

Cracow University of Economics

Poland

“Sources of Real GDP per Capita Growth: Polish Regional-Macroeconomic Dimensions 2000-2005”

- Keynote Speech -

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Overview

Real GDP/Capita is the market value of goods and services available to a country's citizens and as such is regarded as the best measure of welfare.

The Case

Earlier research on growth performance across Poland's sixteen regions has highlighted the presence of serious economic disparities, especially down the Eastern wall of the country.

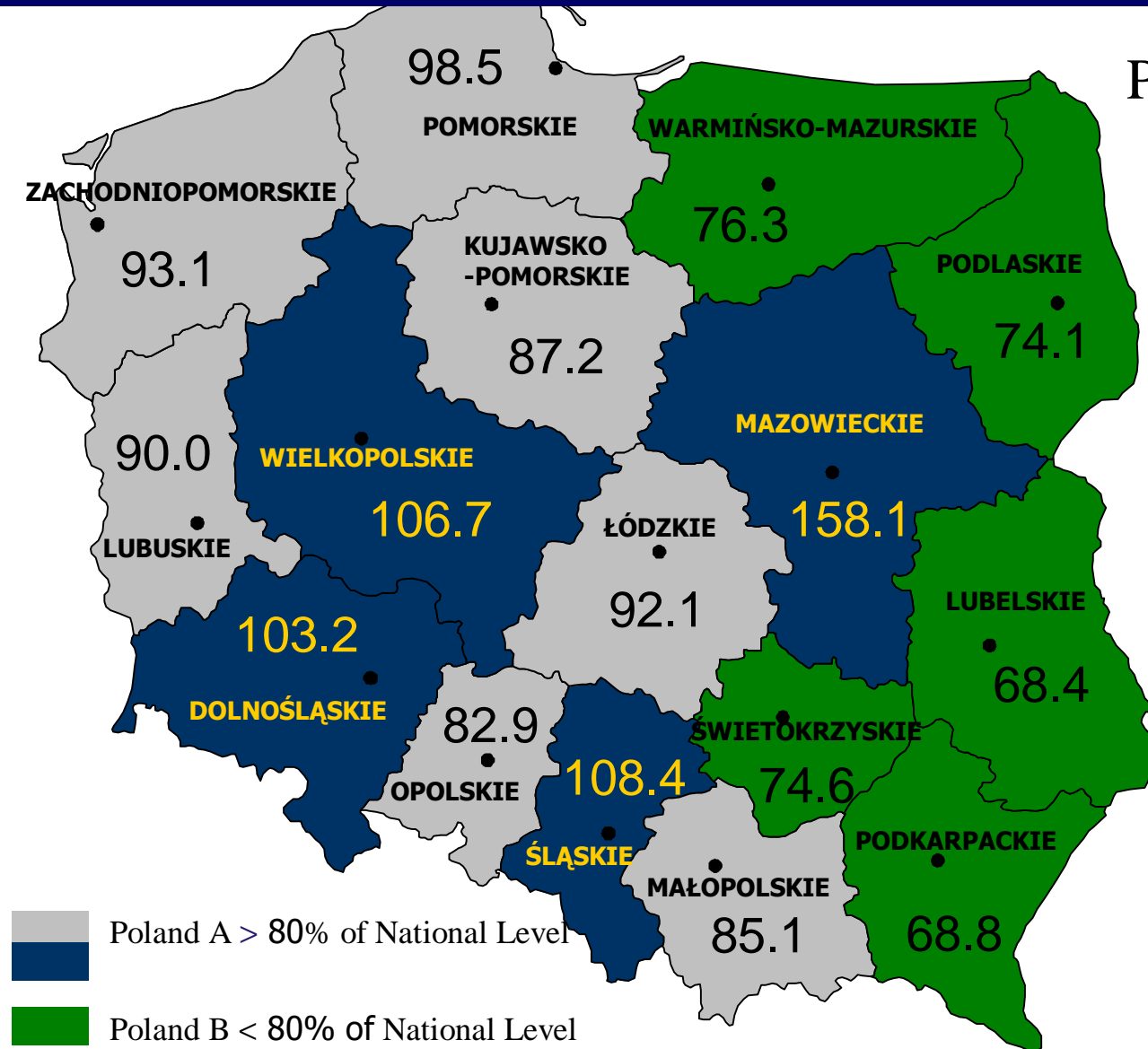
Objective

The aim of this study is to show that a process of convergence between the Eastern regions of the country and the comparatively better developed Western regions has been initiated.

Methodology: The Decomposition Technique

Regional Welfare (Real GDP Capita)

Distribution Effects (2005)



Polish Real GDP/Capita
= 25,228 PLN (100%)

Eastern wall regions
at least 25% behind
the national level

Causes & Effects?

Are Eastern wall
regions showing any
signs of convergence?

Measuring Convergence in Welfare

Chosen Methodology

Decomposition Technique for Real GDP Capita

$$\Delta \frac{gdp}{pop} \equiv \Delta \frac{gdp}{hours} + \Delta \frac{hours}{employment} + \Delta \frac{employment}{pop^{15}} + \Delta \frac{pop^{15}}{pop}$$

Where:

GDP = gross domestic product

Pop = total population

Hours = total number of hours worked

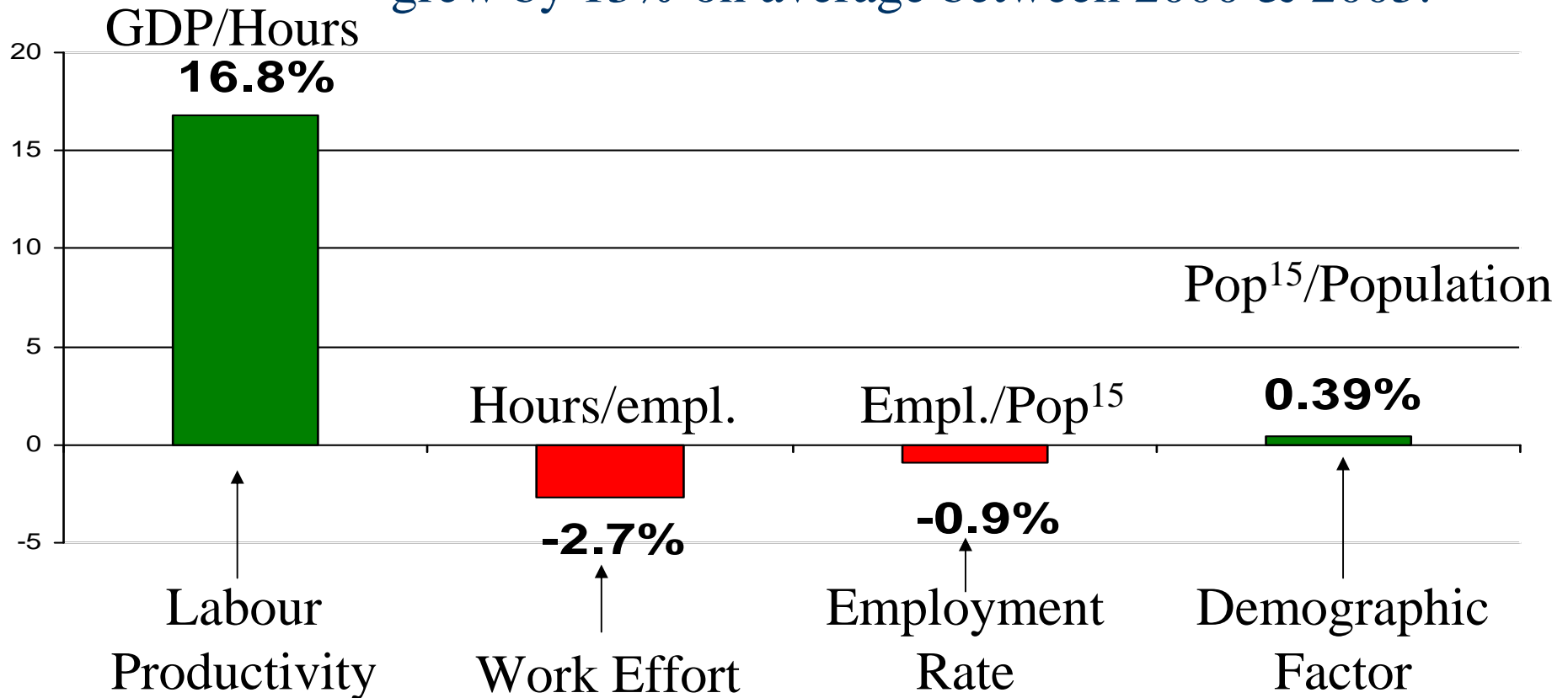
Employment = number of people employed

Pop¹⁵ = Population of working age (aged 15 and above)

Polish Real GDP Capita Decomposed

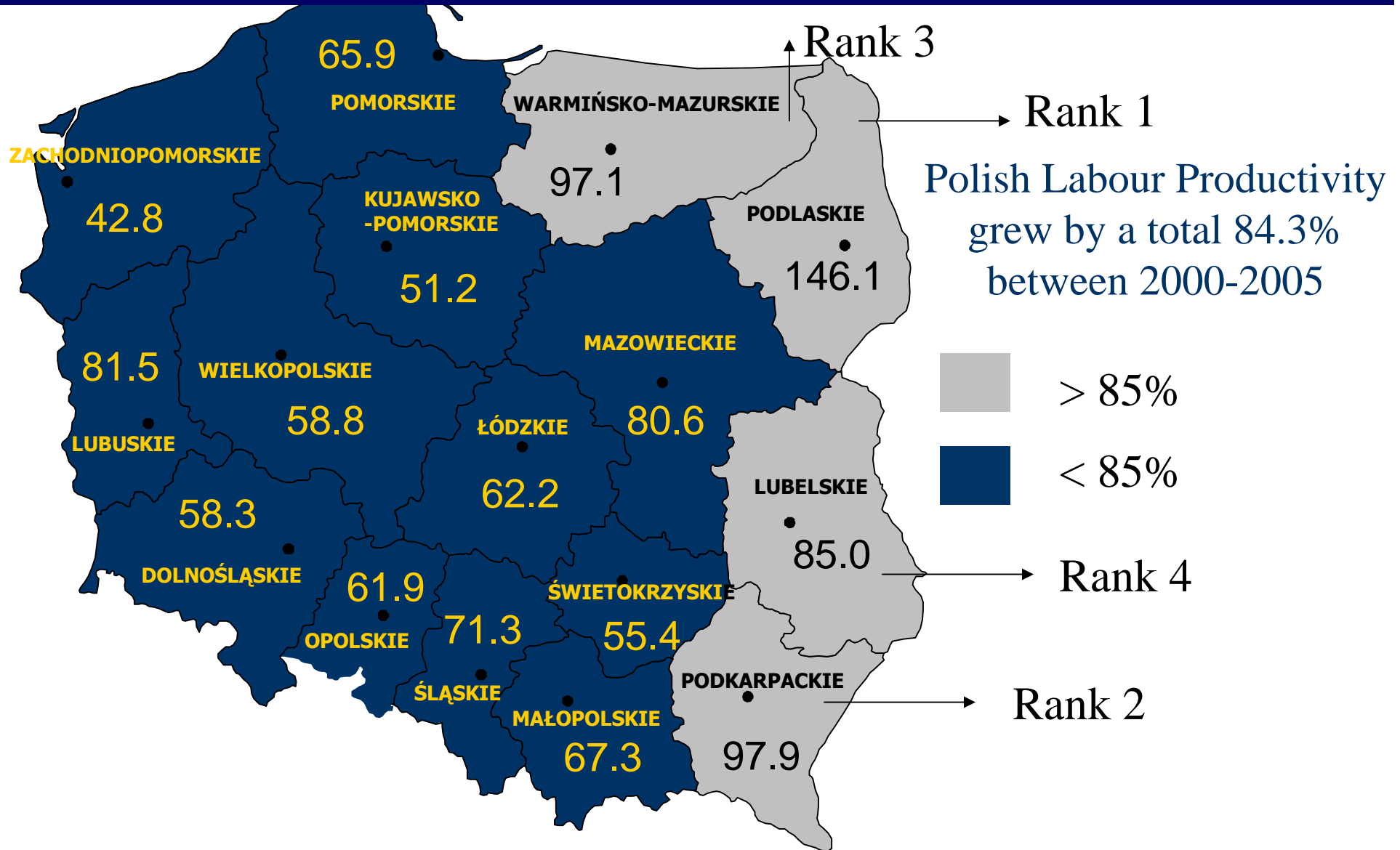
Average Annual Percentage Change (2000-2005)

The sum of the four given components of real GDP/capita grew by 13% on average between 2000 & 2005.



Regional Growth in Labour Productivity (%)

Fastest Growing Regions in Total Percentage Terms 2000-2005



Sources of Labour Productivity Growth

Sectoral Shifts in Employment in % (2001-2005)

Region/sector	2001			2005		
	Farming, Forrestry & fishing	Industry, Building & Construction	Services	Farming, Forrestry & fishing	Industry, Building & Construction	Services
POLAND	19.3	28.6	52.0	17.4	29.2	53.4
Podlaskie	36.5	18.6	45.0	34.4	20.7	44.9
Podkarpackie	30.8	28.2	41.1	25.6	28.3	46.0
Warmińsko-mazurskie	17.9	28.1	54.0	16.4	30.4	53.2
Lubelskie	39.4	18.1	42.5	35.9	19.3	44.8
Świętokrzyskie	31.0	24.9	44.2	33.2	22.5	44.2
Mazowieckie	20.4	21.6	58.0	15.9	21.7	62.4
Śląskie	4.1	39.5	56.4	4.3	38.8	56.8
Wielkopolskie	20.3	32.7	47.0	16.5	34.8	48.8
Dolnośląskie	9.5	32.4	58.2	8.5	33.0	58.4

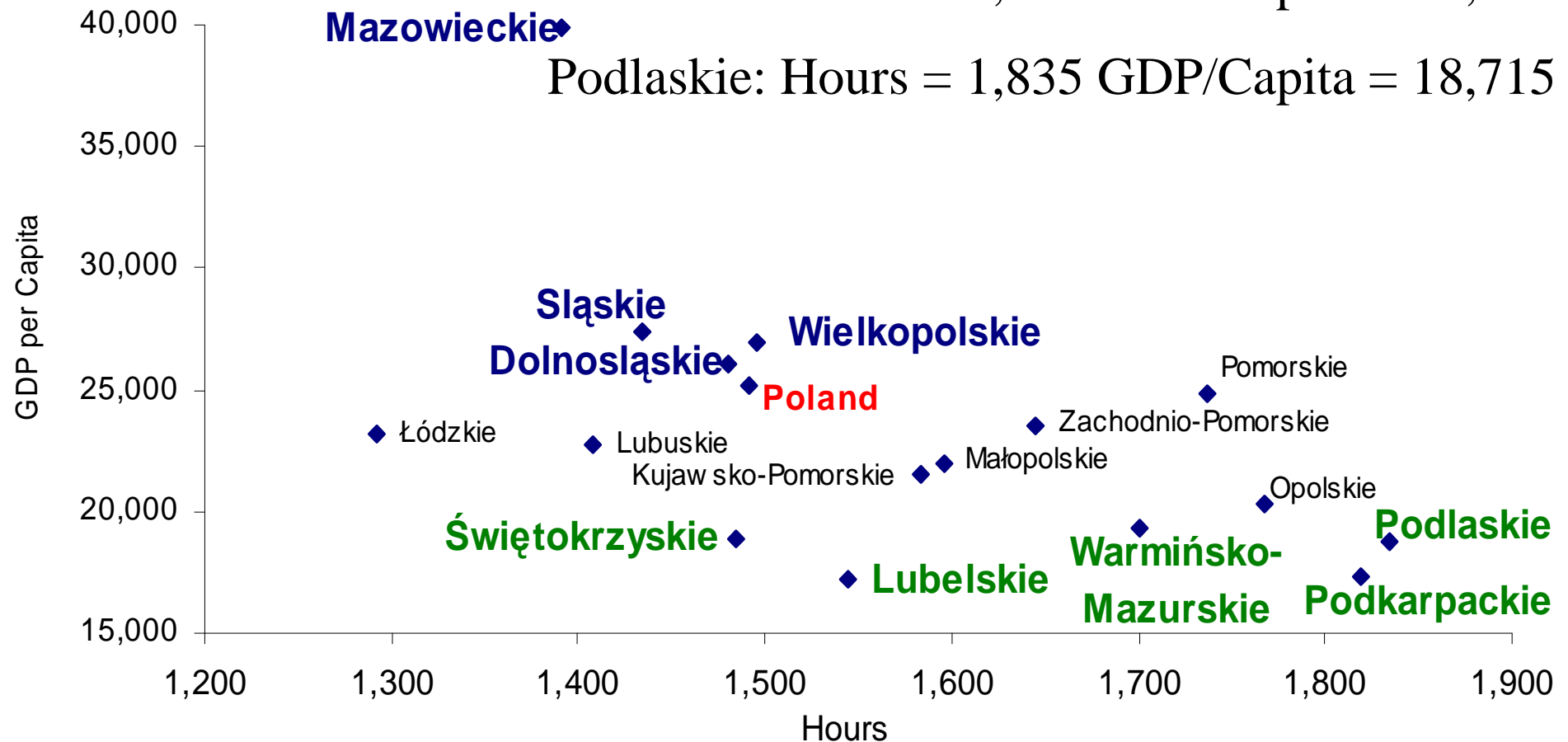
Regional Welfare 2005

Relationship between hours worked & real output per head

Poland: Hours = 1,490 GDP/Capita = 25,228

Mazowieckie: Hours = 1,391 GDP/Capita = 39,902

Podlaskie: Hours = 1,835 GDP/Capita = 18,715



Concluding Points

The convergence of Eastern wall regions towards national levels has commenced for the first time in the country's history and the source of this growth is labour productivity, which is consistent with observed shifts in the structure of employment.

Support Factors

I. Investment Inflows

II. Trends Moving East

Region	Labour Productivity per Capita 2000-2005 (PLN)	Labour Productivity Growth (%↑) 2000-2005
Podkarpackie	12,112	97.9%↑ (2)
Lubelskie	12,718	84.7%↑ (4)
Podlaskie	13,669	146.1%↑ (1)
Warmińsko-Mazurskie	13,961	97.1%↑ (3)
Świętokrzyskie	14,119	55.4%↑ (15)
Opolskie	15,763	61.9%↑ (12)
Małopolskie	16,863	67.3%↑ (9)
Kujawsko-Pomorskie	17,196	51.2%↑ (16)
Lubuskie	18,217	81.5%↑ (6)
Zachodniopomorskie	18,366	42.8%↑ (17)
Łódzkie	19,003	62.2%↑ (11)
Pomorskie	19,695	65.9%↑ (10)
Poland	20,656	84.3%↑ (5)
Dolnośląskie	21,286	58.3%↑ (14)
Wielkopolskie	22,501	58.8%↑ (13)
Śląskie	22,713	71.3%↑ (8)
Mazowieckie	35,709	80.6%↑ (7)