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**POLAND – ECONOMIC DEVELOPMENT LEVEL IN
COMPARATIVE PERSPECTIVE, 1950-2005**

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POLAND – ECONOMIC DEVELOPMENT LEVEL IN COMPARATIVE PERSPECTIVE, 1950-2005

1. Introduction

The aim of the present paper is to show the most aggregate quantitative results of systemic transformation in Poland to date, in terms of changes of country's absolute and relative development levels, i.e. its GDP per capita compared to other countries, in particular fellow transition economies and UE members.

The analysis consists of four parts. In the first part, to shed more light on the present comparative position of Poland on world development ladder, a historical perspective is provided. Between 1990 and 1989, i.e. during the period of command economy, Poland witnessed a real divergence trend. widening the development gap not only towards Western industrialized economies but also vis-à-vis fellow socialist countries.

In part two the process of fast catching up in Poland vis-à-vis both groups of economies between 1990 and 2005 is illustrated with data on economic growth and indices showing the relative development levels. During this period Poland was the fastest growing transition economy while also displaying higher GDP growth rates compared to the UE-15 average.

Part three shows the present comparative position of the Polish economy in the world and in the enlarged European Union, both in terms of economic potential (total GDP) and development level (GDP per capita).

The concluding part summarizes the findings of the paper and sketches the prospects of the real convergence process of the Polish economy towards the future development level in the EU-15 countries.

2. The command economy – lagging behind¹

Throughout its contemporary history Poland tended to remain on the periphery of the mainstream of economic development taking place in the Centre, i.e. mostly in Western

¹ This and the subsequent section of the paper draw from two other works of the author. See R. Rapacki, *Comparative Macroeconomic Performance*, chapter 1.1, in: M. Weresa (ed.), "Poland. Competitiveness Report 2006", Warsaw School of Economics, Warsaw 2006 and R. Rapacki, *Mimo sukcesów do czołówki nam daleko (Notwithstanding successful transformation Poland is still away from fully catching up)*, *Rzeczpospolita*, 6 September 2006.

Europe, and later in North America, Japan and South-East Asia. As a result by 1950 the country remained relatively underdeveloped, with GDP per capita representing less than a half of the level prevailing in the most advanced industrial countries such as United Kingdom, France and Germany. On the other hand, in the aftermath of the Second World War Poland was much ahead of the less developed economies in Southern Europe, including Spain, Portugal and Greece, and achieved a comparable development level to that of Italy and Hungary (table 1).

Table 1. Widening development gap, 1950-1989 (GDP per capita at PPP, Poland = 100)

	1950	1980	1989
Western Europe			
Germany	167	237	279
Italy	106	226	274
France	204	234	268
United Kingdom	243	201	256
Spain	57	159	199
Ireland	134	164	195
Greece	80	174	178
Portugal	69	122	159
EU-15 average	-	215 (46,5)*	262 (38)*
Central Europe			
Czech Republic	141	160	197
Estonia	..	113	142
Hungary	101	122	146
Latvia	..	108	137
Lithuania	..	116	145
Slovakia	141	131	155
Slovenia	..	193	194
Bulgaria	..	90	122
Romania	..	81	89
Russia	..	104	132
Ukraine	..	97	124
Poland	100	100	100

* - Poland's development level as a percentage of the EU-15 average.

Source: W. M. Orłowski, *Droga do Europy: Makroekonomia wstępowania do Unii Europejskiej (The Road to Europe: Macroeconomics of the EU Accession)*. Zakład Badań Statystyczno-Ekonomicznych GUS i PAN, Zeszyt 34, May 1996, Warsaw (1950 data); IMF, World Economic Outlook Database, September 2005 (1980 and 1989 data).

The period of 'real socialism' or the command economy witnessed a dramatic widening of the development gap in Poland towards industrial Western European economies. By 1989, i.e. at the outset of systemic transformation, the Polish GDP per capita amounted to only slightly more than one third of the latter. Simultaneously, Poland experienced a real

divergence of its growth pattern vis-à-vis the less developed countries of Southern Europe. As data in table 1 clearly demonstrate, by 1989 Greece, Portugal and Spain have successfully caught up and by much overtaken Poland on the ladder of economic development. Moreover, Poland has also lost ground to most fellow socialist countries.

The process of real divergence was particularly pronounced in the 1980s. The reasons behind this process are quite straightforward: between 1979 and 1982 Poland suffered – as the only socialist country – a deep contraction of output and GDP amounting to a combined 25 per cent. The fall of output was a clear symptom of mounting inefficiencies of the centrally-planned economy compounded by the martial law introduced in December 1981 and the ensuing sanctions imposed on Poland by most Western countries. As a result of the foregoing trends not only the development gap between Poland and the relatively more advanced socialist countries increased (e.g. vis-à-vis the Czech Republic from 60% to almost 100 per cent) but simultaneously Poland was overtaken by some of the less developed command economies (Bulgaria and Ukraine).

As a derivative Poland's comparative economic position within the group of what is now being dubbed 'transition economies', substantially deteriorated. By 1989, in terms of GDP per capita (in purchasing power parity or PPP) or development level Poland was ranked fourteenth among 27 countries of East-Central Europe and Central Asia, compared to 11th place in 1980.

As a wrap up of the foregoing discussion it ought to be noted that due to the adverse economic trends experienced in the turn of the 1970s and 1980s and its poor economic performance throughout the 1980s Poland suffered a loss of its international comparative position and in 1990 entered the road from plan to market lagging behind not only all Western economies but also a half of the entire group of former socialist countries.

3. Catching up after 1989

The 1990s and the beginning of the new century witnessed a fast real convergence trend or catching up of the Polish economy vis-à-vis both the EU countries and all transition economies.

According to data in table 2, at the outset of systemic transformation (1989) Poland's GDP per capita in terms of purchasing power parity (PPP) amounted to 38% of the EU-15 average. Alternatively, the average development level recorded in fifteen EU member countries represented 262 per cent of that of Poland. Simultaneously, except for Romania the

development level of all other former socialist countries shown in the table exceeded that of Poland by one fifth at the least to almost one hundred per cent.

Table 2. Relative development levels in Poland, the EU countries and selected transition economies, 1989-2005 (GDP per capita at PPP, Poland = 100)

	1989	1992	2000	2001	2002	2003	2004	2005
Poland	100	100	100	100	100	100	100	100
Germany	279	350	239	239	234	232	222	217
France	268	320	243	248	242	238	224	218
Italy	274	327	248	237	231	225	210	203
UK	256	291	240	246	250	249	239	232
Spain	199	244	197	202	205	208	200	196
Ireland	195	252	269	280	287	287	282	276
Portugal	159	212	172	173	171	155	147	142
Greece	178	210	152	157	165	172	167	166
EU-15 average¹	262 (38)	316 (32)	234 (43)	237 (42)	235 (43)	232 (43)	222 (45)	216 (46)
Czech Rep.	197	194	136	141	143	145	145	145
Estonia	142	114	88	92	97	102	104	110
Hungary	146	140	113	121	125	128	122	124
Latvia	137	93	75	80	83	87	88	93
Lithuania	145	128	81	87	90	96	98	102
Slovakia	155	137	101	104	109	111	106	108
Slovenia	194	176	156	161	161	162	162	162
Bulgaria	122	108	57	61	61	64	61	64
Romania	89	79	53	57	61	62	63	65
Russia ²	132	127	72	74	77	80	82	83
Ukraine ²	124	110	41	44	46	49	53	53

1 – data in parentheses show Poland’s development level as a percentage of the EU-15 average;

2 - IMF data for the whole period.

Source: IMF, World Economic Outlook Database, September 2005 (for 1980, 1989 and 1992); Eurostat database (2000-2005).

By 2005 this development gap substantially narrowed both towards the EU-15 countries and transition economies, the only exceptions being Ireland and – to a certain extent – Spain. With regard to the former group Poland’s GDP per capita in PPP terms amounted to 46 per cent (or in the reverse order – the EU-15 average represented 216 per cent of the development level in Poland). This is equivalent to a catching up by 8 percentage points between 1989 and 2005. The process of real convergence was particularly pronounced with regard to major EU countries, such as Germany, France and Italy. It is worth stressing in this context that Poland was the only transition economy (except for a very special case of Bosnia

and Herzegovina) that by 2005 succeeded in narrowing the development gap towards the ‘core’ European Union (table 3).

**Table 3. Transition economies – the development gap towards the UE-15, 1989-2005
(GDP per capita in PPP, UE-15 = 100)**

Kraj	1989	2005
Poland	38	46
Czech Republic	75	67
Estonia	54	53
Hungary	56	56
Latvia	52	43
Lithuania	52	48
Slovakia	59	51
Slovenia	74	74
Bulgaria	46	30
Romania	34	32
Russia	50	38
Ukraine	47	25

Source: own calculations based on IMF and Eurostat data.

Simultaneously, Poland succeeded in narrowing the development gap towards all former socialist countries including those not shown in Table 2. The process of catching up has been especially fast vis-à-vis the Czech Republic, Slovakia, Bulgaria, Russia and Ukraine. As a result, by 2005 in terms of GDP per capita (in PPP) Poland was ranked 7th in the entire group of 27 transition economies, compared to its 14th rank in 1989.

Although the comparative economic performance of the Polish economy was remarkable during the 1990-2005 period, one should not lose from sight a broader historical perspective discussed in the preceding section. Seen from this angle Poland’s relative development level has not essentially improved between 1980 and 2005. Comparing relevant indices in Tables 1 and 2 one can easily notice that today’s GDP per capita in Poland relative to the EU-15 average is roughly at the same level as that recorded in 1980 (46.0 compared to 46.5 per cent).²

Parallel to that general development, however, Poland experienced diverging trends with regard to individual EU member countries and the transition economies. On the one hand, it succeeded in narrowing the development gap towards the major EU economies, including Germany, France and Italy. On the other hand, between 1980 and 2005 its comparative economic position deteriorated vis-à-vis some other, mostly less advanced EU members, such

² However, one should treat these historical data with caution as the GDP estimates for the command economies prior to 1990 might be seriously biased.

as Ireland, Spain and the UK. At the same time Poland's relative development level increased compared to all transition economies, both more and less economically advanced.

Table 4. GDP growth in transition economies and the EU-15, 1990-2005

Country	Real GDP growth rate				Real GDP index in 2005	
	Average annual % growth	Annual % growth			1989=100	2000=100
		1990-2005	2003	2004		
Poland	2.7	3.8	5.4	3.2	153	115
Czech Republic	1.2	3.2	4.7	6.0	121	119
Estonia	1.1	6.7	7.8	9.8	119	144
Hungary	1.4	3.4	4.6	4.1	125	122
Latvia	0.0	7.2	8.5	10.2	99	147
Lithuania	-0.1	10.5	7.0	7.5	96	144
Slovakia	1.6	4.5	5.5	6.0	128	127
Slovenia	1.7	2.7	4.2	3.9	131	118
Bulgaria	-0.2	4.5	5.6	6.0	93	128
Romania	0.1	5.2	8.4	4.1	103	132
Russia	-0.8	7.3	7.2	6.4	87	135
Ukraine	-2.3	9.6	12.1	2.4	58	146
EU-15	2.1	1.0	2.3	1.4	139	108

Sources: *World Development Indicators 2005*, The World Bank, Washington 2005; *Transition Report Update*, EBRD, London, May 2005; Eurostat database; UN Economic Commission for Europe, *Economic Survey for Europe*, 2005 no. 2, Geneva 2005; VIIW Research Report No. 325, *Special Issue on Economic Prospects of Central, East and Southeast Europe*, Vienna, February 2006; own calculations.

The improvement of Poland's relative development level by 2005 has been in part a derivative of the fastest economic growth in the whole group of 27 transition economies. The relevant data are shown in Table 4. The average annual growth rate of Polish GDP in real terms during 1989-2005 totalled 2.7 per cent including the episode of a deep contraction of output in 1990-1991 (by a combined 17.8 per cent) due to the effects of the 'transformation recession'. It should be stressed however, that in a comparative perspective the transformation recession in Poland was both the shallowest³ and the shortest (two years) in the whole group of transition economies. This outcome may be interpreted as a pay off to Poland's 'shock therapy' or the implementation of the so called Balcerowicz Plan since the end of 1989.

³ A similar scale of output contraction was experienced only in the Czech Republic. Moreover, according to revised official data by GUS, a combined decline in GDP in Poland in 1990-1991 amounted to only 14.7 per cent.

As a result of both the shallowest GDP decline in the early stage of systemic transformation and the fastest economic growth during the 1990s⁴ the GDP produced in Poland in 2005 represented 153 per cent of the level recorded in 1989, i.e. at the outset of the systemic transformation. This index favourably compares with similar indices for all the remaining former socialist countries while also exceeding the relevant indicator for the EU-15. As far as the former group is concerned, however, one important point should be raised. Since the beginning of the present decade Poland has lost its leading position as the fastest growing economy of the region. It has been outpaced in this regard by all transition economies shown in Table 4; the average growth rate of the Polish economy during 2001-2005 amounted to 2.8 per cent while the similar indices for e.g. the Baltic countries exceeded 7.5 per cent annually.

As we pointed out earlier, the process of systemic transformation in Poland was accompanied by the real convergence of its development level towards the EU countries; between 1989 and 2005 the development gap vis-à-vis the EU-15 average narrowed by some 8 percentage points (Table 3). This effect, however, can only partly be explained by economic growth rates differentials. Throughout the entire period (including the contraction of output in 1990-1991) the GDP growth rate in Poland was only slightly higher than the average for the EU-15 countries (2.7% compared to 2.1 per cent). The differences in growth dynamic were much more pronounced after 1991: during 1992-2000 the pertinent growth rates amounted to 5.0% for Poland and 2.3 per cent for the EU-15 average whereas in 2001-2005 they totalled 2.8% and 1.6 per cent, respectively.

The most plausible explanation of the process of Poland's catching up with the target development level in the European Union can be found in the diverging demographic trends. Whereas the population in Poland between 1989 and 2005 practically remained unchanged (38,118 thousand compared to 38,157 thousand) the EU-15 countries experienced demographic growth as the aggregate size of their population increased by some 4.5 per cent, i.e. from 369 million to nearly 386 million (Eurostat database). These diverging demographic trends translate into larger GDP growth rates differentials in per capita terms. While for Poland the relevant rate amounted to 2.8 per cent annually the EU-15 countries recorded in average the GDP per capita growth by 1.7 per cent per annum.

⁴ Between 1992 and 2000 the real average growth of GDP in Poland amounted to 5 per cent annually. The country was then dubbed a "soaring eagle" of East-Central Europe. See e.g. De Broeck, M. and V. Koen, *The "Soaring Eagle": Anatomy of the Polish Take-Off in the 1990s*. Comparative Economic Studies, 2001, vol. XLIII, No. 2, Summer.

One more factor that may be held responsible for some disparities between the pace of Poland's real convergence with the EU-15 countries, on the one hand, and GDP growth rates differentials, on the other was the recent upward revisions of the historical GDP levels in Poland made by GUS (Central Statistical Office) in November 2005 and September 2006. The revisions in question involved the GDP values recorded in the domestic currency for 2000-2005 period and – compared to previous official data – increased the GDP levels in the range of 1-4 per cent for particular years. This translates into a faster catching up than otherwise, i.e. in the absence of such statistical revisions.

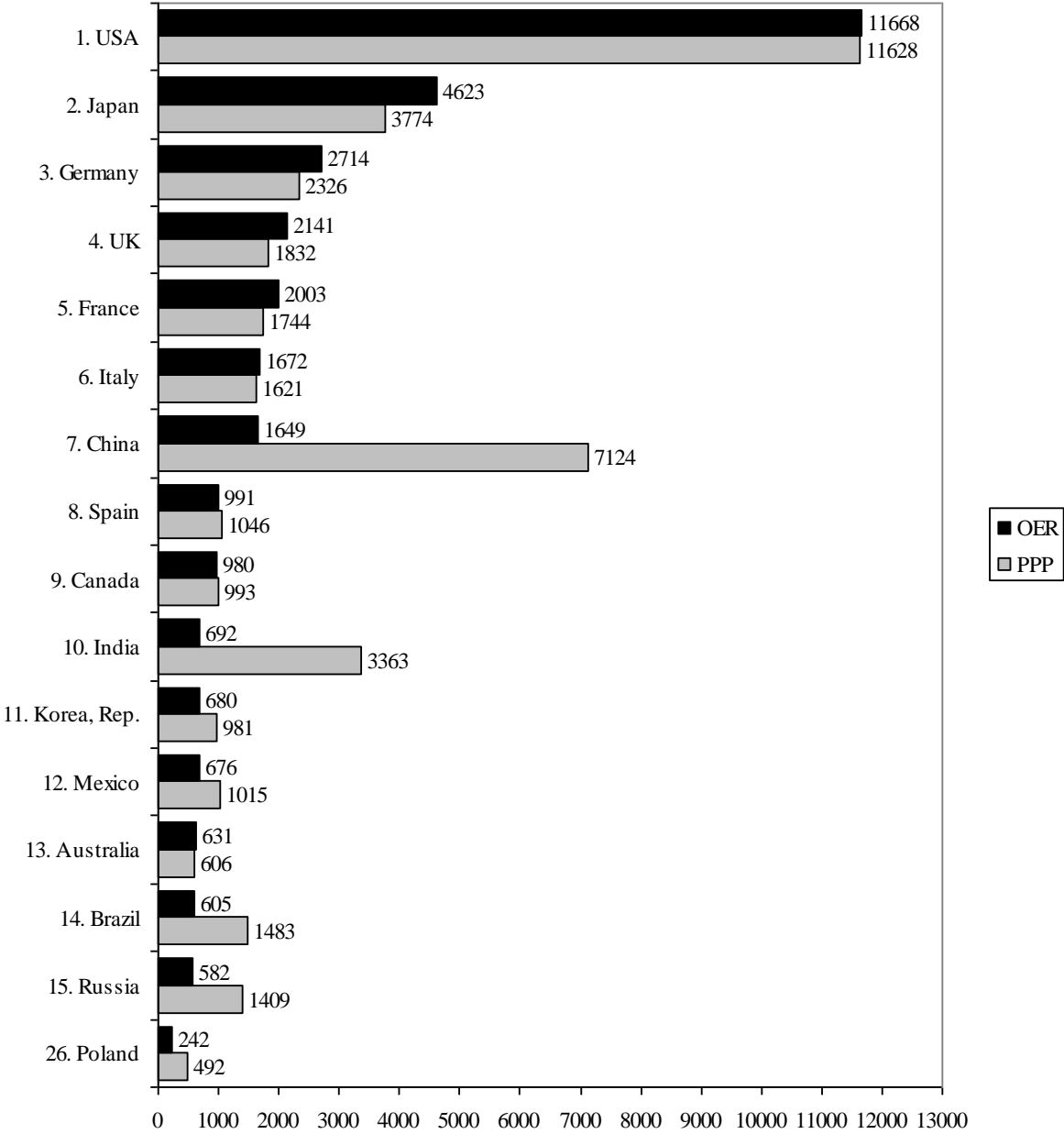
4. The outcomes – the Polish economy today in a comparative perspective

As we tried to show in the preceding section, the last sixteen years of systemic transformation in Poland should no doubt be seen as a success story in terms of narrowing the historical development gap towards more advanced countries both in Western and East-Central Europe. One of the most spectacular dimensions of the successful transition from the central plan to the market was the fastest economic growth among all transition economies between 1989 and 2005. Capitalizing on these past achievements one may legitimately ask a question: where does the Polish economy stand today in terms of its relative development level and what are the prospects of its further catching up in the years to come? To address the first question below we present a concise picture of Poland's present economic potential and development level in a broad comparative perspective – against the background of the world economy as well as its ranks within the enlarged European Union (EU-25 plus three prospective members). The second issue will be dealt with in the concluding section.

Chart 1, based on the most recent available statistics (World Development Indicators Database), presents the ranking of the largest economies in the world, using GDP in official exchange rates (OER) and in purchasing power parity (PPP) as criteria. According to these data, by 2004 Poland was ranked 26th (OER) and 22nd (PPP) in the world in terms of its economic potential or the size of the economy.⁵ Simultaneously, the country was ranked 64-72th in the world in terms of its development level (GDP per capita in OER and PPP).

⁵ Based on the preliminary data for 2005 it may be inferred that Poland's rank might have improved. Its GDP converted using the official exchange rate increased to approximately USD 303 billion whereas its GDP expressed in terms of purchasing power parity – to some 550 billion (author's estimates derived from Eurostat and GUS data).

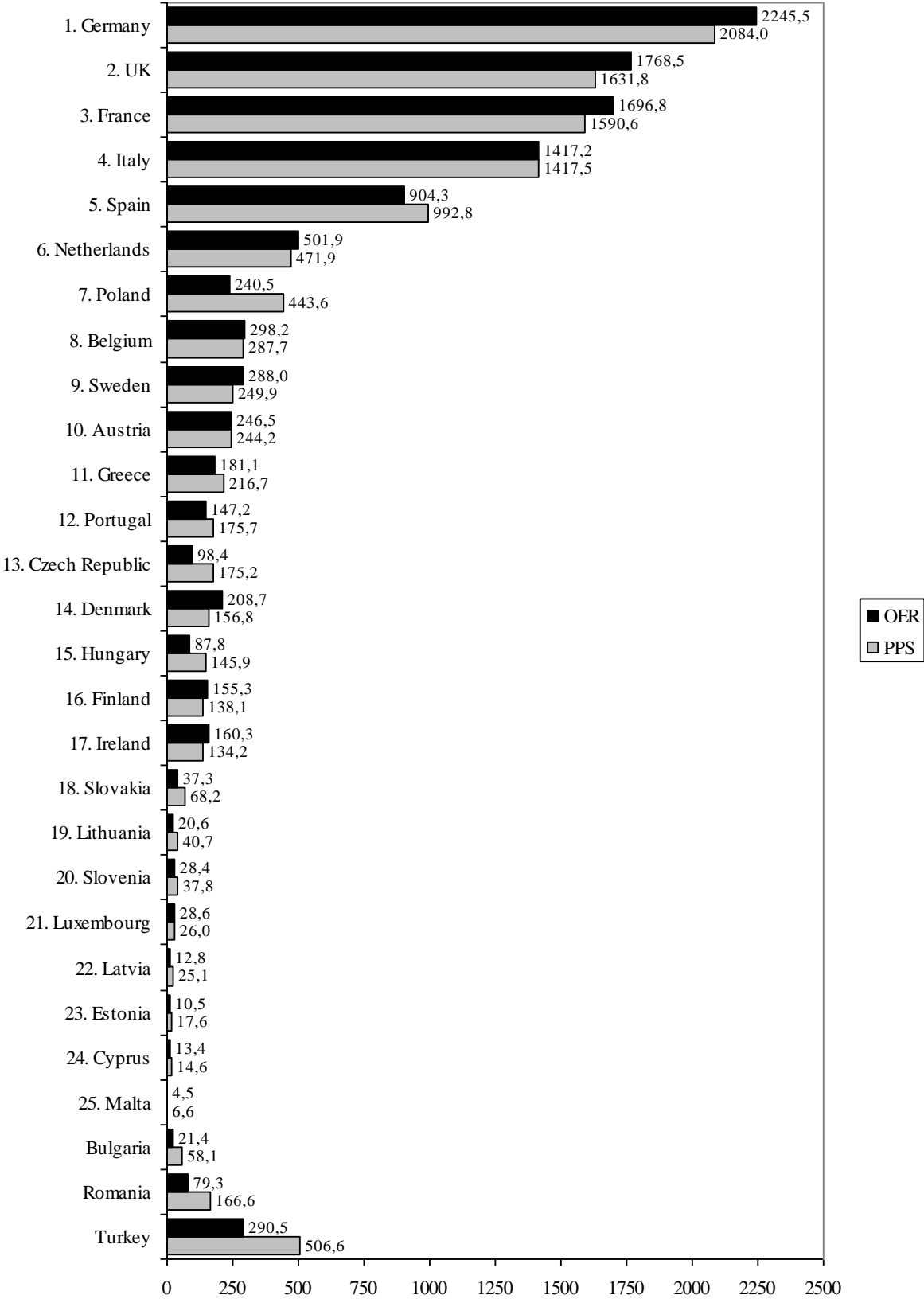
Chart 1. The largest economies in the world, 2004 (GDP, USD billion)



Source: World Bank, *World Development Indicators Database*.

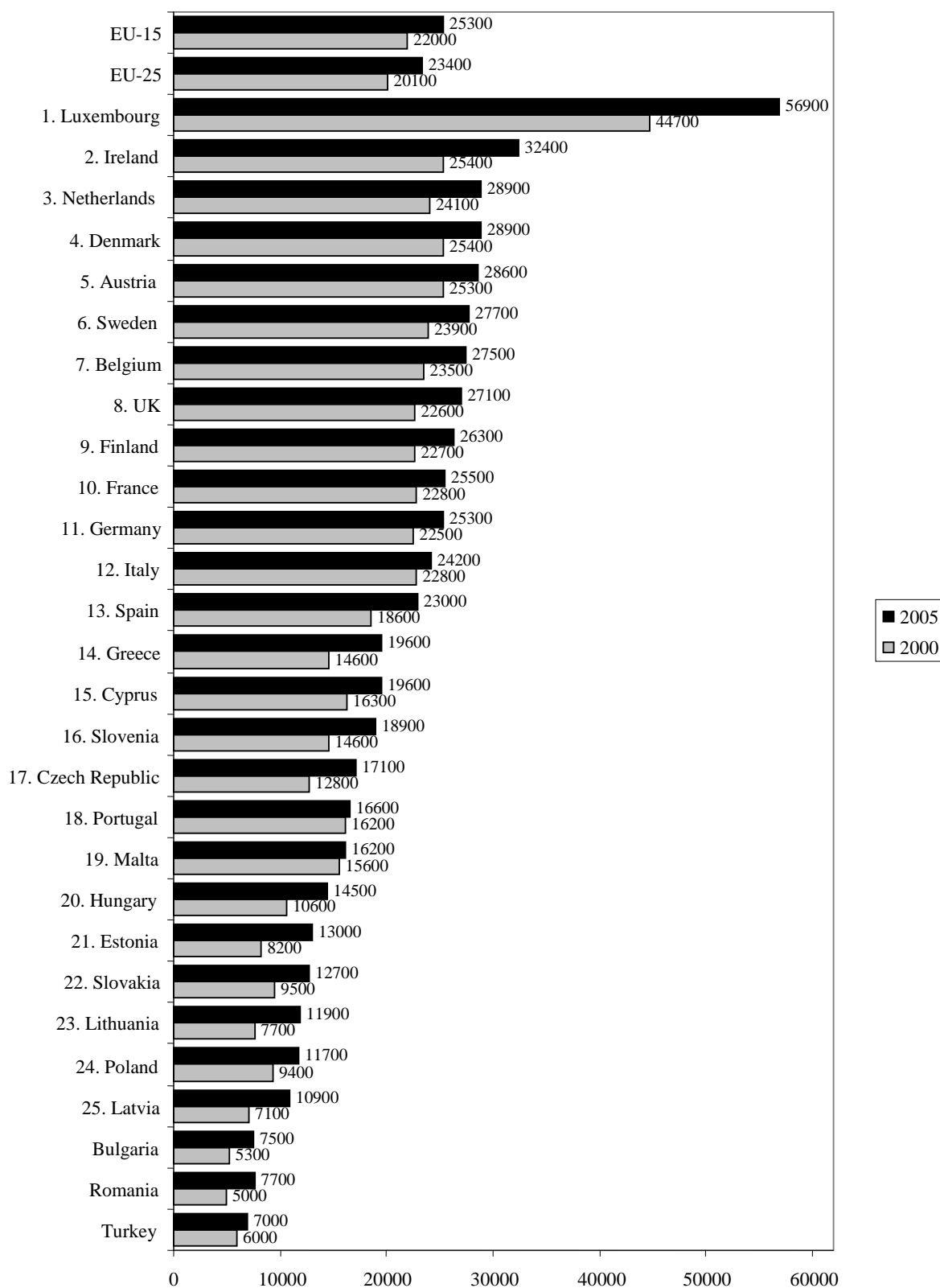
Simultaneously, according to the most recent data released by Eurostat, by 2005 Poland was the seventh largest economy in the EU-25 if the GDP in purchasing power standard (or PPP) is applied. Based on official exchange rates conversions it was ranked 10th in the enlarged European Union and 11th (after Turkey) if three candidate countries are also included. The relevant data are shown in chart 2.

Chart 2. The EU economies by size, 2005 (GDP, euro billion)



Source: Eurostat database.

Chart 3. EU countries by development level, 2000-2005 (GDP per capita in PPS, euro)



Source: Eurostat database.

Finally, in terms of its GDP per capita (PPP) Poland belonged to the group of the least developed member countries of the enlarged European Union. In 2005 it was ranked 24th, i.e. second to last in the EU-25, which entails some deterioration compared to 2000 (22nd). Its development level was only higher than that of Latvia plus all three candidate countries – Bulgaria, Romania and Turkey. Chart 3 presents the full picture.

5. Major findings and conclusions

In the concluding part of the paper it is worthwhile to summarize major findings stemming from the foregoing discussion. Simultaneously we will also attempt to sketch the prospects of Poland's catching up with the future development level in the EU-15.

The most salient development trends of the Polish economy between 1950 and 2005 may be summarized as follows:

1. The period 1950-1989 (the command economy) witnessed a widening development gap or real divergence towards the EU countries.
2. The real divergence process was particularly pronounced in 1980-1989 – both with regard to the EU and vis-à-vis most of the socialist countries.
3. Poland recorded the fastest economic growth in the entire group of transition economies between 1990 and 2005.
4. As a result during the period of systemic transformation Poland succeeded in substantially catching up both towards the EU countries and most advanced transition economies.
5. Despite some slow down of the Polish economy after 2000 its present relative development level improved compared to 1989.

Notwithstanding the fact that Polish systemic transformation, seen from the angle that is most relevant to the present paper, turned out to be mostly a success story, one should not forget that Poland has remained a middle-income country and it is still far away from achieving its strategic goal that is to fully catch up and close the historical development gap towards the EU-15.

What are the prospects of continuing the hitherto process of real convergence in economic development levels between Poland and the EU-15 countries in the years to come?⁶

⁶ It is worth stressing in this context that – based on empirical studies – between 1993 and 2005 the Polish economy has exhibited both beta and sigma convergence towards the EU-15 countries. For details, see Matkowski, Z. and M. Prochniak, *Real Economic Convergence in the EU Accession Countries*, International Journal of Applied Econometrics and Quantitative Studies, vol. 1, no. 3, 2004 and Matkowski, Z. and M. Prochniak, 2006, *Convergence of economic growth of the accession countries in relation to the European Union*, chapter 3.5.3 in: D. Rosati (ed.), "New Europe. Report on Transformation". XVI Economic Forum, Krynica, 6-9 September 2006.

The two most likely scenarios of future catching up are based on extrapolating the past growth trends recorded in 1992-2000 and 2001-2005, respectively. Under the first, optimistic scenario Poland would sustain its growth rate close to an estimated potential output trend, i.e. 5 per cent per annum. On the other hand, the EU-15 countries would grow in average along the path experienced in 1992-2000 that is 2.6 per cent annually (see Section three). If this were the case and the growth rates differential would amount to 2.4 percentage points, the full catching up would take 30 years, i.e. Poland would close the development gap towards the EU-15 by the year 2035.

Under the second, more pessimistic scenario both the Polish economy and the EU-15 would stick to their growth patterns experienced in the first half of the present decade (2.8 and 1.6 per cent real GDP growth per annum, respectively or half of the growth rates differential compared to the first scenario). Then the real convergence process would last 66 years and be completed by 2071.

To conclude it is worth emphasizing that both scenarios are consistent with the general proposition of *conditional convergence* put forward by Robert Barro⁷ as well as with the findings of recent empirical studies on real convergence in the EU accession countries from Central Europe, carried out by the team headed by the present author.⁸

However, the question: which of the two (or perhaps more – including some intermediate cases) scenarios will come true is subject to many uncertainties embedded, inter alia, in the future course of changes in the institutional environment of economic growth in Poland. Among the most crucial determinants of these changes is the issue raised by George Blazyca – what kind of capitalism is most appropriate for and is bound to eventually emerge in Poland?⁹

⁷ See R. Barro, *Economic Growth in a Cross Section of Countries*, Quarterly Journal of Economics, May 1991.

⁸ See Z. Matkowski and M. Prochniak, op. cit., and R. Rapacki and M. Prochniak, *Charakterystyka wzrostu gospodarczego w krajach postsocjalistycznych w latach 1990-2003 (Economic Growth Accounting in Former Socialist Countries, 1990-2003)*. Ekonomista, 2006 no. 6.

⁹ G. Blazyca, *Uwagi na temat polskich przemian - czy naprawdę nie ma "trzeciej drogi"?* (A note on Polish transformation - are there really no "third ways"?), in: "Polscy ekonomiści w świecie (Polish economists in the world)", eds T. Kowalik and J. Hausner, PWN, Warsaw 2000. For an interesting discussion on the EU membership and the development of different models of capitalism, see also P. Hanson, *The European Union's Influence on the Development of Capitalism in Central Europe*, unpublished manuscript, London 2006.

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