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Abstract: EU member states do not get much from participating in a regional trade agreement and economic integration regime: €-area grew since 1960 with a gradually smaller rate than the world economy. On the other hand, there is a clear evidence for a profound structural change regarding convergence in EU-15. During the first two decades of the period we studied, the coefficient of variation of GDP per capita fell strongly and labour remuneration grew substantially relative to non-labour income. This picture changed completely after 1980! The previous trend of closing the gap among the countries reversed completely, while inequality within each country became also much deeper. What we see is not a transitory interruption of a continuous trend. We observe the emergence of a persisting period of continuous divergence, which can only be explained by permanent, structural developments!

Abstract:

EU member states do not get much from participating in a regional trade agreement and economic integration regime: €-area grew since 1960 with a gradually smaller rate than the world economy. On the other hand, there is a clear evidence for a profound structural change regarding convergence in EU-15. During the first two decades of the period we studied, the coefficient of variation of GDP per capita fell strongly and labour remuneration grew substantially relative to non-labour income. This picture changed completely after 1980! The previous trend of closing the gap among the countries reversed completely, while inequality within each country became also much deeper. What we see is not a transitory interruption of a continuous trend. We observe the emergence of a persisting period of continuous divergence, which can only be explained by permanent, structural developments!

1. Introduction

Regarding the effectiveness of internationalisation, the neoclassical point of view can be summarized as follow: opening the markets and enhancing the degree of international competition will boost economic growth and initiate convergence among the societies. Since the 1980s, a vigorous discussion was initiated (Romer 1986) concerning the empirical investigation of growth effects resulting from trade, as well as the convergence tendencies in a progressively globalised environment. Subjective reasons - answering the specific questions relates strongly to various socio-political interests - but also objective ones, like differences in the underlying theoretical assumptions, the variables used, the sample and the statistical data, as well as the econometric techniques applied, generated a variety of partly controversial empirical results and arguments.

For instance, although the dominant position in the relevant literature seems to be that trade contributes significantly to the strengthening of growth, there are plenty of other studies, which either show no relation, or, worst, relate trade and growth in a significantly negative way. Both, the sign and the causality of the effects, vary with respect to country and to time period (Khalafalla and Webb, 2001), meaning that a range of time and region specific socio-economic conditions are of great importance (Levine and Renelt, 1992 and Chuang 2002).[1]

On the other hand, the literature on convergence is even more contradictory! Just think of empirical studies that concentrate on σ-convergence in Europe and we will still find some authors providing evidence for convergence, others offering mixed results, but also enough who argue for divergence. The main reasons that explain the variety of the results is that they focus on dissimilar sets of countries, but mostly the differences regarding the time period they cover.[2]

Yin et al. (2003) study σ-convergence of real GDP per capita for the period 1960-1995. Driven by the different integration levels within this period, they distinguish among EU-6, EU-9, EU-12 and EU-15 and provide evidence for convergence, except for the period 1980-1985. Also Hoen (2000), who uses data on six core European countries (Germany, France, Italy, the Netherlands, Belgium and Denmark), provides results, which are in accordance with the neoclassical paradigm: GDP per capita is converging in the period 1970-1985. Barro and Sala-i-Martin (1991, 1995) found the same, among European regions for a wider period (1950-1990). Veiga (1999), who focuses on 12 European countries with regions belonging at the NUTS II level, provides also evidence for convergence till the late 1970s.

On the contrary, a wide range of studies reject the convergence hypothesis for the European Union. Most of them show an unclear development of standard deviation in time,[3] while others (for instance, Neven 1995) identify different patterns of convergence in northern and southern Europe, especially during the period 1975-1990.

The picture we get is that something is going on with the 1980s! Many of the researches saw this,[4] but they thought of it as the result of a temporary effect: the big 1980-1982

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[1] Kali et al. (2007) gather all different thinkable reasons for having diversified empirical results. They refer to the work of Grossman and Helpman (1991), Matsuyama (1992), Walde and Wood (2005), Rodriguez and Rodrik (2001) and Yanikkaya (2003).

[2] Moreover, there are studies that look at the standard deviation of many different measures. For instance, Boldrin and Canova (2001) study several indicators, such as labor productivity, income per capita and GDP per capita in the EU-15, and find support for the convergence hypothesis.

[3] Neven and Gouyette (1994), Neven (1995), López-Bazo et al. (1999), Barrios and Strobl (2005), Cappelen et al. (2003) and Basile et al. (2001).

[4] Giannias et al. (1999), for instance, speak for a convergence process, which is disrupted in the early 1980s.

recession, resulting from the continuously growing oil's prices, or the accession of southern European countries (Greece, Portugal and Spain),[5] are thought to be the underlying reasons. Yet, the aforementioned studies suffer from a fundamental weakness: all of them cover a period lasting, the most, till the beginning of the 1990s. Therefore they fail to see what we present in this paper: the problem with the 1980s is not that we have a short-term break of a continuous trend, but a complete alteration of the process, a structural change of a previously long-lasting convergence into a persisting period of continuous divergence!

In the present paper, the European Union serves as a historical experiment for the formation of a nearly perfectly internationalised environment. Bearing in mind the subsequent institutional steps that have been taken in the last 5 decades, we consider EU-15 as the outcome of a ***regionally evolving*** internationalisation process,[6] and we try to see if this confirms the neoclassical paradigm. After presenting the data and the methodology, we focus on three distinct questions: Is the ability of European economies to grow becoming stronger? Can we observe any convergence among the member states? Do we see a narrowing of inequalities, or not? Finally, we proceed with a panel regression that relates inequality to growth rate and we draw the respective conclusions.

2. Data and Methodology

For the needs of the present paper, we employ mainly data on real GDP per capita (level and the rate of change) and on real wages (real compensation per employee), for EU-15 as a whole and for each country-member as well, in the period 1960-2006. We used the database of Eurostat,[7] combined with the OECD database[8]. Especially for employees' compensation, we used AMECO database, the annual macro-economic database of the European Commission's Directorate General for Economic and Financial Affairs.[9] Additionally, we also considered data on the annual real GDP growth per capita for the world economy as a whole. Therefore, we used the *World Development Indicators 2007* (The World Bank – WDI dataset)[10].

Our approach is quite simple, yet it serves the ultimate goal of the present study in a satisfactory way. At the end we conclude on some crucial facts and paradoxes, which lead us to subsequent, more sophisticated questions for further research. The analysis can be divided in two parts. In the first part, we try to get some indications regarding the validity of the neoclassical paradigm. Initially, we study the development of cross-country inequalities. We estimate the coefficient of variation (standard deviation divided by the mean) of real GDP per capita among the different countries of EU-15 and the Euro-area, on an annual basis. Checking the characteristics of the derived time series (1960-2006) enables us to deduce on the convergence of real GDP per capita. Similarly, we proceed with analysing σ-convergence for real wages and finally, after we estimate annual real GDP per capita growth rate by subtracting the calculated population change rate from the published

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[5] Neven and Gouyette 1994.

[6] Opposite to Yin et al. (2003), we consider all these countries together, over the whole period (1960-2006), regardless the time of accession. Economic and political co-operation evolves always much earlier than the official agreement. The reason for not taking all 25 countries is also straightforward: political reasons kept the newest members completely apart from the core European Union till the late 1990s.

[7] "*European Economy - Annual Economic Report for 1997, No 63, 1997*", European Commission, Directorate General for Economic and Financial Affairs;

[8] "*OECD Factbook 2008: Economic, Environmental and Social Statistics*", www.oecd.org .

[9] http://ec.europa.eu/economy_finance/indicators/annual_macro_economic_database/ameco_en.htm

[10] http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS

annual real GDP growth rates, we do the same for σ-convergence of change rates, again within EU-15 and the Euro-area.

Next we consider annual GDP per capita (y) and compensation per employee (w), in real terms, in order to look at the development of inequalities within each country. We use the ratio w/y as an indicator for the degree of evenly distributed income. Finally, in the first part, we also search for inference regarding the ability of EU-15 to grow. Therefore, we analyse the time series of real GDP per capita growth in the different countries – both, in absolute terms, but also in comparison to the growth rates of the world economy.

In the second part, we proceed with a panel regression (cross-section fixed effects), checking in as how much the degree of equal distribution within each country (w/y) can be explained by the country's growth rate and its distance from EU average (time trend included).

3. Inequalities and growth dynamic in the European Union

3.1 Real wage & GDP convergence

Standard theory declares that as the process of internationalisation evolves, cross-regional inequalities fade out. From a static point of view, mainstream trade theory implies the equalization of real factors' remuneration among open economies. At the same time, in terms of a dynamic approach, steady state of all participating economies becomes more and more similar. Therefore, convergence is a straightforward conclusion. Does this imply for the core of the European Union (EU-15 and €-area)?

Table 1: How σ-convergence of real wages per employee and real GDP per capita evolves over time

		Stationarity				Estimation of trend							
						ADF (AIC)		ADF (SIC)		PP		KPSS	
		ADF (AIC)	ADF (SIC)	PP	KPSS	coefficient	t-statistic	coefficient	t-statistic	coefficient	t-statistic	coefficient	t-statistic
EU-15	σ/μ of w (GDP deflator)[11]	-1.511	-1.511	-1.570	0.223§	0.000	1.533	0.000	1.533	0.000	1.533	-0.002	-7.478***
	σ/μ of y	-2.199	-2.199	-2.210	0.225§	0.001	5.740***	0.001	5.740***	0.001	5.740***	0.001	2.123**
	σ/μ of y growth rate	-8.208§	-8.208§	-9.560§	0.143†	0.014	0.873	0.014	0.873	0.014	0.873	0.010	0.687
€-area	σ/μ of w (GDP deflator)	-1.942	-1.942	-2.099	0.216§	0.000	0.567	0.000	0.567	0.000	0.567	-0.001	-7.109***
	σ/μ of y	-2.288	-2.288	-2.255	0.218§	0.001	5.985***	0.001	5.985***	0.001	5.985***	0.001	2.170**
	σ/μ of y growth rate	-7.336§	-7.336§	-7.444§	0.148	0.019	0.577	0.019	0.577	0.019	0.577	0.015	0.489

Notes: †, ‡ and § denotes rejection of the 0-hypothesis of unit roots for Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests and rejection of the 0-hypothesis of stationarity for the KPSS (Kwiatkowski-Phillips-Schmidt-Shin) test at the 10%, 5% and 1% significance level, respectively.
*, ** and *** denotes statistical significance at 10%, 5% and 1% significance levels, respectively.

Table 1 provides stationarity tests and trend estimations for the annual coefficient of cross-country variation (σ/μ) of real wages per employee (w) and real GDP per capita (y), in EU-15 and €-area, for the period 1960-2006. In case of real wages, the KPSS-test provides us with a significantly estimated negative trend, meaning a convergence tendency. Quite different is the picture for σ/μ of real GDP per capita: especially for the case of EU-15, we

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[11] We estimate real wages by deflating the nominal compensation per employee in two ways: once we use GDP deflator and then final consumption deflator. Results do not differ significantly.

have the reproduction of a significant positive trend, meaning divergence, with all four different methods.

Yet, trend estimations alone can lead us to incomplete conclusions. The picture we get from the following diagrams is convincing: there are two obviously different periods. In 1960s and 70s, a convergence took place for real wages, as well as for per capita income. Yet, from beginning of the 1980s, the picture changes dramatically: the coefficient of variation of w shows a noticeable stagnation. In the case of y, starting again from the 1980s, σ/μ rebounds and follows an upward tendency of divergence, so strong that the trend we estimated for the whole period is slightly positive. Putting all these together, there is an apparent structural change after 1980: cross-country inequality starts to rise again, above any previous convergences.[12]
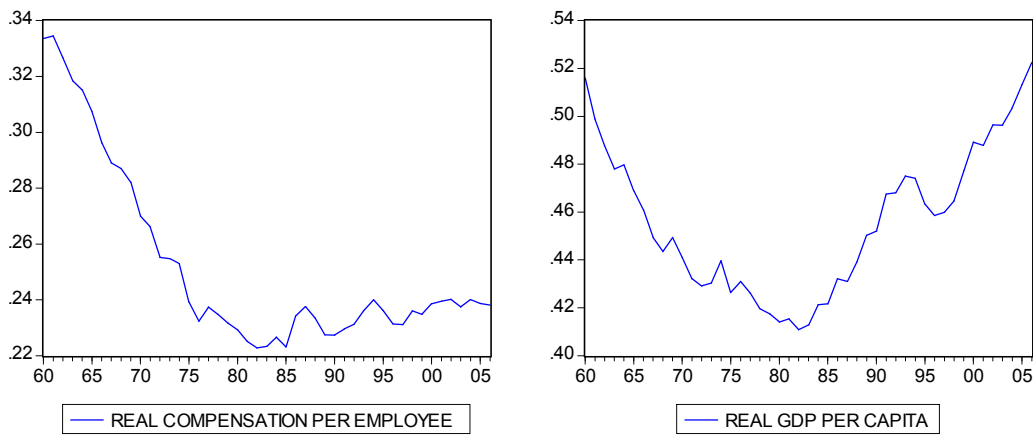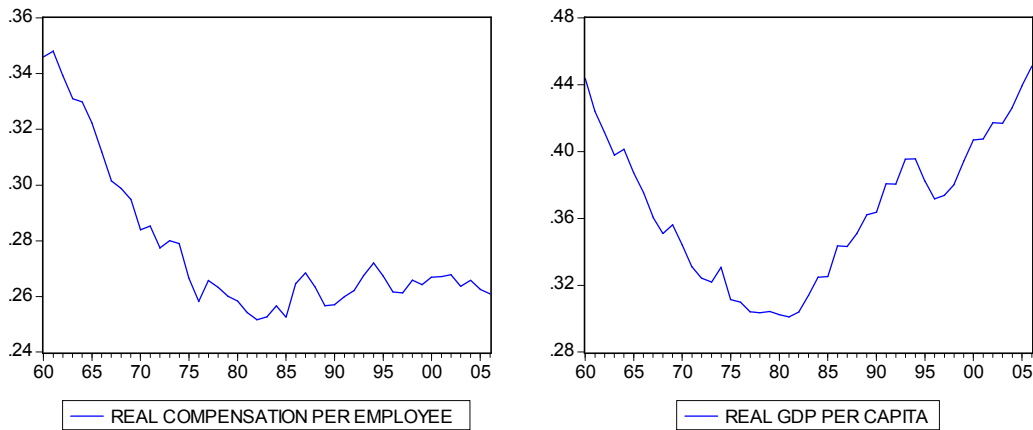
Diagram 1: σ-convergence of w and y in EU-15.

REAL COMPENSATION PER EMPLOYEE   REAL GDP PER CAPITA

Diagram 2: σ-convergence of w and y in €-area.

REAL COMPENSATION PER EMPLOYEE   REAL GDP PER CAPITA

3.2 Domestic distribution of income

Despite the development of cross-country inequality, we should take a closer look in the patterns of income distribution within each member state. Recently, OECD published a study saying that economic growth in developed countries goes together with a deepening

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[12] Using Perron-test, structural change appears in 1982 in all cases, except for σ/μ of y in €-area, where structural change is estimated for 1981.

of domestic inequality within the different countries (OECD 2008). The following diagrams depict the annual development of *w/y* for the Union as a whole (once for EU-15 and then for €-area). As already mentioned, this ratio serves as an indicator for the degree of evenly distributed income. When *w/y* increases (decreases), real wages become higher (lower) relative to per capita income, which means that the labour's remuneration comes closer (falls behind) to non-labour income.

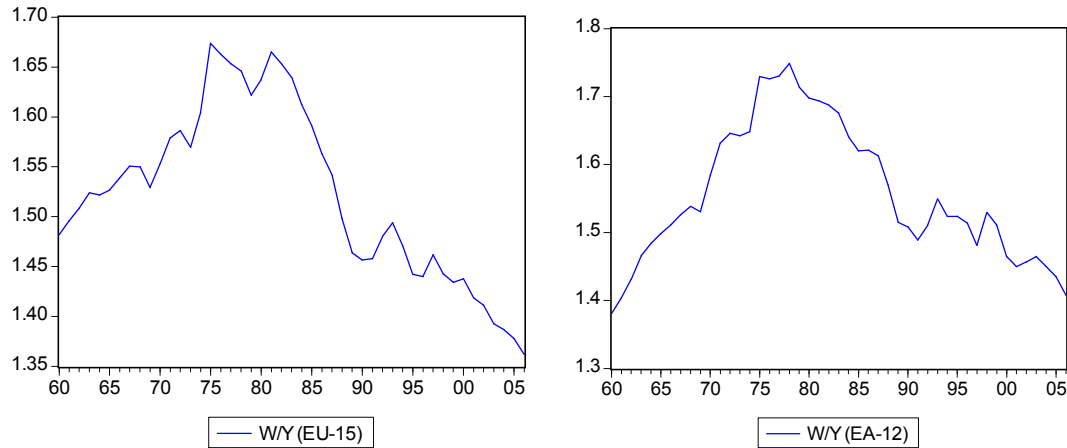**Diagram 3:** Domestic inequality in EU-15 and €-area.

Diagram 3 confirms the findings of OECD, yet only for the second half of the period: being in remarkable conformity with the development of cross-country inequality, domestic inequality is getting better only during the first two decades of the period we study. Starting from the 1980s, European income becomes more and more unequally distributed. Perron test shows a significant structural change in the development of *w/y* around 1981 (1978 for the case of €-area).

Table 2: How *w/y* in EU-15 and the €-area evolves over time.

|	Stationarity				Estimation of trend							
					ADF (AIC)		ADF (SIC)		PP		KPSS	
	ADF (AIC)	ADF (SIC)	PP	KPSS	coefficient	t-statistic	coefficient	t-statistic	coefficient	t-statistic	coefficient	t-statistic
w/y in EU-15	-1.767	-1.767	-1.660	0.199‡	-0.001	-2.464**	-0.001	-2.464**	-0.001	-3.139***	-0.003	-5.006***
w/y in €-area	-1.853	-1.757	-1.772	0.195‡	-0.001	-2.692**	-0.001	-3.380***	-0.001	-3.380***	-0.003	-3.570***

Notes: [†], [‡] and [§] denotes rejection of the 0-hypothesis of unit roots for Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests and rejection of the 0-hypothesis of stationarity for the KPSS (Kwiatkowski-Phillips-Schmidt-Shin) test at the 10%, 5% and 1% significance level, respectively.
[*], [**] and [***] denotes statistical significance at 10%, 5% and 1% significance levels, respectively.

3.3 Growth effects

In addition to the supposed, but not verified convergence, standard argumentation favours the process of globalisation due to the resulting growth effects. As already mentioned, there is a very rich relevant literature, though with contradictory conclusions. In this part, we carry on a quite simplistic comparison: we examine how the growth rate of EU-15 and €-area, related to the growth rate of world economy, evolves over time, during the gradual completion of European Union. This should be simply appreciated as an effort to depict the relative growth perspectives of EU, and not as a thorough study of trade / growth relations. First, the simplicity of our approach does not allow such reasoning. Even more, the

evolution of growth rates in EU could be understood as the result of creating a regional economic union, and not necessarily as the effect of an unlimited internationalisation process.

Diagram 4: Growth rates in EU-15 and €-area, relative to the world economy.
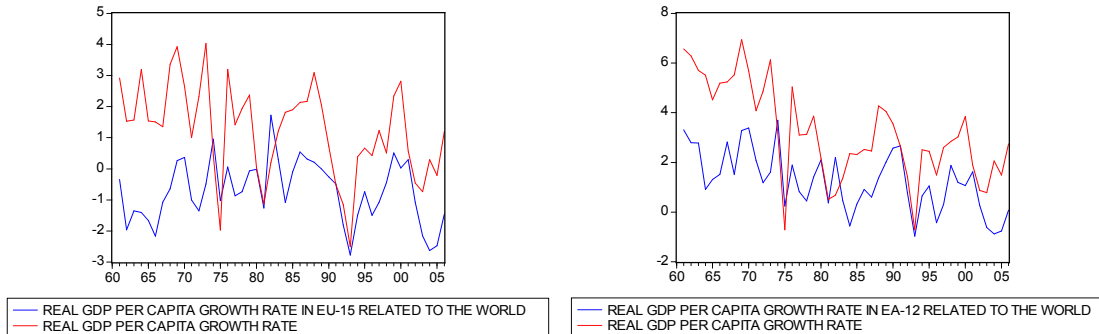
Growth rate of *y* in EU-15, and especially in the €-area (red line in the above diagram), seems to follow a significantly negative trend. The estimates presented in the following table convince us. With the exception of Ireland, all significant trend coefficients are negative!

Table 3: How GDP per capita growth by country, in EU-15 and the €-area evolves over time.

	Stationarity				Estimation of trend							
					ADF (AIC)		ADF (SIC)		PP		KPSS	
	ADF (AIC)	ADF (SIC)	PP	KPSS	coefficient	t-statistic	coefficient	t-statistic	coefficient	t-statistic	coefficient	t-statistic
Austria	-6.330§	-6.330§	-6.359§	0.072	-0.062	-2.844***	-0.062	-2.844***	-0.062	-2.844***	-0.064	-3.598***
Belgium	-6.350§	-6.350§	-6.349§	0.127†	-0.066	-2.898***	-0.066	-2.898***	-0.066	-2.898***	-0.068	-3.646***
Denmark	-6.364§	-6.364§	-6.364§	0.091	-0.038	-1.539	-0.038	-1.539	-0.038	-1.539	-0.045	-1.956*
Finland	-3.350‡	-4.335§	-3.665§	0.207	-0.026	-0.815	-0.028	-0.991	-0.009	-0.315	-0.044	-1.403
France	-4.952§	-4.952§	-4.953§	0.130†	-0.059	-2.927***	-0.059	-2.927***	-0.059	-2.927***	-0.081	-5.188***
Germany	-6.082§	-5.286§	-7.823§	0.218§	-0.070	-3.083***	-0.048	-2.213***	-0.048	-2.213**	-0.061	-3.264***
Greece	-2.116	-4.573§	-4.709§	0.210‡	-0.015	-0.351	-0.059	-1.397	-0.059	-1.397	-0.010	-2.761***
Ireland	-4.018§	-4.018§	-4.010§	0.095	0.044	1.536	0.044	1.536	0.044	1.536	0.060	2.094**
Italy	-5.590§	-6.457§	-7.051§	0.113	-0.114	-3.711***	-0.094	-3.536***	-0.094	-3.536***	-0.103	-5.110***
Luxembourg	-5.355§	-5.355§	-5.318§	0.233	0.038	1.026	0.038	1.026	0.038	1.026	0.043	1.239
Netherlands	-4.290§	-4.290§	-4.260§	0.100	-0.028	-1.448	-0.028	-1.448	-0.028	-1.448	-0.038	-2.019**
Portugal	-3.998‡	-3.998‡	-4.343§	0.073	-0.097	-2.191**	-0.097	-2.191**	-0.078	0.051*	-0.122	-3.350***
Spain	-3.697§	-3.697§	-3.697§	0.165‡	-0.018	-0.845	-0.018	-0.845	-0.018	-0.845	-0.095	-3.697***
Sweden	-2.918†	-4.078§	-3.972§	0.245	0.053	1.638	-0.006	-0.312	-0.006	-0.312	-0.029	-1.356
UK	-5.574§	-5.574§	-5.271§	0.080	-0.001	-0.058	-0.001	-0.058	0.004	0.231	0.003	0.176
EU-15	-4.606§	-4.606§	-4.528§	0.040	-0.029	-1.754*	-0.029	-1.754*	-0.029	-1.754*	-0.047	-3.170***
€-area	-4.271§	-4.271§	-4.208§	0.162‡	-0.051	-2.465**	-0.051	-2.465**	-0.051	-2.465**	-0.093	-5.852***

Notes: †, ‡ and § denotes rejection of the 0-hypothesis of unit roots for Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests and rejection of the 0-hypothesis of stationarity for the KPSS (Kwiatkowski-Phillips-Schmidt-Shin) test at the 10%, 5% and 1% significance level, respectively.
*, ** and *** denotes statistical significance at 10%, 5% and 1% significance levels, respectively.

The picture barely changes when we compare European growth rates to those for the world economy as a whole. Although there is no significant trend for EU-15, €-area and 7 countries show an increasing hysterisis compared to the world-wide growth rates: Austria (ADF estimation), Belgium, France, Greece, Italy, Portugal and Spain (KPSS estimation in table 4). The opposite is true only for Luxemburg, the exceptional case of Ireland and the UK, which is relatively less integrated in the European Common Market. European Union as a whole does not look as if it benefits compared to the rest of the world. If anything, it seems to be a case where, despite (or because of) a regionally constrained process of

internalisationalisation, the prospects of the economy to grow have been affected in a negative way.[13]

Table 4: How GDP per capita growth by country, in EU-15 and €-area, relative to world growth evolves over time.

	Stationarity				Estimation of trend							
					ADF (AIC)		ADF (SIC)		PP		KPSS	
	ADF (AIC)	ADF (SIC)	PP	KPSS	coefficient	t-statistic	coefficient	t-statistic	coefficient	t-statistic	coefficient	t-statistic
Austria	-3.400[†]	-6.259[§]	-6.304[§]	0.255	-0.040	-1.839[*]	-0.023	-1.224	-0.023	-1.224	-0.024	-1.361
Belgium	-4.112[‡]	-6.970[§]	-6.965[§]	0.060	-0.031	-1.711[*]	-0.030	-1.807[*]	-0.030	-1.807[*]	-0.028	-1.855[*]
Denmark	-6.600[§]	-6.600[§]	-6.600[§]	0.054	0.001	0.068	0.001	0.068	0.001	0.068	-0.004	-0.239
Finland	-2.120	-4.226[§]	-4.092[§]	0.085	0.002	0.071	0.006	0.242	0.006	0.242	-0.004	-0.147
France	-5.911[§]	-5.911[§]	-5.916[§]	0.048	-0.038	-2.629[**]	-0.038	-2.629[**]	-0.038	-2.629[**]	-0.041	-3.208[***]
Germany	-5.239[§]	-4.081[§]	-3.821[§]	0.253	-0.018	-1.232	-0.018	-1.232	-0.013	-0.875	-0.021	-1.352
Greece	-2.184	-5.721[§]	-5.942[§]	0.196[‡]	-0.017	-0.479	-0.047	-1.346	-0.047	-1.346	-0.068	-2.081[**]
Ireland	-1.497	-5.094[§]	-5.166[§]	0.068	0.123	1.613	0.082	2.510[**]	0.082	2.510[**]	0.100	3.579[***]
Italy	-6.042[§]	-6.042[§]	-6.022[§]	0.146[‡]	-0.051	-2.433[**]	-0.051	-2.433[**]	-0.051	-2.433[**]	-0.063	-3.465[***]
Luxembourg	-5.558[§]	-5.558[§]	-5.558[§]	0.110	0.071	2.071[**]	0.071	2.071[**]	0.071	2.071[**]	0.084	2.759[***]
Netherlands	-1.672	-5.235[§]	-5.243[§]	0.084	0.000	0.037	-0.004	-0.268	-0.004	-0.268	0.002	0.139
Portugal	-1.627	-4.203[§]	-4.492[§]	0.061	-0.043	-0.967	-0.079	-2.216[**]	-0.062	-1.896[*]	-0.081	-2.621[**]
Spain	-4.618[§]	-4.618[§]	-4.591[§]	0.127[†]	-0.016	-0.813	-0.016	-0.813	-0.016	-0.813	-0.054	-2.491[**]
Sweden	-3.058[‡]	-5.444[§]	-4.851[§]	0.101	0.023	0.872	0.014	0.767	0.013	0.711	0.011	0.572
UK	-5.102[§]	-5.026[§]	-4.888[§]	0.124[†]	0.035	1.917[*]	0.033	1.909[*]	0.033	1.909[*]	0.044	2.838[***]
EU-15	-3.774[§]	-3.774[§]	-3.815[§]	0.177	-0.003	-0.387	-0.003	-0.387	-0.003	-0.387	-0.007	-0.673
€-area	-5.267[§]	-5.267[§]	-5.274[§]	0.060	-0.039	-2.849[***]	-0.039	-2.849[***]	-0.039	-2.849[***]	-0.053	-4.852[***]

Notes: [†], [‡] and [§] denotes rejection of the 0-hypothesis of unit roots for Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests and rejection of the 0-hypothesis of stationarity for the KPSS (Kwiatkowski-Phillips-Schmidt-Shin) test at the 10%, 5% and 1% significance level, respectively.
[*], [**] and [***] denotes statistical significance at 10%, 5% and 1% significance levels, respectively.

4. A closer look into domestic patterns of inequality

In this last part of the present paper, we focus on the patterns of inequality within each country. The conformity we saw in the evolution of cross-country and domestic divergences gives rise to thoughts of an underlying relation. We apply a panel regression (cross-section fixed effects), for the member-states of EU-15 from 1960 till 2006, in order to estimate the coefficients of the following equation:

$$(w_i/y_i)_t = a_0 + a_1 g_{yi} + a_2(y_i/y_{EU})_t + a_3(w_i/w_{EU})_t + a_4 t + e \qquad \qquad (1)$$

where g_{yi} is the growth rate of real GDP per capita in country i, y_i/y_{EU} and w_i/w_{EU} shows the country's divergence from EU-15 average, in terms of per capita income and real wages (t stands for time).

In fact, the estimations, presented in the following table, confirm our suggestions: a very high adjusted R^2, in all three versions of the regression, along with satisfactory F-statistics[14], mean that the estimated equation covers a quite significant part of variations in local distribution of income. Conclusions are simply and clear-cut: first, in countries where living conditions compared to EU-15 average are rising, both, in terms of per capita income

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[13] Andriamananjara and Hillberty (2001) also noticed that trade relations with different countries strengthen domestic growth, especially when they apply to "third" countries, outside the borders of the area of a regional trade agreement regime (like the European Union). Similarly, Wooster et al. (2008) find that trade within the countries of EU-13 has less, yet still positive, effect on economic growth compared to the effect from trade with non-EU countries. Nevertheless, they do no report a negative effect! Standard theory provide us with a range of arguments for why the unconditional, regionally unlimited expansion of trade is preferable compared to the one that results within the borders of regional agreements, but it does not necessarily imply a negative effect on growth.

[14] Provided tests confirm absence of autocorrelation, multicollinearity and heteroskedasticity.

and of real wages, domestic inequalities are getting narrower. Second, after 1960, there is a clear tendency for a deepening of inequality within each country. And thirdly, as real GDP growth increases, wages are falling stronger behind (compared to non-labour income)! The conclusion of OECD for an unequally growing economy is being confirmed.

Table 5: Panel data regression (cross-section fixed effects) of w/y against growth rate, cross-country differences and time (EU-15, 1960-2006).

Dependent Variable: w_i/y_i =	Coefficients of Explanatory Variables					Adjusted R^2	Durbin Watson	Akaike criterion	F-statistic
	Constant	y-growth	y_i/y_{EU}	w_i/w_{EU}	time				
$a_0+a_1g_{yi}+a_2(y_i/y_{EU})_t+a_4t+e$	11,64	-1,33	47,63		-0,80	0,933	0,063	9,56	569,2
	1,3	*-2,9*	*4,2*		*-7,9*				
$a_0+a_1g_{yi}+a_3(w_i/w_{EU})_t+a_4t+e$	-38,58	-0,85		91,53	-0,73	0,934	0,062	9,55	579,2
	-2,4	*-1,9*		*5,4*	*-8,2*				
$a_0+a_1g_{yi}+a_2(y_i/y_{EU})_t+$ $a_3(w_i/w_{EU})_t+a_4t+e$	-49,53	-1,13	77,38	33,09	-0,86	0,935	0,065	9,54	553,2
	-3,0	*-2,4*	*4,4*	*2,8*	*-8,6*				

Notes: Small italics give t-statistics for the estimated coefficients.

5. Conclusions

In general, the present paper tests the validity of standard theoretical expectations regarding the benefits of creating a more internationalized economic environment, specifically in the frame of the European Union. Member states do not seem to get much from participating in a regionally evolving framework of trade agreements and economic integration. Apart from the exception of Ireland, €-area grows since 1960 with a gradually smaller rate than the world economy.

Moreover, in accordance to recently published findings of OECD, European economies' development goes hand in hand with a deepening of inequality: as the growth rate is getting stronger, w/y ratio falls significantly.

Last but not least, there is clear evidence for a profound structural change regarding the distributional patterns that took place in the first half of the 1980s. During the first two decades of the period we studied, both inter- and intra-regional inequality narrowed: the coefficient of variation of GDP per capita fell strongly and labour remuneration grew substantially relative to non-labour income. This picture changed completely after 1980! The previous trend of closing the gap among the countries reversed completely, while inequality within each country became also much deeper.

Identifying the reasons behind this change is beyond the scope of the present paper. Still, what we see is not a transitory interruption of a continuous trend. Therefore, temporary effects, like the big 1980-1982 recession or the accession of southern European countries, can not be the answer. The emergence of a persisting period of continuous divergence can only be explained by permanent, structural developments! In 1974, ECU (European Currency Unit) was defined and on the 13th March 1979, European Monetary System (EMS) entered into force, according to an agreement celebrated the same day between the central banks of the member-countries. Is perhaps the gradual transition of the European free trade area into an economic and monetary union, accompanied by the prevalence of a common neo-liberal political framework, the structural transformation that reversed any previous convergence?

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