

CHARACTER AND CONDITIONS AFFECTING THE CHANGES OF THE PASSENGER CARS' FLEET STRUCTURE IN POLAND

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Abstract

Structure of the fleet of the passenger cars registered in Poland in the 1991-2006 years has undergone significant changes due to a dynamically developing situation, both on the domestic and international automotive market. Over the last fifteen years there has been a growing tendency observed in Poland, which led to an over twofold increase of passenger cars being registered. Changes in both makes and age structure of the fleet of the passenger cars registered in Poland are affected by fluctuations of sales figures of the new cars, but first of all by the used cars import. The 90-ties brought about an improvement in the financial situation of certain social groups in Poland as well as increased availability and ease to obtain loans to buy cars. This resulted in the increase of the new passenger cars sales. Since 2000 there has been a decreasing tendency observed in this aspect, but at the same time growing interest in the individual import of used passenger cars to Poland. Especially, since Poland's accession to European Union on the 1-st of May 2004 Analysis of both makes and age structure of the fleet of the passenger cars registered in Poland for the first time in the years 2004-2006 as well as those removed from the register, indicates a constant growth in the population of old cars, and increase of their share in the car fleet structure. In the period under scrutiny, cars removed from the register, were dominated by the cars of at least mp-teen years of age, including those over 20 years. Those removed from the register were first of all the cars of makes and models whose low technological quality, and additionally high fuel consumption, excluded them from their further economical and safe usage.

Keywords: *transport, passenger cars, changes of the passenger cars' fleet structure, used passenger cars import*

1. Changes of the passenger cars' fleet structure in Poland

Automotive market is one of the most dynamically developing ones both in the world and in Poland, and passenger cars decidedly dominate the entire vehicle population. Their number in 2006 was about 75% of all types of motor vehicles, almost six times exceeding the number of trucks.

In Poland, already since the end of the 80-ties, last century, there has been a growing tendency observed in the amount of all registered passenger cars. Over the last fifteen years their amount increased more than twofold. In 1991 there were 6112.2 thousand passenger cars registered, and by the end of 2006 already 13384.2 thousand, but fifteen years ago, for the 1000 inhabitants there were 159 cars, while in 2006 respectively, 351 this type of the vehicles [2] (Fig. 1).

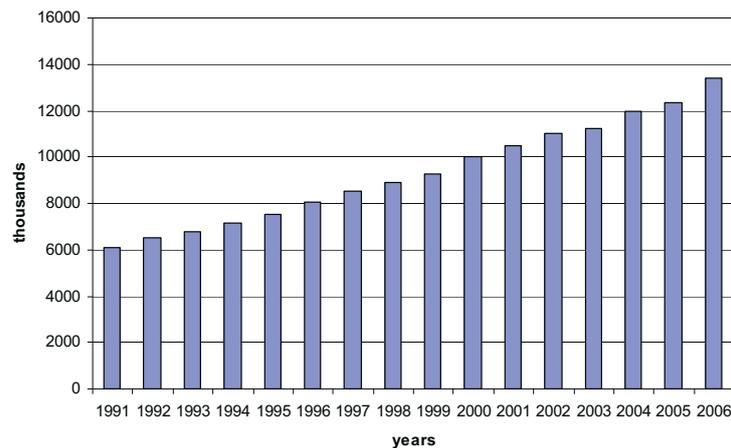


Fig. 1. Numbers of passenger cars registered in Poland in the years 1991-2006

Changes observed in both makes and age structure of the fleet of the passenger cars in Poland are determined by fluctuations of sales figures of the new cars, but first of all by the used cars import. In the years 1992-2007, the domestic market swallowed 10.3 mln passenger cars, in that 5.5 mln new ones and about 4.8 mln used cars.

Sales figures of the new passenger cars in Poland in the 90-ties were characterised by a growing tendency, which was linked to an improvement in the financial situation of certain social groups, but also those less well off people, with an increased availability and ease to obtain loans to buy cars. In 1999 sales reached unimaginable, for those times, figures of 640 thousand new passenger cars, which sparked hopes for modernisation and improvement of the age structure of the passenger cars domestic fleet. Unfortunately, since 2000 there has been a decreasing tendency observed in this aspect. New passenger cars sales in 2002 being of 308 thousand were only less than a half of the sales from 1999. In 2007 new passenger cars sale was about 293 thousand. In comparison with a previous year it was still an increase by 22.6%, but compared with the highest numbers sold in 1999 represents slump by 54.2% [1, 5, 8] (Fig. 2).

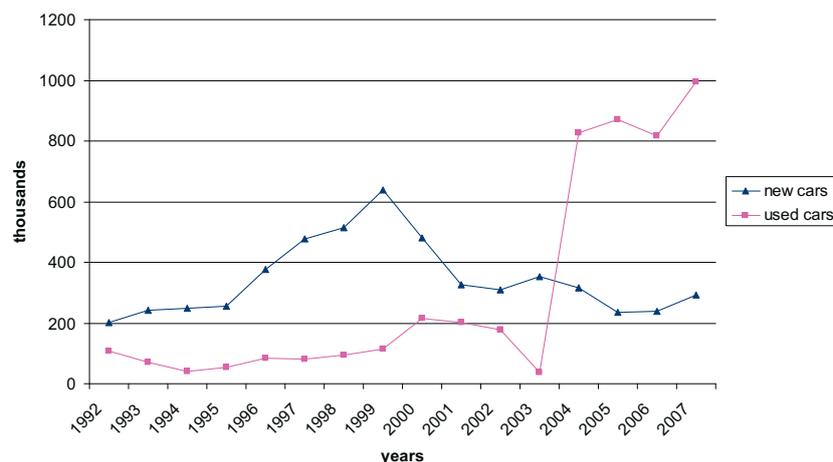


Fig. 2. Sales figures of the new cars and numbers of used passenger cars imported to Poland in the years 1992-2007

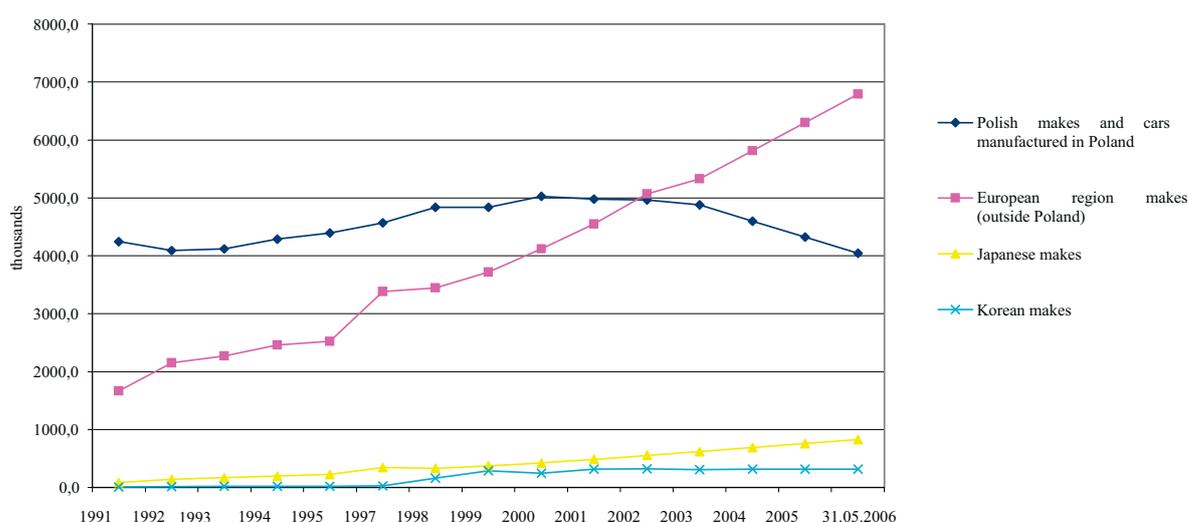
The reasons for the slumping demand for the new passenger cars in Poland can be sought, among the others, in the increase of the excise duty for the new cars, rising fuel prices, and first of all unfortunately - in diversification of the population as far as affluence is concerned. More over, the dynamic development of the housing market, that has taken place in Poland, particularly since 2004, could also have caused limiting of the interest in the new cars. All this causes

increasing interest in the individual import of used passenger cars to Poland. Yet in the 2000-2002 years this import was characterised by a slumping tendency (from 214 to 179 thousands), while in 2003 it shrunk even to almost 36 thousand. But since Poland's accession to European Union on the 1-st of May 2004, there have been almost 3.5 mln used passenger cars imported to Poland. In 2007 import was bigger by 21.7% in relation to 2006. Real content of the wallets of those interested in buying a car, contributed to the fact, that in 2002 more than a half of the passenger cars imported to Poland was over 10 years old. Financial instruments used then in 2003, whose aim was to protect domestic market from importing the oldest used cars, caused the slump in the import of this group of vehicles. In 2003 only 13.7% of the imported used passenger cars were less more than 10 years old, however in the forthcoming years this situation changed radically (Tab. 1) [5].

Tab. 1. Import to Poland of the used passenger cars in the years 2002-2007 (acc. to age)

	2002		2003		2004		2005		2006		I-V 2007	
	numbers	%	numbers	%								
Passenger cars	179.059	100.0	35.736	100.0	828.142	100.0	870.777	100.0	816.789	100.0	385.808	100.0
in this: up to 4 years old	23.031	12.9	19.114	53.5	30.641	3.7	43.539	5.0	54.725	6.7	42.053	10.9
more than 4 till 10 years old	56.691	31.7	11.714	32.8	195.442	23.6	248.171	28.5	281.792	34.5	165.512	42.9
above 10 years old	99.337	55.5	4.908	13.7	602.059	72.7	579.067	66.5	480.272	58.8	178.243	46.2

Following Poland's accession to EU, vehicles manufactured in 1991-1995 represented more than a half of the used passenger cars imported to Poland, while cars of up to 4 years old, decidedly below 10%. Observed dropping number of car manufactured in Poland is a natural consequence of importing used cars to Poland and removing from use even older ones is, since 2001 [6] (Fig. 3).



Manufactured in Poland, besides Polonez, Syrena, Fiats 125p, 126p, Cinquecento, Seicento, Panda, also Daewoo Lanos and Matiz

Fig. 3. Estimated number of passenger cars registered in Poland in 1991-2006 (according to the regions of the makes' origin)

Share of the passenger cars manufactured in Poland among all cars registered in Poland decreased in the 1991-2006 period from almost 70% till about 32%. Mainly European region passenger car makes were growing in numbers. Car makes of this region constituted, by the end of May 2006, about 53% car fleet in Poland.

Amongst the passenger car makes and models manufactured in Poland, for years, the dominating place was taken by Fiats 126p. Their number is however decreasing, like that of Fiats 125p and Polonez. Among the makes of the European origin, the dominating position was won by Opel overtaking Volkswagen and Ford. Skoda, which at the beginning of the 90-ties occupied first place in that group of passenger cars registered in Poland, now occupies further plans in the listing of makes [6] (Fig. 4).

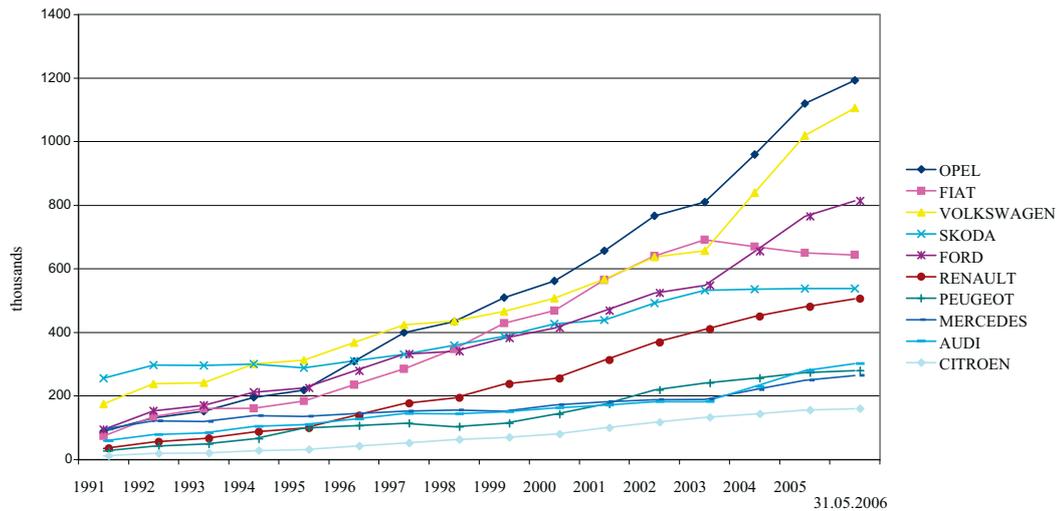


Fig. 4. Estimated numbers of selected passenger cars' makes of the European origin (without those manufactured domestically) registered in Poland, acc. to the state from the end of 1991-2006 years

Comparing age structure of the passenger cars registered in Poland during the last years (31.12.1995-31.05.2006) indicates both the constant increase of the old cars population, and the increase of their share in the fleet population structure.

It is estimated, that in May 2006 almost 5 mln passenger cars registered in Poland (39%) were 16 years old and more [3, 4, 6] (Fig. 5). The share of this age group of cars in 1995 was smaller - about 31%. More over, the share in the age structure of the passenger cars of up to 5 years old has, in the years 2000-2006, decreased from 24 to almost 11%.

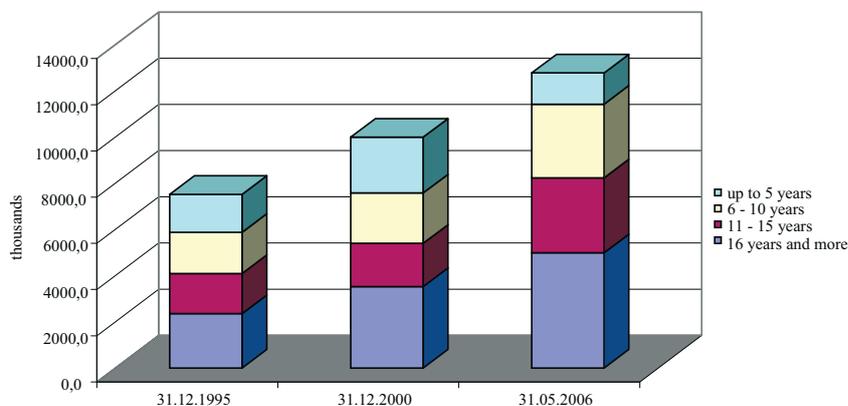


Fig. 5. Passenger cars registered in Poland according to the state from the end of 1995, 2000 and for 31.05.2006 acc. to the age

2. Passenger cars registered in Poland for the first time in the 2004-2006 years

Total number of passenger cars registered in Poland for the first time in the period 01.01.2004 till 31.12.2006 was, according to the CEPIK data, about 3.156 thousand, including about 529 thousand (almost 17%) cars registered in the years of their manufacture (clear majority of them were new cars, purchased in the car show rooms). About 2.626 thousand (more than 83%) were used cars, precisely: manufactured in the period before the year of their first registration on the Polish territory (Tab. 2) [6].

Tab. 2. Numbers of passenger cars registered on the Polish territory for the first time in the 2004-2006 years

Year	Total	Including registered:		Share of cars registered in the same year as the year of manufacture, out of the total number of passenger cars registered
		in other year than the year of manufacture	in the same year as the year of manufacture	
2004	1.003.467	801.953	201.514	20.1
2005	1.120.805	971.072	149.733	13.4
2006	1.031.738	853.728	178.010	17.2
Total:	3.156.010	2.626.753	529.257	16.8

Among the used passenger cars registered domestically for the first time in the 2005 and 2006 years prevailed years of manufacture: 1991-1996 (Fig. 6).

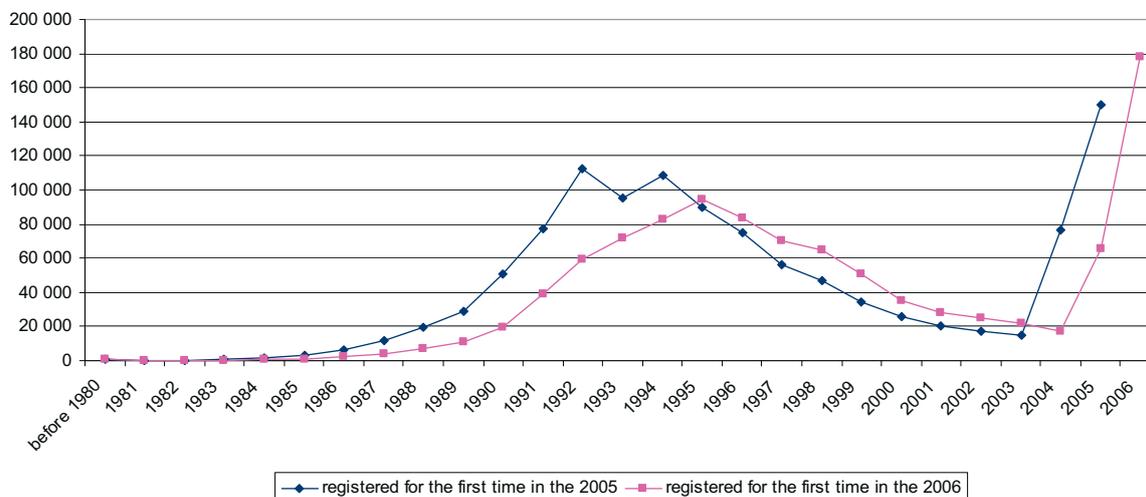


Fig. 6. Numbers of passenger cars registered on the Polish territory for the first time in the 2005-2006 years (according to the year of manufacture)

In total, during the period since January 2004 till the end of May 2006 among the used passenger cars registered on the Polish territory for the first time, prevailed German makes: Volkswagen Golf - 247 thousand, Opel Astra - 145 thousand, Volkswagen Passat - 111 thousand, Opel Vectra - 96 thousand. Together, during the period discussed, cars of these four manufacturers' makes and models constituted almost 29% of the used passenger cars registered in Poland for the first time. Dominating years of manufacture, in case of a VW Golf were 1990 - 1994, Opel Astra years: 1992-1994, VW Passat years: 1990-1995, and in case of an Opel Vectra years: 1990-1993 and 1996-1997 (Fig. 7).

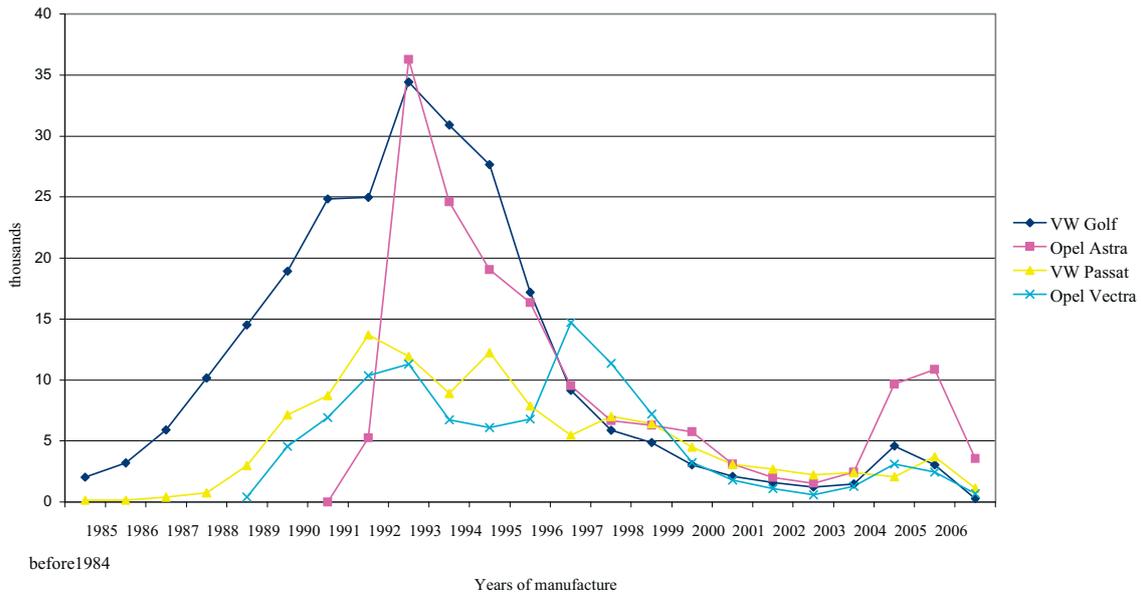


Fig. 7. Passenger cars numbers of selected makes and models registered on the Polish territory for the first time in the period since January 2004 till the end of May 2006

During the entire period discussed, from among about 600 thousand used cars registered in Poland for the first time, of the makes and models mentioned, the number of those manufactured prior to 1990 was almost 124 thousand (20.8%), and from the years of manufacture: 1991-1995 was about 333 thousand (55.5%).

3. Elimination of the used passenger cars

The number of technically used up and de-registered in Poland passenger cars in the period since January 2004 till the end of May 2006 was (acc. to the CEPiK data base) 249.3 thousand. During the entire period under scrutiny, among the deregistered cars, prevailed manufacturing years 1983-1991, that is vehicles of at least mp-ten years of age, including sizeable group of cars over 20 years old. (Fig. 8).

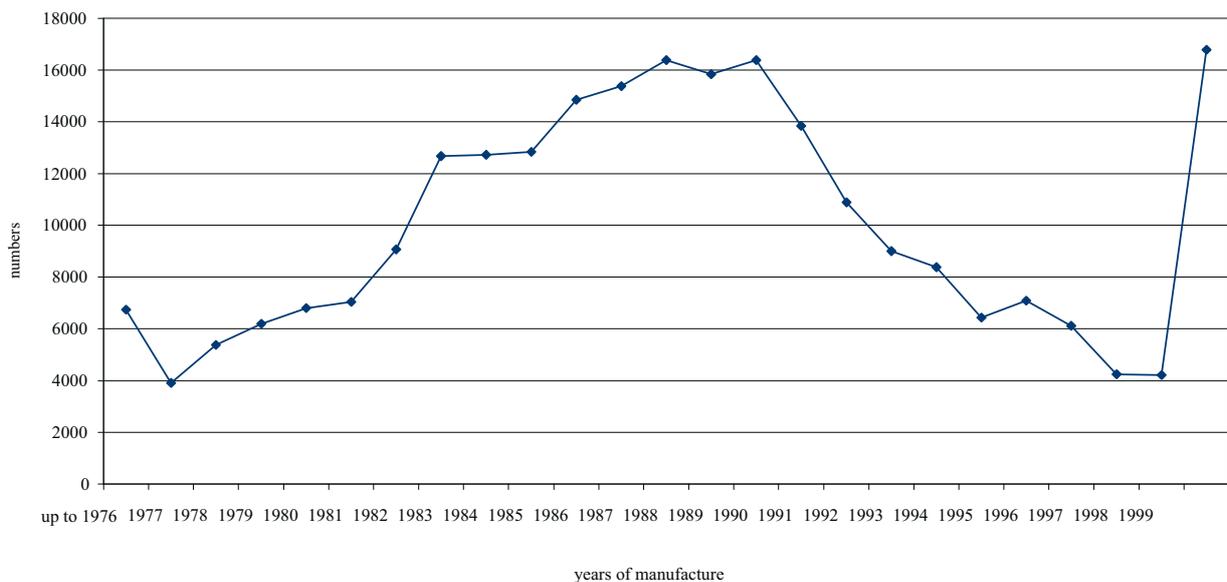


Fig. 8. Numbers of passenger cars deregistered in Poland since January 2004 till the end of May 2006, (acc. to the year of manufacture)

Year groups 1983-1991 removed from use - (131 thousand passenger cars) constituted about 53% of all de-registered cars in the period discussed. All together during a period since January 2004 till the end of May 2006, there was about 176 thousand passenger cars removed from use in Poland, manufactured till 1991r. This constituted almost 71% of all de-registered passenger cars in this period domestically.

Number of passenger cars removed from use in 2005, in comparison with 2004 grew even 5 times and was 157 thousand, which can be linked with a high import of used cars in the following, second year after Poland's accession to EU, and in this replacing the used up old cars with also used ones, but newer and of higher quality.

From among the passenger cars de-registered in Poland in the period under scrutiny, domestically manufactured automotive products of the past years prevailed, i.e. Fiat 126p, Polonez and Fiat 125p. De-registered were over 83 thousand „small fiats”, almost 26 thousand Polonez and almost 19 thousand „big fiats”.

Out of the cars manufactured abroad, de-registered were almost 7 thousand. Skoda 105, 110, 120 and 130 as well as over 6 thousand Volkswagen Golf.

Biggest eliminations of Fiats 126p concerned 1983-1991 year groups, eliminations of Fiats 125p concerned cars manufactured up till 1988, while Polonez manufactured in the years: 1988-1994 [6] (Fig. 9).

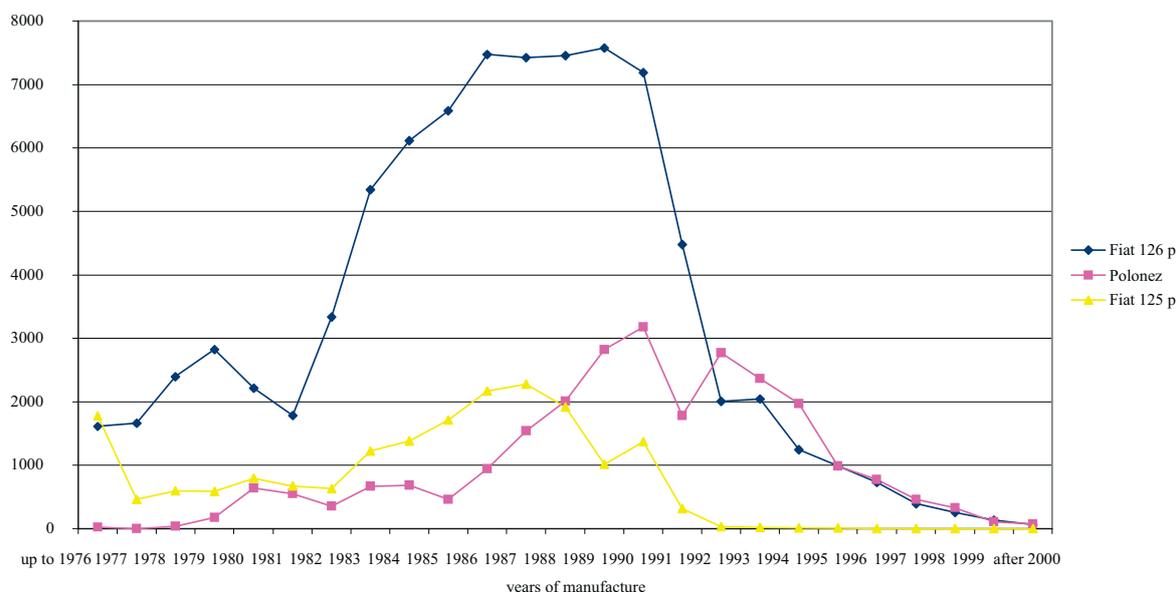


Fig. 9. Passenger cars of selected makes and models de-registered in Poland since January 2004 till May 2006. (acc. to the years of manufacture)

Those removed from use were first of all the cars of makes and models whose low technological quality, and in case of Polonez, high fuel consumption, excluded them from their further economical and safe usage.

4. Summary

Data presented indicates that over the last several years, the ageing process of the car fleet in Poland has been progressing. This is not surprising, in view of low numbers of new passenger cars being delivered to the market annually (as it took place in the recent years) of about 2-3% total number car fleet possessed.

Import of the used passenger cars to Poland negatively affects statistically approached car age structure in Poland. It is possible however to risk a statement (bearing in mind still recent high

percentage of old technologically not durable and dangerous to the drivers and passengers models and makes from the seventies, in the structure of the car fleet), that their replacement by used, newer generation vehicles, represents positive quality change.

Evaluating the import to Poland of the used passenger cars it is necessary to realise, that yet in the first half of the 90-ties, the domestic car fleet, was dominated by domestically manufactured cars and those from other former COMECON countries, majority of them being Fiats 126p. Needless to say, they were technologically not durable cars, and in case of Fiats 126p literally dangerous for the passengers in the situations of increasing road traffic intensity. It needs to be remembered, that cars like Fiat 125p, Polonez, not to mention two stroke engined Wartburgs and Trabants are characterised by a particularly destructive effect on environmental.

Bearing in mind practical aspects of using goods like passenger cars, and also the problem of emotional approach to motorization by significant part of the Polish community, it is safe to assume that, if it had not been for an individual import of used cars, initiated between the 80-ties and 90- ties last century and linked with it drop of vehicle market prices, it might have resulted in the phenomenon of mass rebuilding and reanimating for the vehicles manufactured in the eighties.

Forecasts of the analysts in Poland indicate that the lasting tendency for a low sales of the new passenger cars in Poland. This is caused, on one hand by relatively low economic potential, represented by Polish community at present and probably for the forthcoming years, and on the other by high supply of used passenger cars imported from the EU countries. As from 2004, the number of annually imported car is undiminished. In the forthcoming years it is imperative to take into account a real fact of renewing passenger car fleet in Poland, as a result of importing used cars. This renewal is and will be of course of rather relative character.

Economic factors, and also travelling comfort and driving safety aspects have an influence on the decisions of the old cars owners to replace them with better used imported vehicles.

It is difficult to share the view, that purchasers of a used imported cars replace with them cars presenting higher technological level. That is why, the opinions of flooding the country with a „car junk” are completely unjustified. Imported used cars replace, in a significant part, used up old generation cars removed from use and represent to their purchasers, a substantial quality change. The fact that they are not new cars is a result of the Polish society’s state of wealth.

References

- [1] *Auto Technika Motoryzacyjna* (for the years 1995-2000).
- [2] Central Statistical Office, *Transport - Activity Results (for the years 1991-2006)*.
- [3] Dorosiewicz, T., Dorosiewicz, S., Menes, E., Waśkiewicz, J., Świstoń, D., *Improvement and updating information data base characterising Polish road transport. Estimating numbers of passenger cars, trucks and busses acc. to makes, types and years of service in the individual voivodships, as for the state from the end of 1995*, ITS work 6153/ZBN, Warsaw 1996.
- [4] Menes, E., Krysiuk, C., Szponar, W., *Creating and updating data bases necessary for a forecasting in the road transport*, ITS work 6012/ZBE, Warsaw 2003.
- [5] Ministry of Finance.
- [6] Ministry of Interior and Administration.
- [7] Waśkiewicz, J., Menes, E., Zakrzewski, B., *Comparative evaluation of the technical condition of the used imported passenger cars and replaced by them passenger cars hitherto used in Poland, as far as road safety aspects and environmental protection is concerned (Stage I)*, ITS work 6626/ZDO/ZBE, Warsaw 2006.
- [8] www.egospodarka.pl.