963	1964	1965	1959-65
Bulgaria	5,958	3,286	4,266	6,037	9,966	6,907	11,700	48,120
Czechoslovakia	10,981	13,278	10,889	12,674	12,864	16,497	15,339	92,522
East Germany	9,858	6,231	9,377	7,448	11,229	11,130	20,611	75,884
Hungary	8,247	5,707	7,870	17,752	15,278	9,702	11,561	76,117
Poland	5,871	5,824	7,146	13,804	10,833	6,755	21,095	72,138
Rumania	1,351	1,186	1,308	2,317	3,934	8,593	11,880	30,569
USSR	3,020	3,028	1,523	1,505	1,528	1,517	1,490	13,611
Yugoslavia a/	4,130	2,959	9,110	2,895	1,054	4,859	13,049	38,056

a. Excluding completely knocked-down cars imported for assembly in Yugoslavia.

Table 4  
Exports of Passenger Cars by the European Communist Countries  
1959-65

	Units							Total
	1959	1960	1961	1962	1963	1964	1965	1959-65
Czechoslovakia	30,875	30,556	33,954	34,741	37,047	25,419	49,195	241,787
East Germany	10,551	11,515	14,795	22,876	29,402	29,381	36,448	154,968
Poland	3,117	3,182	2,713	1,845	3,153	3,186	4,463	21,659
USSR	36,000	a/30,206	32,755	39,670	35,686	44,487	48,572	267,376
Yugoslavia	4	7	221	862	114	674	6,170	8,052

a. Approximate.

Table 5  
Production of Passenger Cars in the European Communist Countries  
1955, 1961-66, and Plans for 1970

	Thousand Units							1970
	1955	1961	1962	1963	1964	1965	1966	(Plan)
Bulgaria	0	0	0	0	0	0	Negl.	35
Czechoslovakia	12.5	58.8	64.3	56.5	42.1	77.7	92.7	138
East Germany	22.2	69.6	72.2	84.3	93.1	102.9	106.5	150 to 200
Poland	4.0	14.4	16.1	18.3	20.6	26.4	29.2	70
Rumania	0	0	0	0	0	0	0	40 to 50
USSR	107.8	148.9	165.9	173.1	185.2	201.2	230.2	700 to 800
Yugoslavia	0.8	15.0	13.1	20.9	27.9	35.9	35.3	130

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(d) 45 miles of roads and railroad sidings were laid; and (e) more than 660,000 square feet of housing had been completed. Power lines had been laid to the area by November 1966, and construction since then has begun on a 280-mile branch gas pipeline from Central Asia. Investment in the plant is planned to be more than 100 million rubles by the end of 1967, and a "marked" increase in planned investment is reported for next year. Nevertheless, the usual Soviet construction problems are in evidence. There have been delays in the receipt of technical specifications and shortages of cranes, concrete, and personnel. Damage caused by a recent severe storm added to the delays. The USSR apparently has refused Italian assistance until the final stages of assembly of the equipment, thereby missing an opportunity to speed up the project. Past experience with Soviet construction projects suggests that a delay of two to three years in reaching commercial production is not unlikely.

7. Fiat officials estimate that the program is already at least six months behind the original schedule, which called for the annual production of 600,000 cars by 1972. The slow progress may be due primarily to delays in completing negotiations. Final agreement on the layout of the plant equipment and on the technical specifications for the automobile to be produced was not reached until July 1967, to the dissatisfaction of both the USSR and Italy. This delay in turn postponed negotiations to determine the final composition of the equipment to be ordered in Italy and third countries. Whether or not the Volga plant is completely equipped on schedule, it is possible and even likely that Fiat cars will be produced from its assembly lines before 1970 by using parts and assemblies imported from Fiat plants in Italy and Yugoslavia (see Paragraph 15). Moreover, Fiat apparently is still negotiating to export to the USSR up to 50,000 automobiles annually, presumably until the Volga plant reaches planned capacity.

8. The first contract for equipment for the Fiat plant was awarded in September 1967 to the Innocenti Company of Milan, which will supply the USSR with 142 metalforming presses valued at \$25

million and produced under US license. The USSR will almost certainly want to purchase gear-cutting machines from the Gleason Works of Rochester, New York, and crankshaft grinders from the Landis Tool Company of Waynesboro, Pennsylvania -- even though credit from the Export-Import Bank is not available. Moreover, other specialized production equipment is likely to be purchased in the United States if private financing can be arranged. The total value of equipment to be ordered in Italy and third countries for the Fiat plant is expected to reach \$464 million, 5 to 10 percent of which probably will be ordered from firms in the United States.

9. There have been conflicting reports concerning Soviet plans for production of the *Moskvich*, but it now appears that the USSR intends to increase the annual production from about 90,000 in 1967 to 350,000 in 1970 and to as many as 600,000 shortly thereafter. The horsepower rating of the *Moskvich* will be increased from 55 to between 70 and 75 horsepower by 1970. The USSR signed two separate contracts with the Gleason Works in January and April 1967, each valued at \$3 million and each for the supply of 62 Gleason bevel gear-cutting machines for the *Moskvich* program. The first order was for the existing *Moskvich* plant in Moscow, and deliveries probably have already begun. The second order is for additional facilities now under construction near the existing plant, and shipment tentatively is scheduled for early 1968, pending the issuance of export licenses by the US Department of Commerce. The two orders are adequate for the annual production of gears for some 600,000 automobiles plus spare parts.\* Renault will provide French machinery, materials, and engineering

\* *One recent Soviet report suggested a total anticipated annual production of only 425,000 Moskviches from the facilities in Moscow, and other Soviet reports have indicated an annual production of Moskviches not in excess of 360,000 units. These reports probably do not include the assembly of Moskviches at a new plant in Izhevsk, which assembled its first Moskvich 408's in December 1966 and is soon to begin assembly of the Moskvich 412 -- probably a slightly modified and more expensive model.*

know-how for the renovation and expansion of the existing *Moskvich* plant and probably will assist in the construction of the new facilities. Another contract calls for a five-year, extendable arrangement for scientific and technical cooperation in automobile research between the USSR and the two French firms, Renault and Peugeot. The USSR also has ordered \$35 million worth of machine tools from British firms and is negotiating for the purchase of additional machine tools valued at \$21 million. Most of these tools, as well as dies and other equipment recently ordered in Western Europe, probably will be used in the *Moskvich* facilities.

10. The Soviet consumer will not be limited to choosing between the *Moskvich* and the *Fiat*. The Gor'kiy Motor Vehicle Plant (GAZ) will continue to produce the five-passenger Volga, or a car like it. Annual production of the Volga has reached the neighborhood of 60,000 cars, many of which are allocated to the Soviet taxi fleet. The newest model in this line is the roomier and more powerful GAZ 24, which is scheduled for introduction in 1967. It will be the largest car available to the general public. The production of the *Zaporozhets*, smallest and least popular Soviet car, is planned to increase to 150,000 by 1970 (from 70,000 in 1966). Moreover, it is supposed to be restyled, to be improved in quality, and to have its power increased from 27 to 40 horsepower. The USSR has also announced that a new model, the *ZIMA*, will be produced by the Izhevsk Motor Vehicle Assembly Plant in addition to the *Moskvich*. The Soviet motor vehicle industry produces two cars that are not available to the general public -- the *ZIL-111* (soon to be replaced by the *ZIL-114*) and the *Chaika*, both eight-passenger limousines. About 100 *ZIL* limousines are produced each year by the Likhachev plant in Moscow. The *ZIL*, the most luxurious Soviet car, embodies much handwork and is allocated for official transportation to officials of the highest rank. The *Chaika*, of which GAZ produces 200 to 300 per year, is also allocated for high-level official transportation.

#### The Soviet Automotive Outlook

11. Although the USSR probably will not achieve its goal for the production of 700,000 to 800,000

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passenger cars in 1970, it may produce 600,000 annually by then and 1.5 million by 1975. The stock of automobiles in the USSR in 1975 could reach 5 million (about one car for every 50 residents) compared with about 1 million in 1966. An output of 1.5 million passenger cars in 1975 is based on the assumption that production will be near-rated capacity at the new Fiat plant, that there will be substantial increases in production at the Moskvich and Zaporozh'ye facilities, substantial production at the new Izhevsk facilities, and a small increase at the Gor'kiy plant. Work is under way at all these sites, and, even with the usual delays in Soviet construction and in the start-up of operations, the new plants should be producing at near the designed rate by the mid-1970's. Soviet press coverage of the Fiat contract and other automotive developments has been restrained, however, suggesting that the regime wants to hold down consumer expectations. Automobiles will continue to be scarce in the near future and available only to the relatively prosperous or politically favored. There appears to be inadequate planning for service facilities, and it is unlikely that their growth will keep pace with passenger car production or with the needs of a growing tourist trade. At the same time, the market for automobiles in the Communist countries is so great that there is little prospect the USSR will attempt to export large numbers of cars to the Free World.

#### Recent Developments in Eastern Europe

12. Several Eastern European countries have followed the lead of the USSR in contracting for Western assistance in the manufacture of automobiles. Only East Germany and Czechoslovakia, where highly developed automotive sectors exist, have not signed important contracts with the West since mid-1966. (Czechoslovakia had purchased equipment for the manufacture of passenger cars from Western European firms before 1965.) Hungary has no current plans for domestic production in the near future, but it has contracted to increase its imports of passenger cars sharply. The Eastern European countries also are expanding their automotive services sectors, often with Western help, for the benefit of both the growing number of

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domestic motorists and the rapidly increasing number of foreign tourists. (For photographs and specifications of models of automobiles currently produced in the European Communist countries and those models to be produced in the future, see Figures 2 and 3. For planned production of passenger cars in 1970, by model, see Table 6.)

Yugoslavia

13. Total production of automobiles in Yugoslavia in 1970 is planned to be about 130,000 units, primarily Western models, and registration is planned to exceed 500,000. In 1966 the Crvena Zastava (Red Flag) plant in Kragujevac reached an agreement with Poland and Fiat under which Yugoslavia and Poland will cooperate in the manufacture of Fiat 1300 and 1500 automobiles. By 1970, Yugoslavia will be producing 70,000 cars under this agreement. In the first stages of the agreement, Crvena Zastava will supply Poland with parts, and Poland will supply Crvena Zastava with semifinished material. The value of material deliveries is expected to reach \$140 million by 1975. *Zastavas* -- the Yugoslav name of Fiat models produced under 1954 Italian licenses -- account for most of the current production of automobiles in Yugoslavia.

14. In May 1967 a Yugoslav automobile enterprise completed negotiations with the French automotive firm of Simca for a Simca assembly plant to be built in Split, but this agreement is still awaiting approval by the Yugoslav government. The plant will have an initial annual capacity of 15,000 automobiles. Belgrade radio has reported that Yugoslav Inter-export and Volkswagen "have agreed on the principles of an agreement" for the construction of a Volkswagen assembly plant in Yugoslavia. This plant is supposed to have an initial annual capacity of 35,000 vehicles (of which about 27,000 will be passenger cars), and most of the output will be exported.

15. The USSR and Yugoslavia currently are discussing cooperation in the production of Fiat cars, with Yugoslavia supplying parts, aggregates, and electrical equipment to the USSR in return for

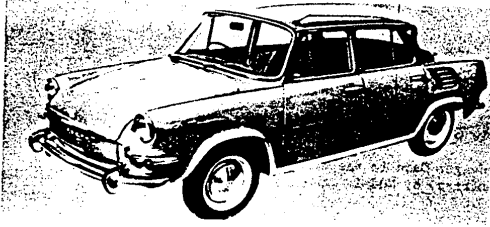
Table 6

Planned Production of Passenger Cars in the European Communist Countries, by Model 1970

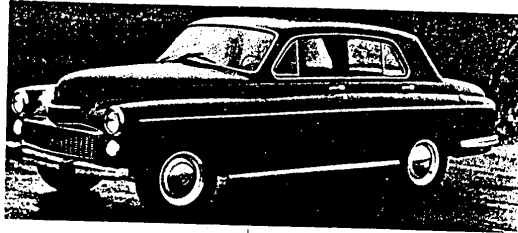
Country	Model	Planned Production	Remarks
USSR	Moskvich	350,000	Production of the Moskvich will be expanded with the aid of purchases of equipment and technology from Renault.
	Zaporozhets	150,000	
	Fiat	100,000 (estimated)	The Fiat will be assembled initially from imported parts.
	Volga	70,000	
	ZIMA ZIL Chaika	N.A.	
East Germany	Wartburg	150,000+	
	Trabant		
Czechoslovakia	Skoda	138,000	
Yugoslavia	Zastava (Fiat)	70,000 to 90,000	The Simcas and Volkswagens will be assembled from French and German parts. The Zastavas will be assembled from domestically produced parts as well as Polish and Yugoslav parts.
	Volkswagen	27,000	
	Simca	15,000	
	Citroen NSU	N.A.	
Poland	Fiat	60,000	The Fiats will be assembled initially from Polish, Yugoslav, and Italian parts.
	Warszawa	10,000	
Rumania	Renault	50,000	Assembly from French parts initially.
Bulgaria	Rila (Moskvich)	15,000	Bulgaria plans eventually to assemble the Rilas and Bulgar Renaults from domestically produced parts.
	Bulgar Renault	10,000	
	Pirin (Fiat)	10,000	



Figure 2. Automobiles Currently Produced  
in the European Communist Countries



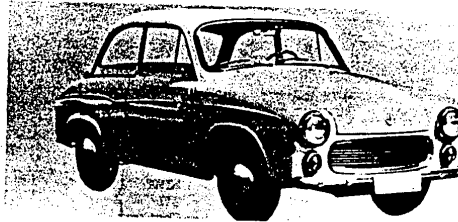
Czechoslovakia: Skoda 1000 MB  
4 Cylinders, 988 CC, 45 HP  
Maximum Speed: 77.7 MPH, Seats 4-5  
Fuel Consumption: 32.7 M/Gal



Poland: Warszawa 203  
4 Cylinders, 2120 CC, 70 HP  
Maximum Speed: 83.9 MPH, Seats 6  
Fuel Consumption: 23.1 M/Gal



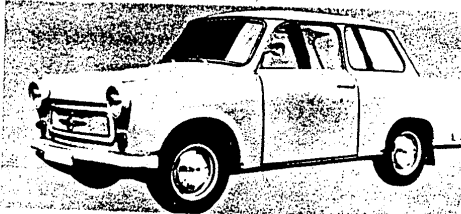
USSR: Zaporozhets 965A  
4 Cylinders, 887 CC, 27 HP  
Maximum Speed: 62.1 MPH, Seats 4  
Fuel Consumption: 31.4 M/Gal



Poland: Syrena 104  
3 Cylinders, 842 CC, 40 HP  
Maximum Speed: 74.6 MPH, Seats 4  
Fuel Consumption: 26.7 M/Gal



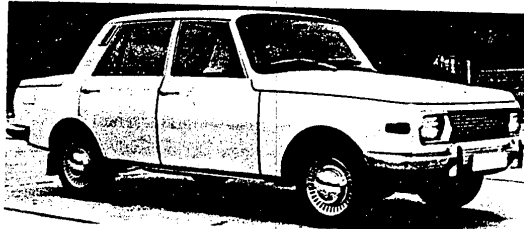
USSR: Volga Gaz 21  
4 Cylinders, 2445 CC, 90 HP  
Maximum Speed: 85.1 MPH, Seats 5-6  
Fuel Consumption: 26.1 M/Gal



East Germany: Trabant 601  
2 Cylinders, 595 CC, 23 HP  
Maximum Speed: 62.1 MPH, Seats 4  
Fuel Consumption: 34.6 M/Gal

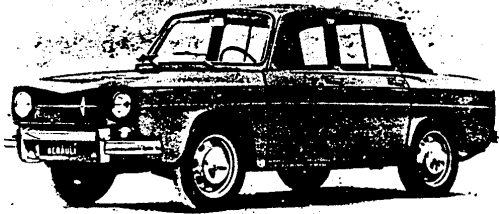


USSR: Moskvich 408  
4 Cylinders, 1360 CC, 55 HP  
Maximum Speed: 74.6 MPH, Seats 4-5  
Fuel Consumption: 36.2 M/Gal

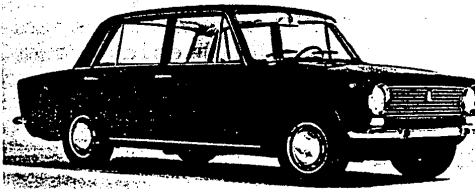


East Germany: Wartburg 1000-353  
3 Cylinders, 991 CC, 45 HP  
Maximum Speed: 77.7 MPH, Seats 5  
Fuel Consumption: 26.1 M/Gal

Figure 3. Automobiles to be Produced in the Future  
in the European Communist Countries.



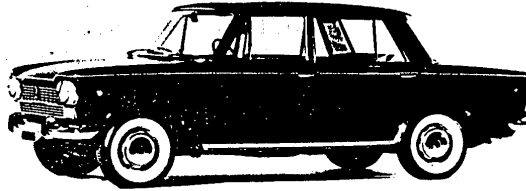
Bulgaria: Renault 8  
4 Cylinders, 956 CC, 40 HP  
Maximum Speed: 80.8 MPH, Seats 4-5  
Fuel Consumption: 34.6 M/Gal



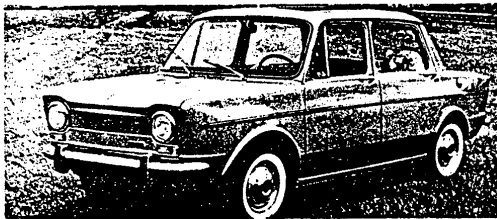
USSR and Bulgaria: Fiat 124  
4 Cylinders, 1197 CC, 65 HP  
Maximum Speed: 89.5 MPH, Seats 5  
Fuel Consumption: 27.7 M/Gal



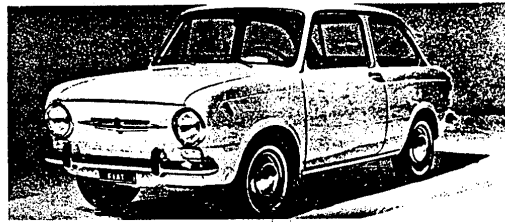
Rumania: Renault 16  
4 Cylinders, 1470 CC, 60 HP  
Maximum Speed: 88.2 MPH, Seats 5-6  
Fuel Consumption: 23.7 M/Gal



Yugoslavia and Poland: Fiat 1500  
4 Cylinders, 1481 CC, 80 HP  
Maximum Speed: 96.3 MPH, Seats 5  
Fuel Consumption: 25 M/Gal



Yugoslavia: Simca 1000 GLS  
4 Cylinders, 944 CC, 50 HP  
Maximum Speed: 82.6 MPH, Seats 4-5  
Fuel Consumption: 36.7 M/Gal



Yugoslavia and Bulgaria: Fiat 850  
4 Cylinders, 843 CC, 40 HP  
Maximum Speed: 74.6 MPH, Seats 4-5  
Fuel Consumption: 39.2 M/Gal

other parts, finished vehicles, and other products. Prospects for success are favorable because Yugoslavia has extensive experience in the manufacture of Fiat vehicles. Yugoslavia is also negotiating for technical cooperation with the Skoda plant in Mlada Boleslav, Czechoslovakia, and has started discussions with Bulgaria on cooperation in the automotive field. In 1967, Yugoslavia, the United Arab Republic, and India agreed on a form of automotive cooperation that calls for Yugoslavia to specialize in the production of *Fiat 650* and *Fiat 850* automobiles, the UAR in trucks and buses, and India in motors for *Fiat 1100's*. (The logical interpretation of this agreement is that Yugoslavia and the UAR will import Indian engines for their *Fiat 1100* production, the UAR and India will import *Fiat 650* and *Fiat 850* cars from Yugoslavia, and Yugoslavia and India will import trucks and buses from the UAR. Implicit in this interpretation is the assembly in India of *Fiat 1100's*.) Finally, Yugoslavia will assist Indonesia in the construction of a plant for the production of both cars and trucks.

Poland

16. Two weeks after the conclusion of the contract between the USSR and Fiat in August 1966, it was announced that Fiat also would help in the expansion of the Polish auto industry. Automobiles were assembled in Poland under Fiat license before World War II, but the changed political situation after the war prevented a second Polish-Fiat agreement, and the USSR helped Poland to restart automobile production. The 1966 contract, valued at \$40 million, calls for Fiat to supply licenses, equipment, and technical advisers for a plant capable of producing annually 70,000 to 100,000 *Fiat 1300* and *Fiat 1500* passenger cars. The equipment is to be installed at Zeran near Warsaw where all of Poland's current automobile production is being carried out. At first *Fiat*s will be assembled from Italian and Yugoslav parts under a trilateral agreement (see Paragraph 13), but Poland hopes eventually to use domestically manufactured parts. US firms have been asked to bid for some machine tools.

17. Poland apparently will continue production of the *Warszawa*, currently its more powerful (70 horsepower) and more expensive car, but production of the *Syrena* -- a smaller car which has been plagued by poor quality -- eventually is to be curtailed. The *Syrena* and *Warszawa* were produced in almost equal quantities in 1966, and 7,300 *Warszawas* (more than half the output of *Warszawas*) were scheduled for export. Poland apparently plans to produce about 60,000 *Fiats* and 10,000 *Warszawas* by 1970.

Rumania

18. In the fall of 1966, Rumania signed a contract with Renault valued at between \$60 million and \$70 million for a plant capable of producing annually 50,000 *Renault 16's*. The plant is now under construction at Pitesti, and assembly of automobiles is planned to begin in 1969, with operation at or near capacity by 1970. Previously Rumania has not manufactured automobiles, although Soviet-type jeeps have been produced since 1959, and it has the smallest number of passenger cars per capita of any European Communist country. The plant initially will assemble cars from imported parts, but there are plans to shift gradually to domestically produced components after 1970. Rumania will make partial payment for the plant by supplying Rumanian-built transmission cases to France. Rumania has ordered gear-cutting machines for the new plant from a US firm.

Bulgaria

19. Bulgaria signed a contract with Fiat in March 1967 for the assembly at a plant in Lovech of passenger cars to be sold under the Bulgarian name of *Pirin*. Assembly of *Fiat 124's* and *Fiat 850's* is to begin by the end of 1967. The Lovech plant began to assemble the Soviet *Moskvich 408* (known as the *Rila*) in 1966. Bulgaria hopes to produce components for the *Rila*, but for the first few years at least, the parts will be supplied from the USSR as specified under a 1965 agreement. About 15,000 *Rilas* and 10,000 *Pirins* are planned for 1970, and the annual capacity of the plant at Lovech will be raised gradually to 55,000 passenger cars. Also in 1967, Bulgaria

was negotiating with Willys subsidiaries in Brazil and Argentina to import "completely knocked-down" jeeps and the equipment for their assembly. Moreover, negotiations were under way with Volkswagen in 1967 for a plant to assemble delivery vans and, perhaps at a later date, automobiles.

20. In the fall of 1966, Bulgaria concluded a contract estimated at \$25 million with Renault for the construction of a plant in Plovdiv capable of assembling annually 10,000 units of a modified *Renault 8* sedan (*Bulgar Renault*). Only a small share of the component parts are to be of Bulgarian manufacture initially, but Bulgaria hopes to produce all of the parts by 1970. About 1,000 *Bulgar Renaults* are to be assembled by the end of 1967. The plant will be expanded after 1970 to produce 50,000 cars annually -- including a more powerful *Renault* -- and to produce 100,000 cars per year in the more distant future.

#### Hungary

21. Hungary is the only European Communist country with no apparent plans to establish the production of passenger cars. In late 1966, Hungary contracted with Fiat and Renault for the purchase of 20,000 automobiles through 1970. In June 1967 a \$10 million contract was concluded with Volkswagen for the import of an unspecified quantity of passenger cars and spare parts over a five-year period. Under an agreement with the USSR, Hungary will receive a guaranteed supply of Soviet passenger cars -- apparently 8,000 or more annually. Hungary, in turn, will specialize in the production of buses and heavy trucks and will deliver more than half of its vehicle output to the USSR in 1967-70. Hungary also will continue to receive substantial numbers of East German, Czechoslovak, and Yugoslav automobiles.

#### East Germany

22. East Germany, the largest manufacturer of automobiles in Eastern Europe, produced 106,500 units in 1966, a year in which it also had the largest registration of automobiles (some 720,000 units) and the most automobiles per capita (42

per 1,000 population). Despite its large supply of automobiles relative to that of its Communist allies, East Germany has the longest waiting period for the purchase of automobiles, probably because cars are relatively cheaper in relation to income in East Germany than in the other Communist countries. The most common cars on the roads in East Germany are the domestically produced *Trabants* and *Wartburgs*. About 60 percent of the cars produced in 1965 were *Trabants*; the remainder were *Wartburgs*. The *Wartburg 1000*, which has a 45-horsepower engine, was first produced in 1966, primarily for export.

23. During 1966-70, East Germany plans to acquire between 500,000 and 700,000 automobiles through domestic production and imports. Production is planned to increase to at least 150,000 cars annually by 1970, a goal well within East Germany's potential, and about 100,000 to 150,000 cars are to be imported from Czechoslovakia and the USSR in the period 1966-70. The only known automotive tooling contract with the West in recent years was for Renault assembly equipment of unknown capacity, that was installed at the Wartburg plant in Eisenach in 1966.

#### Czechoslovakia

24. Czechoslovakia, second to East Germany among Eastern European countries in automobile production and inventory, produced 92,700 cars in 1966 and had a total registration of about 450,000. Czechoslovakia plans to produce 138,000 passenger cars annually and increase registration to about 700,000 by 1970 and to produce up to 200,000 cars and have 1.4 million to 2 million cars on the road by 1980. The government has shown new concern for Czechoslovak consumers by allocating almost two-thirds of its production of Skoda automobiles to domestic consumption in 1967, compared with one-third of a smaller output in 1966. The USSR is to supply Czechoslovakia with 43,500 passenger cars in 1966-70 as part of an extensive bilateral trade agreement. Czechoslovakia imports cars from the Communist countries to help satisfy local demand but exports thousands of cars to the West in order to earn

foreign exchange. The Skoda plant in Mlada Boleslav, the country's most important automobile plant, is planning to build an automobile assembly factory and a repair facility in West Germany. This plant purchased most of its existing equipment from Western European firms before 1965.

25. The most common car in Czechoslovakia is the *Skoda 1000 MB* with a 45-horsepower engine, first produced at Mlada Boleslav in 1946. Skoda automobiles have been produced since the early part of the century. The Mlada Boleslav plant has a capacity of 500 vehicles per day, but was producing an average of only about 300 daily in 1967 because of technical difficulties and shortages of supplies. There have been pronounced shortages of steel, tires, glass, paints, and adhesives in Czechoslovakia, but officials hope to break this bottleneck by increased imports of these commodities from the West. The *Tatra*, a luxurious sedan, is also produced in Czechoslovakia in small numbers.

#### Prospects in Eastern Europe

26. The planned expansion of automobile production in the Eastern European countries is impressive compared with past performance, but it will still leave these countries far behind the industrial West in automotive affluence. By 1970, East Germany expects to have one passenger car for about every 15 residents, and Czechoslovakia one for every 20. A level of one car per 20 residents was attained by France and Great Britain in the early 1950's and by the United States in 1918. Even with a continued rapid growth in the stock of automobiles in Eastern Europe after 1970, no automotive challenge to the West is in prospect.

27. The new programs for automotive development in the Eastern European countries should not interfere with their basic economic goals. The countries holding contracts with Western firms for assistance in automotive production have credit arrangements that will stretch out their foreign exchange payments over several years. The planned expansion of automobile production in East Germany and Czechoslovakia will involve only a very small share of total industrial investment. Moreover,

the funds needed for expansion of the street and highway system and the automotive service sectors are necessary for and will be repaid in part by the expansion of tourism. In the long run, however, the widespread acquisition of passenger cars will lead to increasing demands for more investment in the automotive sectors and may require some diversion of resources from other industries.

28. The assembly of automobiles by the individual Communist countries offers both an economical and a politically appealing means of filling the strong demand for private cars. There are savings in foreign exchange from domestic production as opposed to imports of Western models, and the cost of an imported unit probably is higher than one assembled locally. Much of the initial economic advantage of automobile assembly in at least the smaller countries, however, may be lost if they persist in plans to convert from imported to domestically produced parts. East Germany has estimated that economically efficient production of automobiles requires an annual output of at least 250,000 units of the most important and largest components. (A capacity of 250,000 to 300,000 units annually is about the minimum output required for economically efficient operation in the United States.) None of the smaller countries anticipates an annual production of 250,000 automobiles per year in the near future. Even current production in the European Communist countries that use imported parts is not highly efficient, although high prices permit a large profit to be realized. Most of the European Communist countries can produce other exportable items with greater relative efficiency than they can produce complete automobiles. Czechoslovakia, for example, has admitted that automobiles have a "below-average export effectiveness" -- probably with respect to sales to the Free World -- compared with other products of its machinery industry. Some of the high costs may be reduced, however, if more agreements on automotive specialization are concluded, such as the agreement among Yugoslavia, Poland, and Fiat.

#### The Supporting Sectors

##### Highways

29. Only about one-fourth of the Soviet highway network of some 850,000 miles was surfaced and



less than one-tenth was paved in 1965. The network of surfaced roads in the USSR has been increasing at a very slow rate in recent years, and the new five-year plan does not suggest a sharp increase, although some important intercity routes will be completed or improved. The highway network in the Eastern European Communist countries consists of about 350,000 miles of roads, excluding urban streets. About 30 percent is paved with concrete, asphalt, or cobblestone; another 30 percent is surfaced with crushed stone or gravel; and the remainder has an earth surface. (*For a comparison of the length of the highway network, by type of surface, in the individual European Communist countries and the United States, see Table 7.*) Most of the network in Eastern Europe consists of only two lanes, and only a few routes are designed for limited access. The condition of the roads varies from country to country, with those in East Germany and in the former German territory of western Poland generally in better condition than those in eastern Poland, Czechoslovakia, and the Balkan countries. With the exception of Yugoslavia, very little new highway construction has taken place in Eastern Europe in recent years, probably reflecting, as in the USSR, the relatively small number of motor vehicles in these countries. All of the countries, however, have announced plans for rather ambitious improvement projects, and travelers report much current improvement work. Additional improvements and expansion probably will be necessary to accommodate the large increase in traffic anticipated by the mid-1970's.

#### Services

30. As previously noted, inadequate numbers of service stations and garages and shortages of service personnel and repair parts are characteristic of all the European Communist countries. For example, in 1963 the USSR had only about 1,500 gasoline stations, and in 1965 Hungary had only about 300 stations and Bulgaria no more than 45. (The United States has more than 200,000.) The service problems in Poland are probably representative of those in the other, less advanced Communist countries. In 1965 an average of 30 days was needed in Poland for repair and overhaul of

Table 7

Highway Network of the European Communist Countries  
and the United States a/

	Thousand Miles			
	Type of Surface			
	Total	Paved	Stone or Gravel	Earth
Bulgaria	20	4	10	6
Czechoslovakia	46	10	20	16
East Germany	N.A.	30 <u>b/</u>	N.A.	N.A.
Hungary	18	8	9	1
Poland	127	37	26	64
Rumania	48	7	22	19
USSR	847	82	153	612
Yugoslavia	49	8	28	13
United States	3,248	1,125	1,242	881

a. Excluding urban streets for all countries except for the USSR.

b. Including 850 miles of limited access highway (autobahn).

automobiles because of a lack of parts and facilities, and the motorist was sometimes required to supply his own spare parts. In 1965 a Warsaw newspaper, noting the problem of repairs, suggested that people return to travel by horse. Czechoslovakia, Yugoslavia, and Poland recently have contracted with Western firms for assistance in the expansion of automotive services, and Rumania, Bulgaria, and Hungary are presently engaged in extensive construction of repair and service stations.

Gasoline

31. Plans for the expansion of crude oil refining capacity in the USSR and in Eastern Europe appear to be adequate, if implemented, to supply the gasoline requirements of the automobile inventory estimated for 1970, although

Poland and Hungary may continue to require imports from the USSR or Rumania. Octane ratings probably will remain well below US standards in 1970, but new secondary refining installations will permit the manufacture of gasoline adequate for the lower compression ratios of automobiles used in the European Communist countries.

Tires

32. At present the European Communist countries, with the apparent exception of Czechoslovakia, East Germany, and Rumania, do not produce sufficient quantities of passenger car tires to meet their needs. In the USSR, shortages of tires were reported during the entire seven-year plan period (1959-65) as well as in 1966. In apparent response to the anticipated rise in production of cars for domestic use, efforts are under way in the Communist countries to increase both the output and quality of passenger car tires. These objectives, in turn, have spurred the purchase of tire plants from the West. In the case of Poland and Bulgaria, the addition of facilities supplied by the West probably will permit output to match requirements by 1970. Purchases of tire production facilities by Czechoslovakia in 1965-66 should more than cover increased domestic needs and provide for enlarged exports of passenger car tires by 1970. In August 1967, Rumania contracted with a Western European consortium for equipment to expand its two tire plants, which may enable the country to meet its needs for passenger car tires by 1970. In September 1967 the USSR was near to an agreement with an Italian firm for the purchase of a tire plant that could substantially reduce the Soviet dependence on imports of tires. It seems unlikely, however, that Hungary will be able to meet its demands for passenger car tires in 1970 without imports. The extent to which domestic tire output will meet future needs in Yugoslavia and East Germany is uncertain.

Metals

33. Production of ferrous metals in the European Communist countries by the early 1970's is expected to be adequate to meet the requirements

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of the planned expansion in production of automobiles. Plans of the Soviet automotive sector to increase production will not significantly increase its claim on total output of ferrous metals. Much of the increased auto production in Eastern European countries before 1970 will come from the assembly of imported parts and will not be hampered by the current lack of wide, continuous, hot and cold strip mills needed for auto body stock. By the early 1970's, Czechoslovakia, Bulgaria, and Rumania plan to have wide, continuous, hot and cold strip mills in operation and probably will be able to produce the flat rolled steel necessary for the production of small automobiles. Needs for ferrous metal which cannot be satisfied internally or by imports from other Communist countries probably can be satisfied through imports from the West. Most of East Germany's metallurgical needs for its present automobile production are satisfied by imports from the USSR. Czechoslovakia probably meets its needs through imports from Poland and the USSR.

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