ROMA TRE
UNIVERSITÀ DEGLI STUDI

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REGIONAL HUMAN DEVELOPMENT IN TRANSITION ECONOMICS: THE ROLE OF INSTITUTIONS

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1. Introduction

The aim of this paper is to apply a Human Development approach to the regional disparities analysis of a transition economy, i.e., Poland. In Poland, regional differences in terms of GDP are well known and often discussed in the regional economics literature (Gorzelak 1999). I will build Human Development Regional Indexes for all sixteen Polish administrative regions (*voivodship)*, with the same methodology used to build national Human Development Indexes (UNDP, 1990; UNDP, 2005). The Human Development approach, in general, is broader than the GDP analysis and it is a more appropriate tool in comparison to GDP, because it allows us to characterise differences in non-income dimensions, such as longevity, health, education, accessibility to important goods, etc., which are very important for people's well-being.

Transition economic literature neglected the human development approach. Recently the interest is growing (Bardhan 2005; Tridico, 2005).[1] Moreover, in some countries, where regional differences are very substantial, it is much more important to describe the non-income dimension of human life. Especially in transition economies an HDRI will help to understand better the socio-economic change occurring during transformation from a planned economy towards a market economy. An HDRI was built for Italy and it

[1] Bardhan found that some non-income dimensions of development are better explained by particular institutions such as participatory rights and democratic accountability than by property right institutions. Conversely, it was shown that in transition economies human development is a sufficient but not a necessary condition for economic growth. Therefore, investing in human development is crucial for obtaining GDP growth (Tridico 2005).

was found that Italian dualism is not only an industrial and institutional matter, but that human development differences were also highlighted (Monni 2002). Comparing the Italian HDI with, for instance, the French HDI does not make so much sense if regional differences are very important. The HDI measures the average of the Italian GDP, Health accessibility and Education ignoring differences between the North and the South in such matters. Hence the HDI for Italy may offer a biased measurement. The same could apply to other countries where socio-economic differences are very important, such as India and China, but also to other smaller countries, such as Poland, where differences between West and East are very important and very similar to the Italian case.

Hence, a "normal" expectation would be that in Poland, as in Italy, differences in terms of GDP per capita between East and West produce different HDRI or at least that HDRI differences correspond to GDP differences. If this expectation should be confirmed, the neoclassical argument which considers HDI as a proxy of GDP per capita would be proved. The contrary would confirm that GDP growth is not a sufficient condition for Human Development.

The evolution of Human Development to transition economics offers a dynamic view of how the transformation from a planned economy towards a market economy affected the non-income dimensions too. GDP regional disparities, which seem to have increased in Poland during transition, do not correspond to Human development differences. In fact, I found very interesting results as regards the trend and the levels of the non-income dimensions in Polish regions. First of all Human development improved

both in the East and in the West. However, although GDP performance was better in the West than in the East, non-income dimensions performance was better in the East than in the West and the East maintains higher levels of non-income dimension indicators (education index and life expectancy).

In the first part of the paper I focus on the evolution of GDP in the Polish regions during the past ten years (1995-2004). On the basis of this analysis I discover an uneven development and growing regional disparities between East and West. This analysis suggests that there are some "winner" regions and some "loser" regions: the first group is made up of Mazowieckie, Wielkopolskie and to some extent Malopolskie, Slaskie, Dolnolaskie and Lodzkie, all regions from the East of Poland apart from Malopolskie (the region of Krakow).[2] However, Lodzkie and Malopolskie are still below the national level of GDP per capita in $ PPP. The other 9 regions can be considered losers. They decreased over the past ten years and reached levels of GDP per capita in $ PPP far below the Polish average. However, the main disparities are observed between the region of the capital i.e, Mazowieckie, and the rest of Poland, which absorbed most of the Polish economic growth and represents 22% of the GDP.

[2] The line of division between East and West Poland, which is also adopted in this paper, is historically represented by the River Vistula. In fact, The origin of Poland's East/West dualism can be found in the different *partitions* of Poland between 1776-1918 which divided the country into several administrative parts under foreign powers such as: Prussia, the Austrian Empire and Russia. Russian occupation was consolidated to the East of the River Vistula, while the German occupation was attested to the west side. For interesting information on the history of the partition and occupation of Poland see: Norman Davies (2001). The regions Mazowieckie, Malopolskie and Swietokrzyskie are crossed by the River Vistula. However, considering their general socio-economic and institutional situation, Malopolskie and Swietokrzyskie can be easily affiliated to the East, and Mazowieckie to the West of Poland. (Cfr Tridico, 2004*)*.

In the second part of the paper I focus on the Human Development approach. After having built Human Development Regional Indexes (HDRI) for the sixteen Polish Regions, I examine their evolution during the past ten years (1995-2004). The results are quite different from the first ones concerning GDP. The winners in terms of HD are different from the ones in terms of GDP. Eastern regions did not perform as badly as with GDP. Western regions and winner regions, which experienced faster economic growth, and which maintain a higher level of GDP per capita, did not immediately and automatically create HD improvements.

2. Economic growth during transition

The Transformation from a planned economy towards a market economy was very different among transition economies. As Kornai (2006) recently stated, the transformation of former communist countries (both CEEC and CIS) is a process which involves successes and failures and which varies considerably among transition countries. On one hand, it took place peacefully and it was an astonishingly fast process towards western civilization. On the other, it was characterized by deep economic troubles.

In general, the great transformation was concurrent with a huge recession (Kornai, 1994; Svejnar, 2002). In the CEECs, recession was from 20% to 40% of GDP whereas in the former Soviet Republics it was even worse and GDP fell in some cases by 60% of the GDP (Transition Report, 2001). At the same time economic recovery was faster and more consistent in CEECs than in CSI. After ten years of transition, in 2000, only a few states had reached or exceeded the 1989 level of GDP (i.e. Poland, Hungary, Slovakia and Slovenia). The rest, split between CEECs and the CIS were still below

that level. The reasons for different performance lay in the diverse initial conditions, different policies and institutions and the mistakes of policy makers (Gomulka, 1995; De Vincenti 2002; Nuti 2001; Falcetti *et al*. 2000). In many transition economies of CIS and a few CEECs no attention was paid, particularly at the beginning of transition, to institutions and governance: institutions were not considered important for development; public institutions were neither replaced nor created; standard policies (i.e. the Washington Consensus) and international constraints were just accepted and implemented; culture, social capital, domestic norms and values were simply ignored; path-dependency theory was not considered relevant, etc.[3]

Notably, economic growth in transition economies did not realize neoclassical expectations of convergence in incomes. Countries performed very differently and still almost all the former Soviet Republics (apart from Uzbekistan, Turkmenistan and Belarus) and some Central and Eastern European countries (such as Lithuania, Latvia, Bulgaria, Romania) and all the Baltic countries except Albania, are below the GDP level of 1989. The experience of this great transformation is that transition from planning to market is a complex process and not a linear transformation from an initial point to a putative final point (Nuti, 1999). It is well known, also, that neoclassical predictions of convergence among countries were not realized (Gomulka, 1995). On the contrary, geography, institutions and culture matter along with capital accumulation in the economic growth of the regions and of countries (Krugman, 1995; Serravalli *et al.,* 2002; Becattini, 1979). A consistent amount of literature focused on the path and speed of

[3] Cfr. Kregel and Matzner, (1992); Murrel (1992).

development during the transformation of former communist countries and it is acknowledged that different paths can exist and different variations of market economies can emerge (Boyer, 1995; Lissowska 2003, Nuti, 1999; Chavance, 2003). It was already proved that institutions matter much more than was understood at the beginning of transition, and neglecting institutions was an important mistake by policy makers and economists (Matzner, 1993; Tridico, 2004). Moreover, uneven development was produced and transition economies performed very differently although often policy prescriptions were quite similar (Kowalik, 2001). Within transition economies, very often, regional disparities increased or did not decrease (Gorzelak, 1999).

3. GDP evolution in Poland during transition: a regional analysis

In the case of Poland after a recession of about 20% during 1989-1991 GDP experienced an important recovery. Both the East and the West increased their GDP consistently. Cumulative economic growth in Poland between 1995 and 2004 was around 65%, a little more than 65% in the West (66%), and a little less than 65% in the East (64%).[4] However, the levels of GDP per capita in the East, at the beginning of transition, were much below the ones of the West. Moreover, the transformation recession during 1989-1991 was greater in the East than in the West. In brief, transition from a planned economy towards a market economy increased regional disparities. Eastern regions, which were poorer, increased less, while the western regions, richer and better endowed in terms of infrastructures, capital, and in terms of social capital, increased more. Contrarily to the mainstream argument, there is no

[4] We chose to analyse the period from 1995 because at that time Poland was experiencing its greatest economic growth after the transitional recession of 1989-1992.

strong evidence of the predicted neoclassical convergence, and this has also been discussed in literature (Tridico, 2004; Gorzelak, 1999; Kowalik 2001).

All this is confirmed by the table below which shows GDP per capita in $PPP per region, given 100 as the Polish GDP in 1995 and in 2004. In 1995 six regions (all from the West) had a GDP per capita higher or equal to 100. In 2004, given 100 as the Polish GDP per capita in $PPP, only four regions, all from the West, had a GDP per capita higher or equal to 100. All the other regions had a lower GDP. Among these four regions, one particular region, i.e. **Wielkopolskie**, had in 1995 a GDP per capita below 100 and during transition improved its position. These data show that the Wielokpolskie region, located in the west of Poland and attracting many German investments, and having a very important centre such as the former German city of Poznan, can be considered a winner in GDP terms of the transition. However, the most successful region of the Polish Transition is, without doubt, the **Mazowieckie** Region; its capital, Warsaw, headquarters of national and international capital, is able to attract huge amounts of Foreign Direct Investments and is the political and administrative centre, endowed with good infrastructures and highly skilled workers. As the table below suggests, four other regions can be added to these two "winner" regions, with some specifications. These regions are Lodzkie which can be considered in 2004 a "Stable" region in terms of GDP per capita but winning positions in comparison to its GDP rank of 1995; Dolnolaskie which can be considered in 2004 a "Winner" region in terms of the level of GDP per capita, still above the national average, but losing income and positions; Slaskie which can be considered a "Winner" region because it still enjoys a GDP per capita above the national average, but is losing

income; Malopolskie which can be considered a "Stable" region in terms of GDP per capita but winning positions in comparison to its GDP rank of 1995.

Table 1. GDP evolution in Polish Regions, 1995-2004

Polish Regions	Ppp95 US$	Poland 1995=100	ppp2004 US$	Poland 2004=100	Cumulative Gdp Growth 95-04	Evolution description in terms of GDP position	Rank 95-Rank 2004[5]
Poland	7137	*100*	12184	100	65%		
Dolnośląskie	7622	107	12488	102	64%	"Winner" but losing income and positions	-1
Kujawsko-pomorskie	7139	100	10924	90	53%	L	-2
Pomorskie	7168	100	11997	98	67%	L	0
Lubuskie	6975	98	10540	87	51%	L	-1
Łódzkie	6582	92	11246	92	71%	Stable income but winning positions	3
Śląskie	8648	121	13276	109	54%	"Winner" but losing income	0
Mazowieckie	8952	125	18888	155	111%	Winner	0
Opolskie	7063	99	9678	79	37%	L	-4
Wielkopolskie	6930	97	12778	105	84%	Winner	6
Zachodniopomorskie	7382	103	11557	95	57%	L	-2
Małopolskie	6143	86	10463	86	70%	Stable income but winning positions	1
Świętokrzyskie	5681	80	9518	78	68%	L	0
Warmińsko-mazurskie	5775	81	9600	79	66%	L	0
Podlaskie	5505	77	9246	76	68%	L	1
Lubelskie	5629	79	8602	71	53%	L	-2
Podkarpackie	5407	76	8625	71	60%	L	1
Average East	5690	80	9342	77	64%	Loser	
Average West	7446	104	12337	101	66%	Winner	

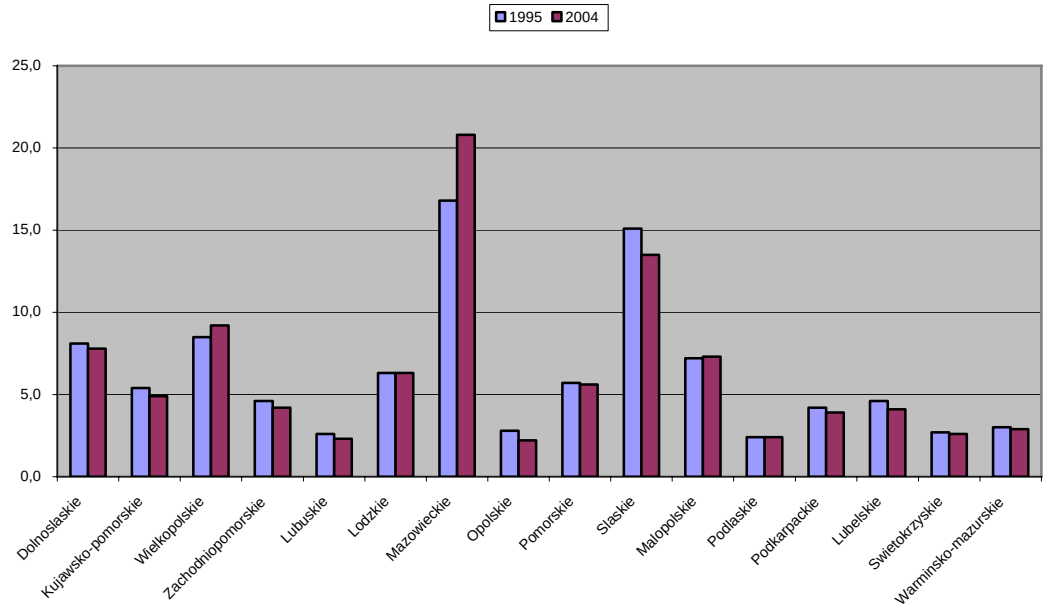
Source: own elaboration on data from GUS, 2005

[5] A negative figure means a lower position in 2004 than in 1995.

From the table above, it is surprising to see that not only the eastern regions worsened their position in comparison to Poland (with a GDP per capita in $PPP = 80 in 1995 and 77 in 2004) but also that western regions passed from 104 in 1995 to 101 in 2004. This is due to the polarization of the Polish economy towards the capital's region, Mazowieckie, and Warsaw in particular, which represents fairly, as the figure below shows, the greatest productive region of Poland with 22% of the regional contribution to the national GDP. Mazowieckie absorbed all the loss, in terms of regional contribution to the national economy, of the other western regions. This explains an income (101) slightly higher in the west in comparison to the national average (100), and still higher in comparison to the eastern part of the country (77).

As I said before, GDP increased in the eastern as well as in the western regions. However, only 2 out of 10 western regions increased their GDP rank considerably in 1995-2004 while 3 out of 6 improved their GDP position in the east. In parallel, 5 regions out of 10 in the west worsened their GDP positions between 1995-2004, while in the east only 1 out of 6 regions worsened their GDP positions. This analysis suggests that in the end the better performance of the West in comparison to the East is mainly due to the Mazowieckie region and to some extent also to the Wielkopolskie region. This underlines an uneven development and a problematic transformation among regions during transition from planned economy towards a market economy.

Figure 1. Percentage of the Regional contribution to the Polish GDP: 1995-2004



Source: own elaboration on data from GUS, 2005

Table 2. Percentage of Change of the Regional contribution to the total GDP, 1995-2004

Dolnośląskie	-4%	**Małopolskie**	**1%**
Kujawsko-pomorskie	-9%	Podlaskie	0%
Wielkopolskie	**8%**	Podkarpackie	-7%
Zachodniopomorskie	-9%	Lubelskie	-11%
Lubuskie	-12%	Świętokrzyskie	-4%
Łódzkie	0%	Warmińsko-mazurskie	-3%
Mazowieckie	**24%**	East	-4%
Opolskie	-21%		
Pomorskie	-2%		
Śląskie	-11%		
West	-3%		

Source: own elaboration on data from GUS, 2005

Basically almost all the regions decreased the percentage of their regional contribution to the national economy apart from Mazowieckie, Wielkopolskie and Malopolskie, the winners, and Lozdkie and Podlaskie, which maintain the same percentage contribution to the national economy. The rest of the Polish regions can be considered losers of the transition in terms of contribution to the wealth of the country.

4. A Human Development approach

The idea that the GDP is an absolute and reliable measure of development has been widely criticized by development economists. Performances of countries in terms of GDP can be very different from basic development indicators (Noorbakhsh, 1996; Costantini and Monni, 2005). Morris (1979) was among the first to elaborate an index of socio-economic development ("the physical quality of life index"), which was built on the basis of three indicators, i.e.: infant mortality, literacy and life expectancy. The United Nations (UN) has always been very sensitive about the socio-economic development level reached by countries. According to the UN, it was clear that development does not mean growth. During the seventies, the UN started to study a different economic development approach according to which developing countries should satisfy some "basic needs", through public policies (Streeten, 1979). A subsequent theoretical contribution by Amartya Sen (1985) and his "capability approach" was crucial to further investigations into development indicators. In 1990, the UNDP published its first Human Development Report where a composite index of human development was presented. A great deal of empirical evidence shows that both in developing and in developed economies some countries have a relatively high GDP per capita but very low indicators of development such

as literacy, access to drinking water, rate of infant mortality, life expectancy, education, etc. This is in part due to the fact that wealth is unequally distributed. Vice versa, there are cases of relatively low GDP per capita and high indicators of development in countries where income is more equally distributed (Ray 1998). For instance, Guatemala has a GDP per capita that is higher than Sri Lanka but inequality is much higher in Guatemala. Development indicators are much better in Sri Lanka than in Guatemala. Life expectancy (years): 72 compared with 65; infant mortality rate (per 1000): 18 compared with 48; access to safe water (% of pop.): 60 compared with 62; adult literacy rate (%): 89 compared with 54 (UNDP, 1995). Examples like these are numerous and non-perfect correspondence between GDP and development indicators can be observed even in industrialized countries where there are more resources to distribute. As a result, the UNDP taxation of Human Development Indexes and GDP rank is not at all coincident (UNDP, 1999).

The UNDP Human Development Index is a composite index, ranking between 0-1. It is the combination of two non-income dimensions of people's lives and one income dimension. The first one is life expectancy at birth which also reflects infant mortality. The second one is educational attainment which is a combination of primary, secondary and tertiary educational levels and the adult literacy rate. The third element is an adjusted GDP index which reflects income per capita measured in Purchasing Power Parity (PPP) at US$ (UNDP, 1990). According to the UNDP definition, human development is a process of enlarging people's choices and is achieved by expanding human capabilities and functioning

(Sen, 1999). In order to expand human capabilities, institutions are needed. Institutional policies should aim at improving the three essential capabilities for human development: i.e. leading long and healthy lives, being knowledgeable and having a decent standard of living. If these basic capabilities are not achieved, many choices are simply not available and many opportunities remain inaccessible (UNDP, 1999). This approach assumes that human development determines economic growth. Poor countries such as China, Sri Lanka and Indonesia had relatively high human development levels and a very low GDP per capita in 1975. Development economists mostly agree that these higher human development levels made faster growth possible (UNDP, 2004). Today, those countries have relatively high GDP per capita compared with other developing countries. On the other hand, in 1975 poor countries such as Pakistan, Ghana and Nigeria had very low levels of human development and after 25 years they are still poor with a very low GDP per capita (UNDP, 2004).

Obviously, the link between human development and growth is not automatic and the evidence is very controversial. There is, for instance, evidence of a stable or improved level of human development together with economic decline or human development in a reverse direction with respect to economic growth such as in the case of Botswana, which experienced good economic growth with a reduction in human development level (from 1975 to 2002), due to worsening of life expectancy and health levels. Mainstream economists argue that GDP is the best proxy for development but then they cannot deny the substantial evidence of growth without

development.[6] Hence, it seems to us that a composite index of human development where the GDP is only one of the different elements which determine it along with others concerning human life is the best proxy, indeed, of 'development' in its widest sense.

5. Regional Human Development Indexes in Poland

In order to build Human Development Indexes for each of the sixteen Polish regions (NUTS 2), according to the administrative reform of 01-01-1999, I used primary data from *Główny Urząd Statystyczny* (GUS), the Central Statistical Office of Poland in 2005. The Human Development Regional Indexes aim to shows regional differences in Human Development, in a country economically very heterogeneous. The HDRI follows the same methodology of the HDI but it gives specific indications of the regional context. In particular:

1. A long and healthy life, as measured by life expectancy at birth in each region.
2. Knowledge, as measured by the adult literacy rate (with two-thirds weight) and the combined primary, secondary and tertiary gross enrolment ratio (with one-third weight) in each region.
3. A decent standard of living, as measured by GDP per capita (PPP US$) in each region.

[6] For details on this debate see: Anand and Harris 1994; Desai 1991; Naqvi 1995; Srinivasan 1994; Streeten (1994).

To calculate these dimension indexes — the life expectancy, education and GDP indexes' minimum and maximum values (goalposts) are chosen for each underlying indicator.

$$Dimension\_Index = \frac{actual\_value - \min imum\_value}{\max imum\_value - \min imum\_value}$$

For each dimension the goalposts are the following:

Table 3. Goalposts for calculating the HDI/HDRI

Indicator	Maximum value	Minimum Value
Life expectancy at birth (years)	85	25
Adult literacy rate (%)	100	0
Combined gross enrolment ratio (%)	100	0
GDP per capita (PPP$)	40.000	100

The life expectancy index measures the relative achievement of a region in life expectancy at birth. For the Region of Mazowieckie, with a life expectancy of 75.44 years in 2004, the life expectancy index is 0.841.

$$\text{Life expectancy index (Mazowieckie, 2004)} = \frac{75.44 - 25}{85 - 25} = 0.841$$

The education index measures a region's relative achievement in both adult literacy and combined primary, secondary and tertiary gross enrolment. First, an index for adult literacy and one for combined gross enrolment are calculated. These two indexes are then combined to create the education index, with two-thirds weight given to adult literacy and one-third weight to combined gross enrolment. The adult literacy rate is defined as a percentage of people aged 15 and above who can, with understanding, both read and write a short, simple statement related to their everyday life (UNDP, 2005). The gross Enrolment ratio combined for primary, secondary and tertiary

schools is the number of students enrolled in primary, secondary and tertiary levels of education, regardless of age, as a percentage of the population of official school age for the three levels.

In all the Polish Regions the Adult Literacy rate is quite homogeneous and very high, around 99% in 2004. For the Mazowieckie Region, with an adult literacy rate of 99.9% (Adult Literacy Rate = 0.99) in 2004 and a combined gross enrolment ratio of 84% (Gross Enrolment Index = 0.84) in the school year 2004, the education index is 0.95

Education index (Mazowieckie, 2004) = 2/3 (adult literacy index) + 1/3 (gross enrolment index)
= 2/3 (0.999) + 1/3 (0.84) = 0.95

The GDP index, which indicates the living standards, is calculated using adjusted GDP per capita (PPP US$). Income is adjusted because achieving a respectable level of human development does not require unlimited income (UNDP, 2005). Accordingly, the logarithm of income is used. For each region, given the income at current price in PLZ, I calculated firstly the income in US$ at the current exchange rate. Then the same incomes are multiplied for the Purchasing Power Parity US$ exchange rate of Poland, which obviously is more highly evaluated than the current exchange rate (UNDP, 2005).[7] For instance, in the case of the Mazowieckie Region the GDP per capita calculated at the current exchange rate in 2004 is US$

[7] The GDP at the rate of exchange of PPP (purchasing power parity) takes into account price differences across countries, allowing international comparisons of real output and incomes. At the PPP US$ rate, PPP US$1 has the same purchasing power in the domestic economy as $1 has in the United States.

8,994.[8] For the same year the adjusted GDP per capita calculated in PPP US$ is 18,888. Consequently, the GDP index will be:

$$\text{GDP index} = \frac{\log(18{,}888) - \log(100)}{\log(40{,}000) - \log(100)} = 0.875$$

Finally, once the dimension indexes have been calculated, the HDRI is calculated as a simple average of the three dimension indexes:
HDRI (Mazowieckie, 2004) = 1/3 (life expectancy index) + 1/3 (education index) + 1/3 (GDP index) = 1/3 (0.841) + 1/3 (0.95) + 1/3 (0.875) = 0.89

After having built HDRI for the Polish Regions a very interesting comparison can be made between levels of HDRI and levels of regional GDP per capita in $PPP. Obviously, the line of division between eastern and western regions is the same as for the GDP analysis, i.e., the Vistula River (cfr. note number 2).

Figure 2. Administrative division of Poland since 1st January 1999. The blue line indicates, approximately, the Vistula River as a line of division between East and West.

[8] The Mazowieckie Region has the highest GDP per capita of Poland. The national GDP per capita calculated at the current exchange rate is US$ 5,802, the one calculated in PPP US$ is 12,184.

The question that emerges making this comparison is: are the winner regions of the Polish transition in terms of GDP also winners in terms of HDRI?

6. HDRI: an evolution during the Polish transition

In order to answer to that question (i.e., are the winner regions of the Polish transition in terms of GDP also winners in terms of HDRI?) I present data for HDRI in 1995 and 2005 as I did for the GDP evolution (cfr note number 5). A first look at HDRI in 1995 and in 2004 among Polish regions shows strong regional differences, as appears in the table below. In particular Mazowieckie, Slaskie, Lodzkie and Wielkopolskie are the regions with the highest indexes. Lodzkie and Wielkopolskie increased consistently, in fact their HDRI in 1995 is lower than the National HDI, while in 2004 it is

higher. Slaskie and especially Mazowieckie had the highest HDRI both in 1995 and in 2004. On the contrary Opolskie, with a higher HDRI in 1995 than the National HDI, ends up with a lower HDRI in 2004 in comparison with the average of Poland. These are interesting data which already offer a perspective of differences between loser and winner of the transition as regards progress in HD.

Table 4. HDRI 1995-2004

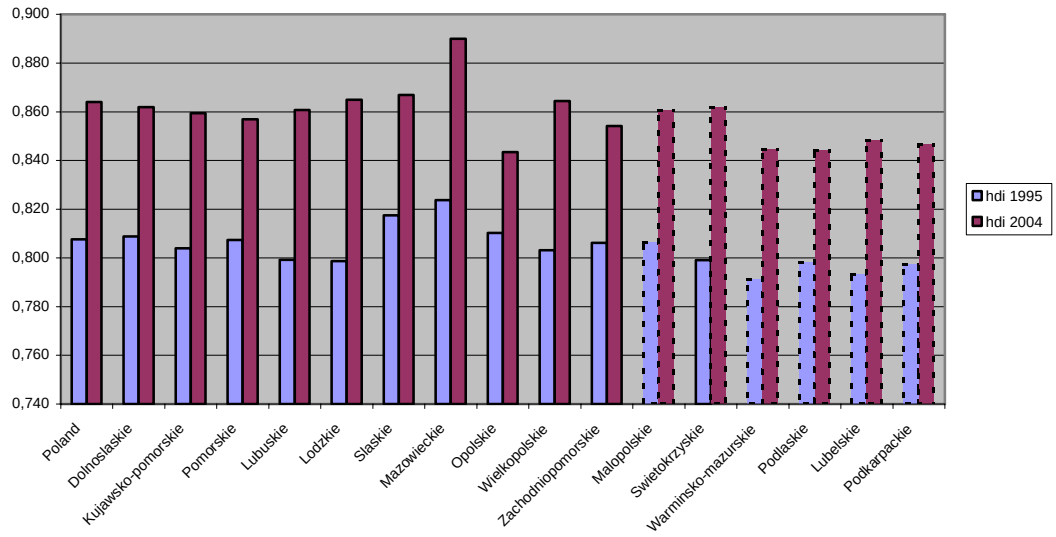
Polish Regions	HDRI 1995	HDRI 2004
Poland	0,808	0,864
Dolnośląskie	0,809	0,862
Kujawsko-pomorskie	0,804	0,859
Pomorskie	0,807	0,857
Lubuskie	0,799	0,861
Łódzkie	0,799	0,865
Śląskie	0,817	0,867
Mazowieckie	0,824	0,890
Opolskie	0,810	0,844
Wielkopolskie	0,803	0,864
Zachodniopomorskie	0,806	0,854
Małopolskie	0,806	0,860
Świętokrzyskie	0,799	0,862
Warmińsko-mazurskie	0,791	0,845
Podlaskie	0,798	0,844
Lubelskie	0,793	0,848
Podkarpackie	0,797	0,847
East	0,797	0,851
West	0,808	0,862

Source: own elaboration on data from GUS, 2005

In general, HDRI in 1995 and 2004 would lead us preliminarily to conclude that HDRI increased both in the east and in the west, and western regions have higher HDRI than eastern both in 1995 and 2004. However this is not the end of the story and in fact a further examination of the different Human

Development dimensions and of the singular HDRI evolution reveals some important information.

Figure 3.Regional HDI during transition



Source: own elaboration on data from GUS, 2005

1. First of all, from the table below we can say that the majority of regions which won in terms of GDP position and income lost in terms of HDRI position. In particular Wielkopolskie, Lodzkie, Dolnolaskie and Malopolskie, which were the winners in terms of GDP, are losing position in terms of HDRI. On the contrary, regions which lost GDP position, i.e., Lubulskie, Kujawsko-Pomorskie, Pomorskie, Podlaskie and Opolskie, gained HDRI positions.

Table 5. HDRI and GDP in 2004

Polish Regions	Rank of Regional GDP - 04	Rank of Regional HDRI - 04	Evolution description In terms of position GDP 1995-2004	Description of HDRI position 2004	Gdp-Hdri 2004
Mazowieckie	1	1	Winner	S	0
Śląskie	2	2	"Winner" but losing income	S	0
Łódzkie	3	4	Stable but winning positions	L	-1
Wielkopolskie	4	5	Winner	L	-1
Dolnośląskie	5	10	"Winner" but losing positions and income	L	-5
Świętokrzyskie	6	11	L	L	-5
Lubuskie	7	3	L	W	4
Małopolskie	8	9	Stable but winning positions	L	-1
Kujawsko-pomorskie	9	7	L	W	2
Pomorskie	10	8	L	W	2
Zachodniopomorskie	11	16	L	L	-5
Lubelskie	12	14	L	L	-2
Podkarpackie	13	6	L	W	7
Warmińsko-mazurskie	14	15	L	L	-1
Podlaskie	15	13	L	W	2
Opolskie	16	12	L	W	4

Source: own elaboration on data from GUS, 2005

In general it has to be said that although Regional income is lower than in the West, differences in terms of HDRI are not so strong. In particular, in Poland, 8 regions have a worse HDRI rank in comparison to the GDP rank. 4 of them are from the West and 4 from the East.[9]

[9] Considering Malopolskie and Swietokrzyskie in the East of Poland, the western regions are 10 and the eastern regions are 6. However, Malopolskie and Swietokrzyskie are just divided into two parts by our conventional east-west border, i.e., the River Vistula, half in the east and half in the west of Poland.

2. Secondly, if we look at the first available data of HDRI in 1995, we discover that in that year the eastern regions performed relatively better in terms of HDRI. In particular only 2 eastern regions, ie., Warmińsko-Mazurskie and Lubelskie, with asterisks in the table below, had a worse HDRI position in comparison with their GDP position, while the other 4 eastern regions had a better HDRI position in comparison with their GDP rank. In the west it was the opposite. Regions with a better GDP rank did not confirm the position in the HDRI taxation, apart from the Region of Opolskie. Five western regions, out of 10, had a worse HDRI position in comparison with their HDRI position.

Table 6. HDRI and GDP rank in 1995

Polish Regions	Regional Rank Gdp PPP 1995	Regional Rank HDRI 1995	GDP-HDRI	
Mazowieckie	1	1	W	0
Śląskie	2	2	W	0
Dolnośląskie	3	4	W	-1
Zachodniopomorskie	4	6	W	-2
Pomorskie	5	5	W	0
Kujawsko-pomorskie	6	8	W	-2
Opolskie	7	3	W	4
Lubuskie	8	10	W	-2
Wielkopolskie	9	9	W	0
Łódzkie	10	12	W	-2
Małopolskie	11	7	E	4
Warmińsko-mazurskie	12	16	E*	-4
Świętokrzyskie	13	11	E	2
Lubelskie	14	15	E*	-1
Podlaskie	15	13	E	2
Podkarpackie	16	14	E	2

Notes: E=East; W=West. Source: own elaboration on data from GUS, 2005

3. Thirdly, the analysis proposed allows us to say that transition did not favour the eastern regions either in terms of GDP or in terms of Human

Development. However it has to be added that, in terms of Human Development, evolution did not favour Wielkopolskie, Lodzkie, Dolnolaskie and Malopolskie, which were, together with Mazowieckie and Slaskie, the "Winners" of the transition in terms of GDP. If we look at the HDRI in an evolutional perspective (1995-2004) a very interesting fact emerges. Eastern regions, which are definitely losers in terms of GDP during the period 1995-2004, did not lose position in terms of HDRI; on the contrary, they increased relatively more than the western regions. In particular, if we look at the sum of the positions lost by the 10 western regions, there are 8 positions in total, with an average of -0.8. On the contrary, the 6 eastern regions gained 8 positions in total, with an average of 1.33 position gained.

Table 7. HDRI rank in 1995-2004

HDRI Rank1995	HDRI Rank 2004	Polish Regions	Number of Positions changed
1	1	Mazowieckie	0
2	2	Śląskie	0
12	3	Łódzkie	9
9	4	Wielkopolskie	5
4	5	Dolnośląskie	-1
11	6	Świętokrzyskie	5
10	7	Lubuskie	3
7	8	Małopolskie	-1
8	9	Kujawsko-pomorskie	-1
5	10	Pomorskie	-5
6	11	Zachodniopomorskie	-5
15	12	Lubelskie	3
14	13	Podkarpackie	1
16	14	Warmińsko-mazurskie	2
13	15	Podlaskie	-2
3	16	Opolskie	-13

Source: own elaboration on data from GUS, 2005

4. The last point of my analysis, and also the most important, is that if we look at the singular dimensions of development our understanding of winner/loser changes completely. Surprisingly enough in the East the education level, and in particular the Gross enrolment ratio for primary, secondary and tertiary education, and life expectancy at birth, represented respectively by the education index and the life expectancy index, are higher than in the west. This result tells us something very important: the non-income dimension in the East has better levels than in the West. Contrary to the mainstream argument, GDP growth, which was higher in the West, did not automatically mean improvements in human development. The regions of the West of Poland, which experienced better economic performance, are economically more dynamic in terms of trade, competition and industry. The eastern regions are more agriculture-oriented and less dynamic in terms of trade and competition. However, as far as non-income dimensions are involved, people's lives have a better level. The HDRI is a synthetic index where the GDP, although adjusted at PPP, has a strong weight for one third, the rest depends on Education and Life expectancy indexes. Eventually in Poland it comes about that the difference existing in terms of GDP levels in favour of the western regions is able to compensate the difference existing in terms of non-income dimensions in favour of the eastern regions. The final result is a synthetic index of Human Development by regions in favour of the West.

Table 8. Evolution of Non-income dimension indicators

	Life expectancy index		Education index	
Polish Regions	1995	2004	1995	2004
Poland	**0,802**	**0,833**	0,909	0,958
Dolnośląskie	0,794	0,823	0,909	0,957
Kujawsko-pomorskie	0,793	0,827	0,907	0,968
Lubuskie	0,787	0,822	0,902	0,980
Łódzkie	0,779	0,813	0,918	0,980
Mazowieckie	0,806	0,841	0,915	0,955
Opolskie	0,812	0,846	0,908	0,921
Śląskie	0,796	0,822	0,912	0,963
Wielkopolskie	0,796	0,831	0,906	0,953
Zachodniopomorskie	0,795	0,823	0,905	0,946
Pomorskie	0,805	0,841	0,904	0,931
Małopolskie	0,823	0,853	0,908	0,953
Świętokrzyskie	0,814	0,843	0,909	0,982
Lubelskie	0,800	0,829	0,907	0,972
Podkarpackie	0,825	0,850	0,901	0,946
Podlaskie	0,819	0,844	0,907	0,933
Warmińsko-mazurskie	0,798	0,823	0,898	0,949
East	0,813	0,840	0,905	0,956
West	0,796	0,829	0,909	0,955

Source: own elaboration on data from GUS, 2005

As the table above shows, the difference is very consistent as regards the Life Expectancy index. It obviously captures not only the life expectancy at birth as an average of the number of years of men and women, but also the overall health system, the accessibility to health infrastructures, the hygienic conditions of a country, the quality of life and in general the health dimension. It has a weight of one third in the synthetic index of HD. In number of years, the difference between the East and West Life Expectancy index in 2004 is produced by a difference of 1 year in life expectancy (75 in the east and 74 in the west). This difference was the same in 1995 (73 in the east and 72 in the west). Both the East and the West increased their life expectancy by 2% during 1995-2004. Hence, during transition, although

eastern regions grew less, HD increased consistently and maintained a higher level in comparison to the west, which increased more in GDP terms. In the next paragraph I propose an explanation of these surprising results, which however need further investigation.

7. The role of institutions in Human Development

The Regional Human Development analysis confirms an important point: Human development is closely connected to institutions. Where institutions allow better accessibility and broader services, human development increases or maintains a higher level. This relation does not depend strictly on income; in fact regions with higher income do not necessarily have a higher Human Development index. GDP growth is not a sufficient condition for Human Development.

If some regions grow more they can even produce better services and infrastructures such as appear to exist in the West of Poland. However, during transition, new services and infrastructures, built in the West, were mainly private and many of the previous services were privatised. Private infrastructures can be less accessible for poor people, and therefore the income dimension emerges as an important selection mechanism in the West. In the East less GDP may produce fewer infrastructures and services; however, public infrastructures, which are more easily accessible, can still compensate for the lack of income among poor people. All in all, poorer people in the East can have easier access to the Public Health System than in the West where poor people do not have the same facility because income is the main element allowing accessibility to private health services.

The same argument can be applied to the Education index. In this case, however, the differences between East and West were very small in 2004, but still in favour of the eastern regions which increased their Education level by 6% during 1995-2004, while the West did so by 5%. Higher levels of Education are guaranteed, first of all, by policies which provide incentives and allow the poor to go to school. A country in transition needs quality human capital – skilled workers – to foster innovation but, more importantly, it requires a high percentage of educated people to increase *capability* and therefore human development. During transition western regions in Poland focused more on the first aspect and a high number of skilled workers were trained in order to be functional to economic growth. Skilled jobs allowed higher income; however the educational level, which is enhanced first of all by public policies, did not increase, because during transition public expenditure on education decreased (GUS, 2005).

Both the evolution of education and the life expectancy indexes among Polish regions show that *capability* institutions and human development are strictly correlated. As Fadda (2003, p. 7) puts it: "choices are determined to a large extent by what we want to do, and this is determined by capabilities, as elements of institutions, and capabilities should not be taken as given". In transition economies, "…freedom has been accompanied by the loss of many *basic economic and social rights*" (UNDP, 2000, p. 12). This negatively affected people's capabilities of doing and being. Consequently, their economic and social freedom, in Sen's terms "development as freedom" (Sen, 1999), worsened because many opportunities disappeared.

Putting the income dimension in first place on the scale which allows access to services, education and the health system creates strong discrimination between people with and without income. During transition, Institutions as behavioural norms and group preferences shifted from solidarity to meritocracy, from egalitarianism towards indifference, from altruism towards egoism, from cooperation towards competition (Kowalik, 2001). This evolution started from the political level and reached the civil level. During this process the income dimension emerged as a pay-off for institutional and economic equilibria. Consequently, public policies and institutional policies were more and more oriented towards the income pay-off. If the non-income dimensions are not improved by the effect of economic growth, and this is often the case as I showed also for the Polish dualism, Human Development does not increase, or rather it increases less, in the regions more oriented towards the prevalence of those behavioural norms. In the East of Poland, institutions as behavioural norms and group preferences did not evolve completely, because they met more inertia and resistance on the part of lobbies, political groups and individuals. Consequently, public policies and institutions are less oriented towards the income pay-off. Previous behavioural norms favour social policy and public services to a greater degree than private services and market economy. In the end, the non-income dimension of Human development, even with less economic growth, can perform better.

A recent research by Bardhan (2005) goes in the same direction. He suggested that some non-income dimensions of development are better explained by a particular institutional index such as participatory rights and democratic accountability than by property right institutions. Property right

institutions and privatisation are better developed in the West of Poland, but this does not help to reach a higher level of Human Development.

CONCLUSIONS

The contribution of the paper was twofold. First of all, I built Human Development Regional Indexes for the sixteen Polish Regions. The advantage of having HDRI lies in the fact that they give specific information regarding human life at regional levels. In a country where regional differences are very substantial, it is important to describe the income and non-income dimensions of human life. In Poland, regional differences in terms of GDP per capita are very important between the eastern and the western parts. An aggregate Human Development Index such as the one offered by the UNDP for the whole country, although it offers a broader prospect of development than the national GDP per capita, does not give specific information about how people live in each of the very heterogeneous Polish Regions. An HDRI, on the other hand, overcomes this deficiency.

The second task was to analyse the East-West Polish dualism during transition not only in GDP terms but also in terms of Human Development. The East-West Polish dualism is a very important example of multi-speed transition. In general western regions can be considered "winners" of the transition process in GDP terms in comparison to eastern regions. However, both the East and the West increased their GDP and HD. Nevertheless, the non-income dimensions of HD, i.e., Life expectancy and the Education Level, are higher in the East than in the West and increased more in the East

than in the West between 1995 and 2004, in spite of a higher GDP level and of faster economic growth in the West than in the East. This surprising result contradicts the neoclassical argument of considering HDI as a proxy of GDP per capita. GDP growth is not a sufficient condition for Human Development. Along with GDP growth, HD requires investments in human development dimensions in order to increase people's capabilities of doing and of being.

In this process institutions considered as social norms and group preferences more oriented towards social policies and public services emerge as the crucial factor in the maintenance of a high level of human development in the East. In the West social norms and group preferences are more oriented towards market economy; hence the income dimension emerges as an important selection mechanism for collective services, education and health. However, poor people in the West enjoy fewer facilities and collective services because income is the main element which gives accessibility to private health services and education. Still, this explanation would need further investigation and research, together with the improvements of Human Development Indexes which should consider each dimension influencing Human Development with specific weights, in order to avoid the income dimension over-compensating the other two non-income dimensions.

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