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PAUL BOCCARA'S ANALYSIS OF GLOBAL CAPITALISM. THE RETURN OF THE BOURBONS, AND THE BREAKDOWN OF THE BRUSSELS / PARIS NEO-LIBERAL CONSENSUS

EL ANÁLISIS DE BOCCARA DEL CAPITALISMO GLOBAL. EL RETORNO DE LOS BORBONES Y LA RUPTURA DEL CONSENSO NEO-LIBERAL DE BRUSELAS-PARÍS

Abstract

Globalization and monopolies lead towards stagnation. Paul Boccara emphasized this since the early 1970s. Some other great political economists of the instability of the international order, like Rosa Luxemburg and Otto Bauer, foresaw the dark clouds of major inner-capitalist wars on the horizon, and in the light of our analysis, we are not too far away from such dark times, if the logic of 'madness' called contemporary globalization is not corrected. Boccara, over the last decades, provided a coherent framework of analysis, which reached similar policy prescriptions, independently from the Steindl/Kalecki approach in political economy. A Boccaran worldview would hold that the contradictions of global capitalism increase over time, if markets are left for themselves. Boccara is right in stressing that this system is, as he puts it, 'mad' because its logic of profitability is reaching its climax. Capitalism as a system, which puts making money before and against people lives, needs to be questioned. It is really futile to speak of 'morality' and 'transparency' without attacking the logic of the system.

Keywords: Paul Boccara, global capitalism, economic cycles, economic crisis, instability, Political Economy, economic policy, European Union.

Resumen

La globalización y los monopolios llevan al estancamiento. Paul Boccara enfatizó esto desde principios de los 70. Algunos otros grandes economistas políticos de la inestabilidad del orden internacional, como Rosa Luxemburgo y Otto Bauer previeron las nubes negras de las grandes guerras inter-capitalistas en el horizonte y, a la luz de sus análisis, no estamos tan lejos de ese tiempo oscuro, si la lógica de la "locura" llamada globalización contemporánea no se corrige. Boccara, en décadas recientes, proporcionó un marco de análisis coherente que alcanzaba prescripciones políticas similares, pero de forma independiente del enfoque de Economía política de Steindl / Kalecki. La cosmovisión de Boccara sostendría que las contradicciones del capitalismo global se incrementan con el tiempo, si a los mercados se les deja actuar por sí mismos. Acierta al resaltar que este sistema es, a decir de él, "loco" porque su lógica de rentabilidad está alcanzando su climax. El capitalismo, que antepone el hacer dinero a las vidas humanas, necesita ser cuestionado como sistema. Realmente es fútil hablar de "moralidad" o "transparencia" sin atacar la lógica del sistema.

Palabras clave: *Paul Boccara, capitalismo global, ciclos económicos, crisis económica, inestabilidad, Economía política, política económica, Unión Europea.*

JEL: B24, B25, B31, E11, E12, E32, E37, H56, P16.

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This essay will feature on the global relevance of the political economy of the French political economist Paul Boccara from the viewpoint of quantitative international political economy. Why should we be interested at all in the work of an author, who, to be sure, played such an important role not only as an academic, but also as a politician for the now dwindling French Communist Party? Politics and academics often go together, and as a recent NATO-inspired volume shows, leading thinkers from the Western security apparatus have less apprehensions to touch upon the theme of K-cycles as most chairholders of economics at major Universities around the world (see Devezas, 2006, reflecting the views of international experts on the subject, gathered by the NATO Advanced Research Workshop on The Influence of Chance Events and Socioeconomic Long Waves in the New Arena of Asymmetric Warfare in Covilhã, Portugal, 14–18 February 2005). The great French scholar Paul Boccara was born in Tunis in 1932, and he is the author of numerous works in French, German and Spanish, and his academic works were well received in many countries outside the Anglo-American sphere, but the reception of his academic works in the English-speaking world is rather deficient. While the probability to find Boccara's works at libraries in French speaking countries is overwhelming, even the Library of Congress in Washington D.C. merely lists only ten of his dozens of works; and the 'Hollis' Catalogue at Harvard University Library, always a good indicator about the global market presence of an author, only lists eight of them. In the major peer-reviewed social science journals of the world, contained in the Social Sciences Citation Index, there are indeed many scattered references to his work, but the only article, which in turn proved to be very influential on the subsequent writing (185 subsequent quotations), was Jessop, 1990. With the exception of the French language social science journal, Penseé, Boccara never even published in these maybe elitist peer-reviewed journals, which might be one of the reasons for the rather deficient reception of his work in the English-speaking world. The limited world library outreach of his work can be also guessed from some figures, available from the 'Worldcat' catalogue. His most influential work, Boccara, 1973/1976, is available at 118 global libraries, and Boccara, 2008 is only available at 24 European and 9 Anglo-American and Pacific region libraries. The present article will show that contemporary social science should pay much more attention to the work of this scholar, whose theories and hypotheses render themselves for further analysis and testing in the empirical literature, and open important perspectives for the theoretical debate on K-cycles and the instability of the world system.

This is a quantitative analysis on the Political Economy of our Time which aim is to draw international attention to the fact that Boccara's political economy is part and parcel of the wider French language debate on the instability of capitalism and the long economic cycles (Kondratiev cycles), which ranges, from the (former) Maoist Samir Amin to the Communist Boccara and the Trotskyst Ernest Mandel (1923-1995), and which is in good company of a wide variety of attempts to revive the debate on Kondratiev cycles (Devezas, 2006), which was a NATO Advanced Research Workshop on the influence of chance events and socioeconomic long waves in the new arena of asymmetric warfare in Covilhã, Portugal, 14-18 February 2005.

We briefly put the relevance of Boccara's approach into the wider and necessary perspective of the more general long-cycle debate and we then feature the highlights of Boccara's particular contribution to the understanding of current global economic depression, from which the world economy slowly recuperates. We show in the main part of this essay the empirical relevance of Boccara's general approach, using advanced empirical methods of econometric and politometric time series analysis. We conclude by cautiously drawing some general consequences from our findings, especially for the current debate on the future of the European Union economic policies. Paul Boccara, over the last decades, provided a coherent framework of analysis, which reached similar policy prescriptions, independently from the Steindl/Kalecki approach in political economy, which we also introduce in this essay (against the *'return of the Bourbons').* A Boccaran worldview would hold that the contradictions of global capitalism increase over time, if markets are left for themselves. Boccara is right in stressing that this system is, as he puts it, 'mad' because its logic of profitability is reaching its climax. Capitalism as a system, which puts making money before and against people lives, needs to be questioned. It is really futile to speak of 'morality' and 'transparency' without attacking the logic of the system. Our analysis, using advanced statistical techniques, also re-iterates empirical results, recently published by Korotayev and Tsirel (2010) and has shown in addition the following things:

1. liberal and 'Marxist' analyses of all 'denominations' are right in emphasizing the severe cyclical fluctuations of the capitalist system on a global scale
2. there is a world political and world strategic swing of societal system, which accompanies the economic ups and downs
3. and three there is a striking similarity in the logic of the globalized period of the second half of the 19^{th} Century with our age.

Globalization and monopolies lead towards stagnation. Paul Boccara emphasized this since the early 1970s. Some other great political economists of the instability of the international order, like Rosa Luxemburg and Otto Bauer, foresaw the dark clouds of major inner-capitalist wars on the horizon, and in the light of our analysis, we are not too far away from such dark times, if the logic of 'madness' called contemporary globalization is not corrected.

Our aim is first to draw international attention to the fact that Boccara's political economy is well part and parcel of the wider French language debate on the instability of capitalism and the long economic cycles (Kondratiev cycles), which ranges, to be sure, from the (former) Maoist Samir Amin to the Communist Boccara and the Trotskyst Ernest Mandel (1923-1995), and academic econometricians like Claude Diebolt. The revival of the K-cycle debate by NATO exactly raises the question of the relevance of long cycles far beyond the narrower borders of the political debates among limited left-wing circles (Devezas, 2006). It is perhaps one of the paradoxes of research about global political economy that radical thinkers often follow up the truly interesting questions, which are absolutely neglected by the academic mainstream. The analysis, provided by Boccara on the nature and relevance of the K-cycles, is impressive indeed and merits further empirical attention (Boccara, 1977, 1987a, 1987b, 1993, 2008, 2009; Boccara, Treviño and Weinstein, 1983). But the sad fact of international social science as a strategy of communication is that most social science students around the globe most probably would never have seen the name *"Paul Boccara",* if it would not have been for the quotations in the influential works by Jessop, 1990, and Jessop and Sum, 2006.

We will turn to the relevance of Boccara's ideas by using advanced econometric techniques, like spectral analysis and analysis of autocorrelations. We will keep the mathematics to a minimum, and refer our readers to the recent applications of such methods and the methodological debates well documented, among others in Devezas, 2006, and Korotayev and Tsirel, 2010. As we will show in this article, this very recent analysis provided by Korotayev and Tsirel brought again motion into the subject of the K-cycle debate, characterized by debates on whether these cycles exist at all, because these two Russian K-cycle researchers present results of spectral analysis that has detected the presence of Kondratieff waves (their period equals approximately 52-53 years) in the world GDP dynamics for the 1870-2007 period.

In the present essay, we will also briefly put the relevance of Boccara's approach into the wider and necessary perspective of the more general international long-cycle debate outside of France and we will then feature the highlights of Boccara's particular contribution to the current global economic depression, from which the world economy slowly recuperates. We will conclude by cautiously drawing some general consequences from our findings, especially for the current debate on the future of the European Union economic policies.

Boccara's theory in the framework of the contemporary debate

In order to talk about economic cycles, one hasn't to be French or being a member of a small left-wing political party, or both. The crisis-prone and cyclical nature of global capitalism has been featured already by many theories in the tradition of political economy.[1] Among the important non-mainstream, non-neoliberal political economies of our time, the first to be mentioned in this context is of course Schumpeter.

Schumpeter, Harvard professor of economics and THE great economist of the waning 19th Century and the early 20th Century, already foresaw in his writings, published in 1908, 1912, 1939, 1950 that capitalist development takes the form of *'creative destruction',* and that innovation by entrepreneurs/companies is the force that sustains long-term economic growth, even as it destroys the value of established companies that enjoyed some degree of monopoly power. Capitalism is of a strong cyclical nature, and the 50 year swings, first discovered by the Russian Nikolai Dmitriyevich Kondratiev (1892-1938), who was by the way a victim of Stalin's purges, play an important part in the ups and downs of innovations and economic growth. These writings of Joseph Alois Schumpeter (in particular 1908, 1912, 1939), and later world system and dependency analyses were always aware of the emergence of crises, cyclical imbalances, regional shifts, and the rise and decline of entire regions and even continents in the process of capitalist development. Several of Schumpeter's major works, like *'The Nature and Essence of Theoretical Economics'* (1908, translated 2009) *'The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle'* (1912, first translated 1934) were all heavily influenced by his early and short experience at the outer rim (1909-1911) of the Austro-Hungarian Empire at Chernivtsi University in Northern Bukovina, Ukraine, where Schumpeter gained valuable insights into the nature of world development in the periphery.

As is well-known, for Schumpeter (1913, 1939) the entrepreneur is the prime mover of economic development, which is cyclical in character, connecting innovations, cycles, and development. Schumpeter strongly believed in these Kondratiev waves (for empirical studies on Kondratiev waves, see Devezas 2006; furthermore Bornschier 1996; Goldstein 1988; Tausch 2007, 2008). Successful innovation is a source of temporary market power, eroding the profits and po-

1 Amin, 1976, 1994, 1997; Arrighi, 1995; Attinà, 2003a, 2003b, 2005; Bauer, 1936; Bobróvnikov, 2004; Bornschier, 1996; Devezas and Corredine, 2001; Escudier, 1993; Goldstein, 1988; Jessop, 1990, Jessop and Sum, 2006; Jourdon, 2008; Kalecki, 1966, 1968, 1971, 1979, 1996, Kalecki and Feiwel, 1972; Korotayev and Tsirel, 2010; Louçã, 1997, 1999, Louçã and Reijnders, 1999; Luxemburg, 1964; Mandel, 1995; O'Hara, 1994, 2000, 2001, 2003a, 2003b, 2004a, 2004b, 2005a, 2005b; Schumpeter, 1912, 1939; Tausch, 2007a, 2007b, Tausch and Ghymers, 2006.

sition of old firms, yet ultimately losing to the pressure of the new inventions, championed by the competitors.[2]

The contemporary international system, more and more, seems to resemble such a perpetual rise and fall of companies, regions, sectors, even nations. Several world systems approaches have taken up the basic idea of the Schumpeterian competition and stipulated that even the international system itself since the 1450s is characterized by hegemonies, international system de-concentration, the de-legitimation of the international order, and recurrent global wars over the hegemony in the system (see Devezas 2006; furthermore Arrighi 1995; Goldstein 1988; Tausch 2007). That currently economic growth dramatically shifts away from the North Atlantic arena and the states very closely linked to them to other regions of the world economy seems to indicate that such a major fundamental shift is taking place with the force of a real *tsunami*. Everywhere, the monopolies of power, which the old dominant transnational oligopolies wielded, are eroding.

For Boccara, the re-discovery of the K-cycles has been the defining aspect of his scientific life. At this point of assessing the validity of his approach, we also should have a closer look at the contribution of the Austrian political economist Josef Steindl (1912 – 1993), whose work nowadays enjoys a renaissance, especially championed vigorously by the Austrian Institute for Economic Research in Vienna, as a policy alternative to the current and dominant Brussels/Paris neo-liberal consensus of the European Commission and the OECD. As far as we know, Boccara was not aware of this important theory tradition, which in many ways defends and supports his viewpoints and is parallel to his major scientific discoveries. A *"Google Book Search"* analysis, performed on September 10th 2010 and searching for **all** the works authored by Paul Boccara, yielded **no** result for a quotation of any of the works, written by Josef Steindl by Boccara.

In Steindl (1946), the author analyzed the process of increasing concentration of capital and the oligopoly of the market. In Steindl (1952) he established a relationship between economic stagnation and the growth of oligopoly in advanced capitalist countries. In the words of Guger/Marterbauer/Walterskirchen, the researchers at the mentioned Austrian Institute of Economic Research, who are very instrumental in the re-discovery of Steindl's legacy:

> 'In competitive industries profit margins are highly elastic, and excess capacity is eliminated in the long run by squeezing out surplus capital. In monopolistic industries, on the other hand, price cuts are not practicable. In these industries, demand does not determine prices, but the degree of capacity utilization - also in the long run. The typical producer in the competitive type of industry has low profit margins and rather small chances to survive. In monopolistic industries, on the contrary, producers have substantial profit margins and a high chance of survival. Therefore, it would require a large price cut to eliminate competitors. Hence, oligopolistic or monopolistic firms avoid cut-throat price competition.' (Guger/Marterbauer/Walterskirchen, 2006)

Steindl expected a secular tendency to stagnation in mature capitalist economies, brought about by monopolization, and –as Guger/Marterbauer/Walterskirchen remark with justification–, the prosperity of the post-war era was a 'big surprise' to Steindl, who published his analysis of US capitalism in 1952. Steindl's theory, in our view, is so important in the Boccara context, because it possibly highlights the tendencies of stagnation and socially excluding development, observed after the end of Keynesianism and focused on by later, empirically in-

2 For a formal model of Schumpeterian growth economics, see Aghion/Howitt 1992.

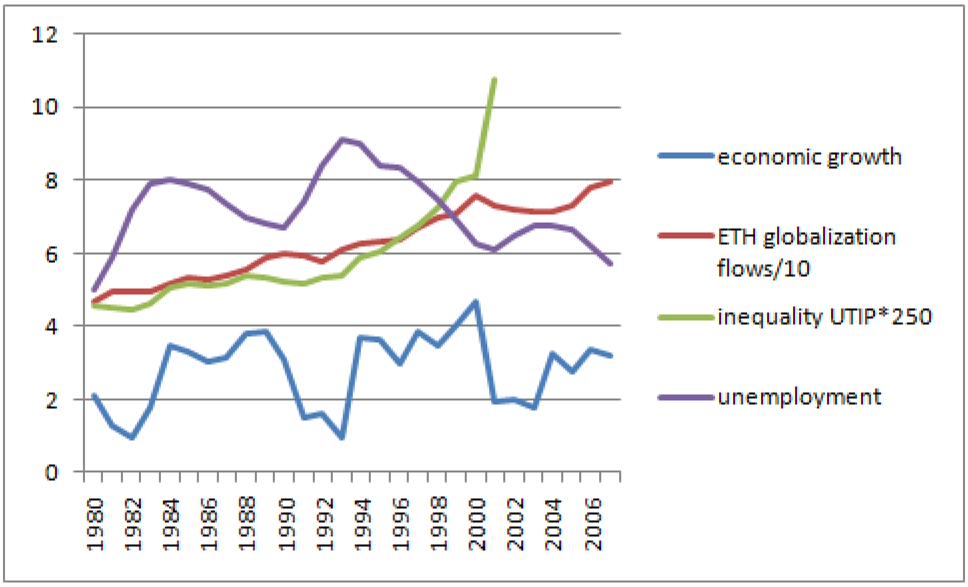
spired theories of multinational corporation penetration (MNC penetration). Steindl's theory, 1952, was a vision of events to come. We strongly assume in this context that MNC inward penetration is a main driving force of the degree of monopoly, especially in periphery and semi-periphery countries. In the introduction to the re-publication of his book on *'Maturity and Stagnation',* Steindl explained the extraordinary development of the postwar period in the West by the following factors:

• the rising share of the public sector;
• technical innovations and new products;
• international cooperation in economic policies;
• cooperation between business and trade unions; and
• a favourable political and economic climate.

The postwar boom increased public expenditures, which raised effective demand. These outlays were largely financed by profit taxes. In accordance with Kalecki's arguments, the expansionary effect of public expenditures is even higher, Steindl assumes, if taxes are financed by profits and not mass consumption. Technical innovations stimulated investment. Information and communication technologies, automation and aircraft industries gave a strong impetus. The innovations, due to high military spending even disseminated to the private sector. In post-war Europe, private investment was further stimulated by the catching-up process with the USA, a process initialled by the Marshall plan. According to Steindl, the speed of European post-war recovery was greatly enhanced by additional labour supply from agriculture and, later on, from abroad. The change in the secular trend of income distribution since the end of the Second World War in the world's most advanced economies, observed by Steindl, has to be especially noted: since the early 1980s, income distribution has changed in favour of classes with high savings propensities; i.e. in most industrial countries the share of wages and salaries in national income has been declining, while non-wage income, in particular property incomes, have risen sharply, and income inequality between the rich and the poor has increased considerably.

In Graph 1 we try to visualize some of the main points of Boccara's theory by using data from 22 western democracies. Unemployment remained high throughout the period, inequality rose sharply, as did globalization, and economic growth strongly fluctuated.

Graph 1: **Rising monopolization/globalization, rising inequality, stagnation and unemployment in the West (22 leading western democracies)**[3]



According to Steindl, the burden of taxation has shifted from profits to wages - a process which reduced the expansionary effects of the public sector (Steindl, 1979, p. 5). Without unduly mixing the theoretical and the empirical part of this work, it should be emphasized nevertheless that the very significant downward pressure of MNC penetration on social security expenditures would be an important empirical test for the Steindl theory of capitalism. Assuming that tax revenues are immediately spent, higher profit taxes are paid out of increasing profits (before taxation) due to higher capital utilization, while an increase in wage taxation reduces consumption. The following aspects of Steindl's analysis especially caught the attention of the empirical researchers from the Austrian Institute of Economic Research (Guger / Marterbauer / Walterskirchen, 2006): what Steindl calls a *'policy of stagnation'* will continue, since governments are preoccupied with inflation and the public debt (Steindl, 1979, p. 9). Thus the Steindl paper on *'Stagnation Theory and Stagnation Policy'* (Steindl, 1979, especially p. 13) must be regarded, together with Boccara's papers, as one of the first key documents against the current Euro-monetarist stagnation policy, which –according to this Kaleckian viewpoint– is the cause of stagnation, unemployment and rising inequality in Europe. The new political and economic landscape, which began to take shape in the late 1970s and 1980s, was characterized by:

- macroeconomic policy being oriented primarily towards price stability and budget consolidation
- declining international cooperation regarding economic policy (breakdown of the Bretton Woods system and the establishment of a flexible exchange rate system in the early 1970s)

3 Unweighted means for Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, United Kingdom, United States. Sources and variable definitions, see Graph 1 of this work. The numerical values in our Graph are again simple differences between the EU-15 performance and that of the USA and the other Western democracies under investigation. In order to visualize our time series in a single graph and on a single easily comprehensible left hand scale, we again had to multiply the University of Texas Inequality (Their Indices of the inequality of wages by sectors) data time series by a factor of 250 and to divide the ETH globalization flow data by a factor of 10, to produce scales, which range from 0 to 12.

• increasing environmental and energy problems
• a political trend against full employment (with Kalecki's (1943) Steindl believed in the 'political aspects of full employment', and argued that the entrepreneurs were losing interest in full employment because of the increasing power of trade unions and employees as a consequence of full employment.

This new set-up was called by Steindl as the *'return of the Bourbons'*. The Bourbon's return resulted in a restrictive bias in economic policy, particularly in the EU. For Guger / Marterbauer / Waltterskirchen, one of the main consequences for our analysis of the European Union today is the following:

> 'Steindl identified a persistent and lasting mood against growth and very clearly spoke about a deliberate 'policy of stagnation'. This characterization seems to be even more appropriate for the current development. In the EU a macroeconomic policy framework has been established that has a restrictive bias—it may even be characterized as 'policy of stagnation'—although it promised stability and growth. In the current macroeconomic policy framework of the EU, institutions to guarantee price stability and sound public finance are extensively developed. However, institutions responsible for aggregate demand and full employment are missing.' (Guger/Marterbauer/Waltterskirchen, 2006)

According to Steindl, there are currently three main pillars of economic policy in the EU:

(1) a 'free' market economy is seen as being stable and improving welfare. Deregulation and establishing free movement of goods, services, capital and labour, and structural reforms especially on product and capital markets are seen as the main element of improving real variables such as economic growth and employment in the long run.

(2) macroeconomic policies are oriented towards ensuring growth and stability by providing stable frameworks. This is seen to be guaranteed by the combination of 'price stability and sound public finance'. For achieving these ends two institutional arrangements have been formed: the European Central Bank, which is primarily oriented on price stability and the Pact for Stability and Growth, which aims at budgetary positions 'close to balance or in the surplus' in the medium term.

(3) The unemployment problem, seen from a neoclassical perspective, mainly being determined by 'structural factors'. In the medium and long term, unemployment will be unaffected by aggregate demand or productive capacities, but the NAIRU [non accelerating inflation rate of unemployment] can be reduced by a flexible labour market. EU employment policies are oriented towards increasing the adaptability of the workforce and the flexibility of the labour markets.

In view of the current crisis in Greece and in other Southern European countries, Steindl remarked prophetically that it has to be avoided that debtor countries are forced into a painful policy of restrictions, causing low growth and high rates of unemployment, of which all countries would have to suffer. He further pointed out (Steindl, 1988) that the record of the EU model of economic policy has been disappointing. Growth rates of GDP are low and unemployment is high in relation to long-run averages and to the USA. Economic policy in the EU seems to have an inherent anti-growth and pro-unemployment bias.

Guger/Marterbauer/Walterskirchen thus reach the conclusion:

> 'What we experienced in recent years was a European economic policy focused on preventing inflation and budget deficits. With the 'Stability and Growth Pact' Steindl's apprehensions were realized: Europe's economic policy got a bias towards stagnation policy from the outset. The Lissabon process —oriented towards economic growth— has not altered this bias so far.' (Guger/Marterbauer/Walterskirchen, 2006).

Apart from Schumpeter and the Steindl/Kalecki paradigm, and Schumpeter's tradition, a third political economy comes to my mind, which might be useful in overcoming the current neo-liberal Brussels/Paris-consensus. It's the political economy of Paul Boccara. As great number of scholars, including Louçã, Mandel and a great number of his otherwise fierce ideological opponents graciously recognized, Boccara's impartial academic contribution precisely is to be situated into the framework of these critical approaches to political economy. And seen in the perspective of the political economy of Steindl and Kalecki, Boccara's diagnosis is not too far away from the 'mainstream' of alternative critical thinking on the necessity to re-formulate European economic policy. From the outset, Boccara must be praised for confronting the neo-Stalinist orthodoxy, reigning also in western communist political parties at that time, for taking up and considering respectfully the heritage of Nikolai Kondratiev, a figure, which immediately raised in those circles at that time the suspicion of 'Trotskysm'. As Jessop and Sum (2006) quite correctly emphasize, Boccara squarely places the entire debate about Kondratiev-cycles (K-cycles) within the more general framework of the succession of regimes and types of regulations. And even more interesting, in the framework of our empirical analysis, Boccara links already in his classic, published in 1976 (whose first edition appeared in 1973) the question of economic cycles to the one of 'mondialisation'/'globalization'. Interesting, as this perspective might be, it should be also emphasized that today Boccara (2008) was also among the first global political economists to diagnose the fact that the current crisis would be not only a severe recession, but a profound and thorough crisis, reminding the world of the 1929 Great Depression. Boccara also, like Steindl and Kalecki before him, puts forward proposals to initiate emancipation from this 'gone mad' system. For him, the financial crisis that originated in the United States is now severely shaking Europe and France. Why do you speak about a *'global crisis of capitalism'* rather than a failure of *'Financial Liberalism'?* For Boccara, 2008, current changes exacerbate capitalism. The financial crisis is revealing the maturation of the crisis in capitalism. To be satisfied with challenging 'liberalism' or the lack of regulation or 'deregulated finance', as people typically say, is a basic error, leading to holding onto a system that is becoming more and more harmful. For Boccara, 2008, the crisis it is not caused by merely deviating from a 'normal' capitalism that would be 'healthy', as claimed, for example, by current French President Nicolas Sarkozy, because the system itself has gone crazy. Boccara, 2008, analyzes this system, now dominating the world, as mad because its logic of profitability is reaching its climax. That's capitalism squared. It is therefore capitalism as a system, which puts making money before and against people lives, that needs to be questioned. It is futile to speak of 'morality' and 'transparency' without attacking the very logic of the system. In addition, for Boccara, 2008 there is no possible going back to the capitalism of our grandpas, because the current exacerbating transformations are irreversible. At the heart of the current systemic crisis, which is much deeper even than the one between the two World Wars, we can observe revolutions of technical and social operations. With the industrial revolution, material and money predominate against people in production. The accumulation of capital has helped to replace hand tools with machine tools. This has led to the firing of workers, to pressures on wages in favour of profits while increasing production.

With the information revolution there is a radical change taking place. Science and information, rather than machines, now dominate production. Computers replace some functions of the human brain. This is an extraordinary change, since information, like research, can be shared throughout the world, while a machine tool can only be here or there and can therefore be privately owned. For Boccara, 2008, this mutation gives rise to both a need for sharing and expanding the system. This is noticeable with the expansion of private multinational companies that are able to share the costs of global research, in contrast to purely domestic enterprises. Hence, 'new privatisations'. Hence, too, deregulation of markets, opening them as much as possible and building multi-states, from the European Union to the global hegemony of the United States. Other indications of the failure of capitalism are for Boccara, 2008: employees are competing worldwide (with the tremendous increase of workers and industry in emerging countries, particularly in Asia) and the enormous fall-back onto the use of the financial markets by multinational firms. It is this contradiction between financial accumulation and material over-exploitation, which for Boccara, 2008, is putting pressure onto wages everywhere that provokes crises like the one in 2001 or the one that is looming behind the current financial crisis. For Boccara, 2008, historically money has been gradually freed from gold, though ostensibly keeping gold as its *'ground basis'.* But the breaking off of this basis is now almost complete with the beginning of a monetary revolution. This allows for the creation of seemingly limitless money, as with the dollar. But the absence of boundaries is a fantasy. This is one of the reasons for the enormity of the wild speculation that has led to the current financial crisis. This thought brings Boccara into vicinity of neo-classical and monetarist economists. Among the more radical currents on the political left, to our knowledge Samir Amin and Andre Gunder Frank would have especially emphasized a similar analysis.

Speculation implies three things (Boccara, 2008): a money supply, a requirement of a very high rate of profit, and a product with strong demand on which to speculate. Meanwhile, the start of the monetary revolution has over-enlarged the available monetary supply. Productivity of the information revolution and global competition of workers have strongly increased the rate of profit (15% and more), and speculation wants to increase it. Housing demand has become considerable. The very low interest rates charged on the dollar allowed banks and speculative capital to borrow very cheaply, to then lend massive amounts (far beyond their capital) to individuals who went into debt to buy housing. These financial institutions have lent at increasingly high interest rates, drawing a profit from this rate difference, until such point as the buyers could not repay the loans. Consequently, the repayment of debt, massively purchased by the banks in the United States and Europe, dropped sharply. Hence the bank losses. For Boccara, 2008, this speculation relates to the inherent contradiction of capitalism: the system uses money to get money at the expense of exploited workers' wages. Yet it is impossible to make money without consumers. In this instance, popular demand, resulting in enormous debts, has run up against the downward pressure on wages, which has prevented the repayment of debts.

As the French K-cycle researcher and political economist Philippe Jourdon quite correctly remarks (Jourdon, 2008):

> Indeed, the monetary dimension existed in KONDRATIEFF's theory. The variation in gold markets, and its impact on production, is one of the four poles and the most «super structural" of BOCCARA's presentation (1993) of the long cycles theory, whereas the most «infrastructural» one is related to demographic moves, with economy and technology in the middle. But the matter was gold only, and this dimension is completely outdated, and must be extended to credit money, particularly'. (Jourdon, 2008: 13)

Boccara, 2008 also pays attention to the ecological revolution. For him, the stupidity of pollution relates to the same system at work in the financial markets, with the waste of material resources, in production as well as in consumption. Simple taxation cannot be the solution without compromising business management geared to financial profitability, without getting help from new public services for new ways to produce and consume. Aiming for 'sustainable development' as we commonly say, from both the left and the right is for Boccara, 2008 totally insufficient without other forces and funding that are incompatible with the requirements of capital. Calls for the state and market regulation reveal for Boccara, 2008 a new climate in favour of proposals to control markets and a capitalism gone mad. It is a shift from previous periods. But a greater involvement of the State in market regulation will not suffice at all if the fundamental rules of the system are maintained. The left must break the traditional alternative: Market or State. On the State side, new powers are needed, powers of control, and of decisions made by workers and citizens, in businesses as in public services. On the Market side, markets need to be controlled by the distribution of equity and by innovative public services. Regarding the market for labour, there needs to be an emphasis on job and training security; regarding the marketing of products, in favour of new management criteria; and finally, regarding the financial market, in favour of public institutions and a new credit system.

Boccara, 2008 also thinks that we cannot limit intervention to last-minute plugging holes that are multiplying without reforming the entire banking system. Of course, we could start taking some immediate steps, while at the same time developing overall plans based on a dialogue among workers, citizens and their organizations at the national, European and world levels. State control or participation in the banks has become inevitable, in the United States and in Europe. But for Boccara, 2008, they are *ad hoc* in emergency and seen as provisional. That is not enough at all. This is not a matter of eliminating state speculation at the expense of taxpayers, and then starting all over again with the same credit criteria. Choosing prevention? But a European public fund to buy rotten assets, imitating the American Paulson plan, does not meet the need. Nor would simple guarantees on deposits, nor a public institution taking temporary participation in banks with no other criteria. An overhaul of the system is needed, with public involvement and nationalization, public and national centres of finance, a new bank credit, new public services for credit, and cooperation among themselves for a local, European and global reconstruction.

In this context, Boccara, 2008 also singles out the European Central Bank for criticism. For him, the primary mission of the ECB against inflation, for a strong Euro, promotes assets exportation against industrial employment. This is one of the reasons why the unemployment rate is higher in the Euro zone than in the United States, where employment is an essential task for the Fed. The ECB had to fly to the rescue of banks, and so did the Fed, in providing liquidity. But it can only do so in exchange for securities deposited by the banks. When these securities are rotten and bank shares are falling, banks are pushed into bankruptcy or have to be recapitalized by the states. A simple drop in interest rates of the ECB, demanded by the right and the left, is not the solution. Yet the recent and simultaneous drop of the rates of six central banks around the world, including the ECB and the Fed, demonstrates the severity and novelty of the situation. Low rates of the Fed have fuelled speculation. The issue is therefore to reduce the rates in a conditional or selective way: increase interest rates for loans to financial investments, and reduce to zero when for real investments, provided they are accompanied with more jobs and training. Also, the Stability Pact, directed against government spending, must be removed.

But, as Boccara demonstrated in his writings, behind the banking crisis is looming a serious economic crisis on a global scale, with a shaken dollar. This crisis will also reach emerging countries. Already, the fall of the stock exchanges are strong and are reaching Asia, as is the case with Japan. By laying the cost of their hegemony on the importation of capital from all around the world, the United States has contracted a colossal debt. This debt corresponds to the withdrawal of great masses of Treasury bills in dollars by central banks, European and even more by Asian banks. This leads to a dollar inflation that could ultimately lead to its rejection and would seriously weaken the international monetary and financial system. Besides, sovereign funds have started to use their dollars for partial acquisitions of U.S. firms. For Boccara, 2008, also the IMF is going through a very deep crisis. The voting rights of developing countries and emerging markets are extremely small. Dominique Strauss-Kahn wants to increase them a little. This would, according to Boccara, 2008, not solve at all the issue of the United States blocking power, which must be removed. According to his analysis, the IMF discredited itself by playing the role of policeman against the developing countries. It has caused disasters by putting pressure on public and social spending, to the advantage of their creditors. It has given up its role, set up after the war, which was to support the whole world's growth. This is leading, according to Boccara, 2008, some countries to want to free themselves from it. This is what the establishment of the South Bank by Latin American countries means. Such initiatives are positive. But beyond that, Boccara, 2008 thinks there is a need of a radically new IMF, and we need to rebuild the world-wide economical organization with other criteria.

To create a common world currency, emancipated from the dollar, we can rely, Boccara, 2008 thinks, on an already existing embryo: the 'special drawing rights' of the IMF (SDR). The IMF, a sort of central bank of central banks, manages a common pool of currencies and gold, set up by the Bretton Woods agreements in 1944. Each country was able to draw foreign currencies from other countries, in proportion to its gold deposit. The Special Drawing Rights, established in the early 1970s, are drawing rights without gold counter-part. It is a pure monetary creation of the IMF. But the United States opposes their use because they threaten the hegemony of the dollar. But we can already generate more SDRs, immediately, and then create from them a common global currency. This would refinance credits for employment or training, and public services. The common currency would help promote services and public property belonging to humanity (food, water, energy, transport, environment, culture, health, peace, etc.), and would thereby challenge the domination of multinational companies.

Methodology and research design

In the following, we will show from standard time series data in the tradition of Goldstein and Attinà that, as Boccara correctly predicted already in 1973/76, globalization indeed leads to the erosion of economic growth. Our model rests on the role of defence pacts in the world system, which, in our analysis, are a major blockade against the sliding into warfare. Nothing could better highlight the erosion of the Keynesian, NATO and Warsaw Pact Alliance supported post-World-War-II order than the quadruple process of globalization, erosion of economic growth, defence pacts, and the increase of world political superpower tensions. In addition, we also show that the globalized years in world history, 1870-1913 and 1975-2009, show striking parallels in their economic growth cycle pattern, and that –on top of all, the patterns of warfare as measured by annual major power battle fatalities– show again a striking parallel of the post-1945 patterns with earlier, indented *W*-pattern shaped warfare cycles. Instead of learning from the past, the world repeats in a nutshell the grave errors of the second half of the 19th Century.

In the social sciences, time series can reveal many important trends and conclusions, which might be hidden from simple cross-national data analysis. Most published research articles on the subject of the capitalist world economy and development performance are based on simple or pooled cross-national data analysis, and as yet do not use time series analysis, based on yearly data. First of all, statistical research methods and developments have developed, and the availability of relevant statistical programmes, available for the global research community, has proliferated during the last decades. For one, we should mention as a first step the powerful instruments of very simple, linear time series correlation analysis of indicator performance over time, now possible for dozens or even hundreds of countries by applying the powerful, simple and user-friendly tools of Microsoft EXCEL in its current versions. Secondly, a wide array of more sophisticated and econometric tools are now freely available for all users in an equally user-friendly and globally available statistical software for home computers, the SPSS-IBM product 'SPSS' in its current versions. The time series component of the programme now includes such sophisticated econometric time series techniques such as spectral analysis, autocorrelation analysis and time-series cross correlation analysis. As to the econometric analyses used, we simply draw the attention of our readers to standard applications and introductions.[4]

There is really no excuse anymore NOT to use the wealth of these techniques. Secondly, and in this context equally important, the social sciences, focusing on globalization, now have the following time series data freely available in EXCEL format, easily to be put into an SPSS format data file (see appendix). The following data series are especially relevant for our research question and directly relate to the research questions of the dependency/world systems paradigm (see appendix). Apart from the economic standard data on economic growth (IMF) and unemployment (OECD) we used the KOF Index of Globalization, provided by a team of the ETH-Zurich in Switzerland, which to our knowledge is the best single available time series about different aspects of globalization since the 1970s through to 2007. We concentrated here on the ETH economic globalization time series, to get at least yearly data, which would be comparable to our independent variables. Economic globalization is composed in this index by:

1. Capital Account Restrictions
2. Foreign Direct Investment, flows (percent of GDP)
3. Foreign Direct Investment, stocks (percent of GDP)
4. Hidden Import Barriers
5. Income Payments to Foreign Nationals (percent of GDP)
6. Mean Tariff Rate

4 Basic texts Ito, 1993; Meko 2009; as well as Nagakawa, 2006; Warner, 1998; Wei, 2006; for critical views on earlier research from the standpoint of econometric time series analysis Silverberg, 2005, 2007; furthermore: Devezas, 2006; and Tausch/Ghymers, 2006.

7. Portfolio Investment (percent of GDP)
8. Taxes on International Trade (percent of current revenue)
9. Trade (percent of GDP)

Our analysis also relies on the data series by the **University of Texas Inequality Project on Inequality.** UTIP is a research group at the University of Texas, concerned with measuring and explaining movements of inequality in wages and earnings and patterns of industrial change around the world. It starts from the assumption that one can establish a reasonably reliable relationship between these measures and the broader concepts of inequality, such as income inequality. UTIP relies on the of Theil's T statistic to compute inequality indexes from industrial, regional and sectoral data. UTIP also used yearly pay inequality as an instrument to estimate measures of household income inequality, for a large panel of countries from 1963 through 1999.

So the following time series data were used:

- **Economic growth:** IMF economic growth data (real GDP per annum) and growth predictions, data download April 2009.[5]

- **Globalization:** ETH Zurich globalization time series data, data download January 2010,[6] The Zurich data, used in this study, refer to the **ETH economic globalization time series**, which covers 'actual flows", combining trade (percent of GDP), foreign Direct Investment (flows, percent of GDP); foreign direct investment (stocks, percent of GDP); portfolio investment (percent of GDP); and income payments to foreign nationals (percent of GDP). The ETH Zurich globalization data are weighted according to the following key:

	Indices and Variables	**Weights**
A.	**Economic Globalization**	**[37%]**
	i) Actual Flows	(50%)
	Trade (percent of GDP)	(19%)
	Foreign Direct Investment, flows (percent of GDP)	(20%)
	Foreign Direct Investment, stocks (percent of GDP)	(24%)
	Portfolio Investment (percent of GDP)	(17%)
	Income Payments to Foreign Nationals (percent of GDP)	(20%)
	ii) Restrictions	(50%)
	Hidden Import Barriers	(22%)
	Mean Tariff Rate	(28%)
	Taxes on International Trade (percent of current revenue)	(27%)
	Capital Account Restrictions	(22%)

- **Inequality:** Theil Index of Inequality, based on payment in 21 industrial sectors; calculated from UNIDO sources in University of Texas Inequality Project (data download January 2010), http://utip.gov.utexas.edu/data.html

5 Vid. <http://www.imf.org/external/datamapper/index.php>
6 Vid. <http://globalization.kof.ethz.ch/static/rawdata/globalization_2010_short.xls>

- **Unemployment:** unemployment as % of the civilian labour force: http://stats.oecd.org/Index.aspx

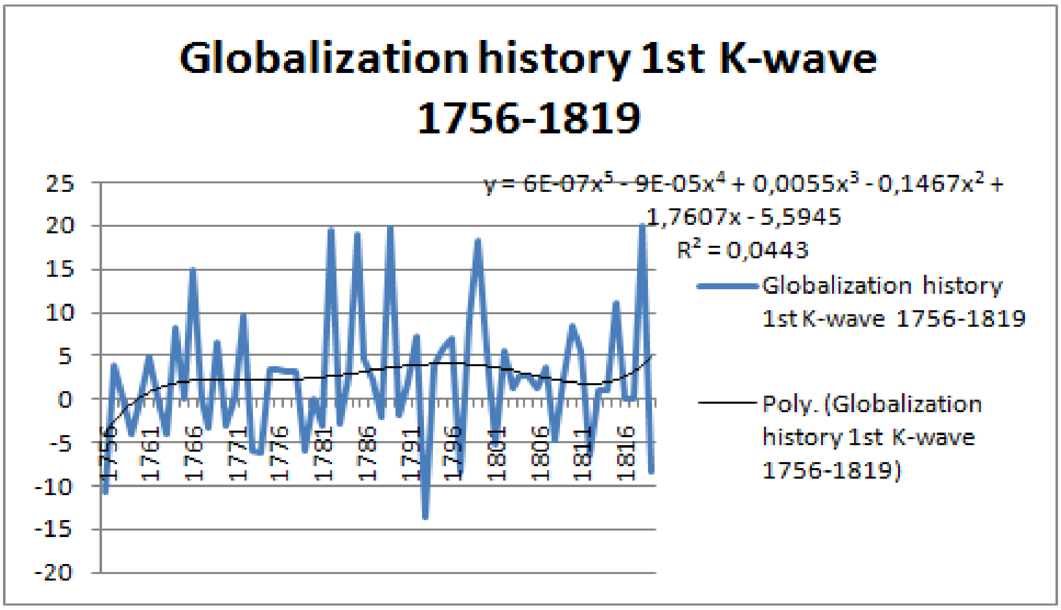
The most recent contribution on the subject, written by two Russian K-cycle researchers, merits our special attention in the debate. Korotayev and Tsirel, 2010 present results of spectral analysis that has detected the presence of Kondratieff waves (their period equals approximately 52-53 years) in the world GDP dynamics for the 1870-2007 period. To estimate the statistical significance of the detected cycles the authors used a new methodology. In addition, the reduced spectral analysis has indicated a rather high significance of Juglar cycles (with a period of 7-9 years), as well as the one of Kitchin cycles (with a period of 3-4 years). Thus, their spectral analysis has also supported the hypothesis of the presence of Juglar and Kitchin cycles in the world GDP dynamics. Korotayev and Tsirel suggest that the Kuznets swing should be regarded as the third harmonic of the Kondratieff wave rather than as a separate independent cycle. The research, presented by Korotayev and Tsirel suggests two interpretations of the current global economic crisis: on the one hand, the spectral analysis suggests rather optimistically that the current world economic crisis might mark not the beginning of the downswing phase of the 5th Kondratieff wave, but it may be interpreted as a temporary depression between two peaks of the upswing (whereas the next peak might even exceed the previous one). On the other hand, Korotayev and Tsirel suggest that there is some evidence supporting another interpretation based on the assumption that the current world financial-economic crisis marks the beginning of the downswing phase of the 5th Kondratieff wave. Korotayev and Tsirel also explore the world GDP dynamics before 1870 and find that it does not appear possible to detect Kondratieff waves in the world GDP dynamics for the pre-1870 period, though for this period they appear to be detected for the GDP dynamics of the West. Korotayev and Tsirel argue that in the pre-1870 epoch the Modern World System was not sufficiently integrated, and the World System core was not sufficiently strong yet –that is why according to them the rhythm of the Western core's development was not quite felt on the world level. Only in the subsequent era the World System reached such a level of integration and its core acquired such strength that it appears possible to trace Kondratieff waves in the World GDP dynamics.

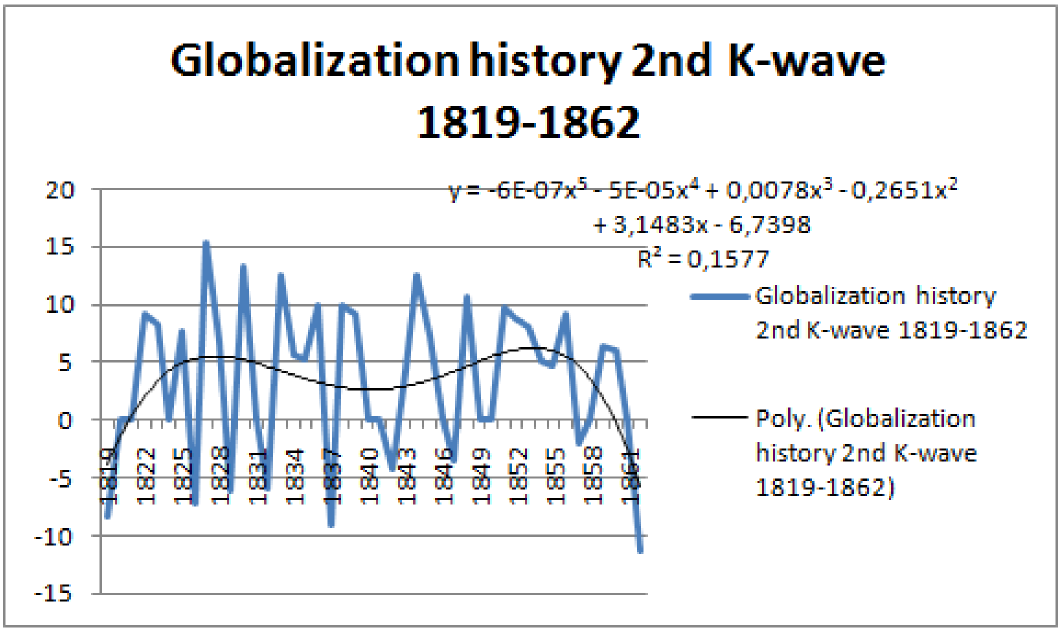
Our own research results

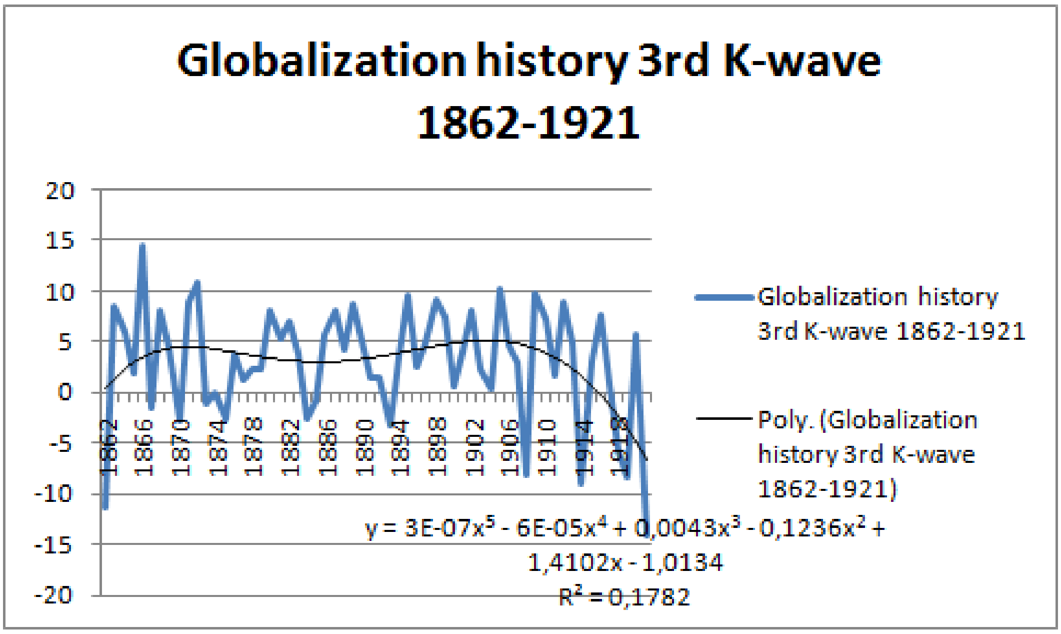
We first of all start out from a re-classification and re-analysis of the long waves of capitalist development in the period after 1740. As we document in our appendices to this work, we now have not only price fluctuations, but also world industrial production growth time series at our disposal, which range back to 1740. In Tausch/Ghymers, 2006, the differing K-cycle dating and classification schemes were discussed. In the framework of re-assessing Boccara's approach, we propose however to leave the different existing classification schemes overboard and to analyze the untransformed yearly annual growth rates of global industrial production in the framework of the abundant literature on the different phases of globalization (Tausch/Ghymers, 2006), whose empirical cutting points, corresponding to the slump of K-cycles, we now put in this publication at: 1756; 1819; 1862; 1921; 1958; 2009.

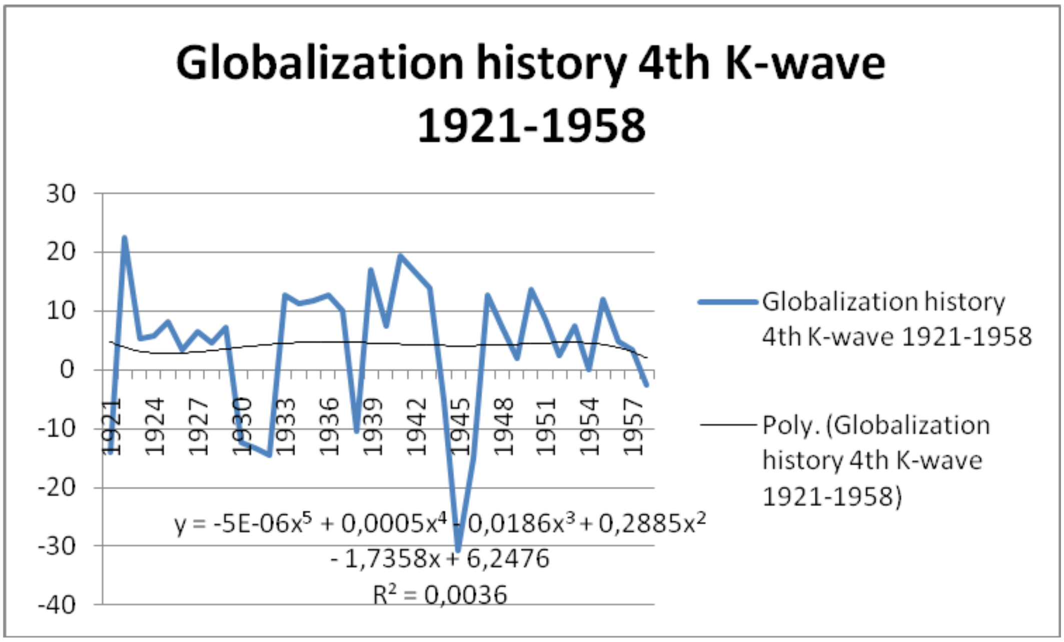
The empirical evidence of the polynomial multiple regressions of the 5th order about the untransformed global industrial production growth data series is really surprising and reveals a clear **M-shaped pattern** of world industrial production growth:

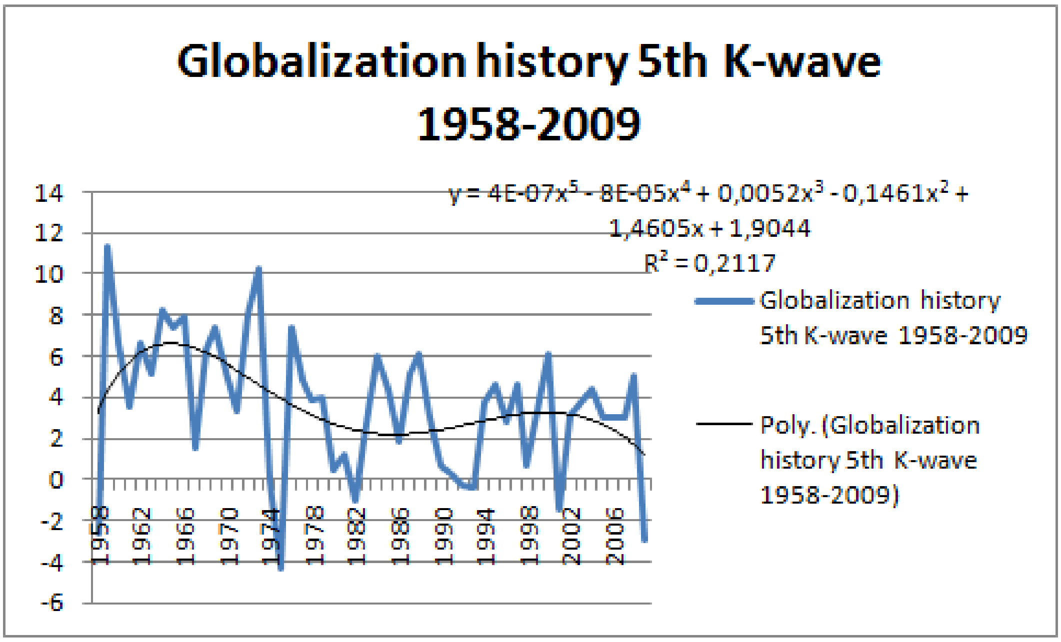
Graph 2: **K-waves, 1756 - 2009**





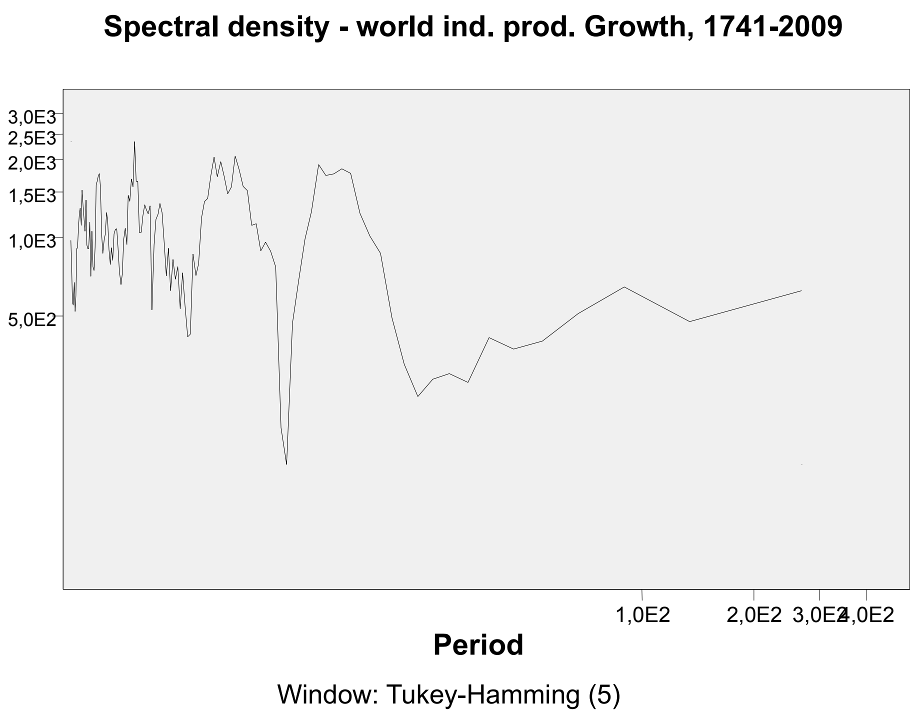

Globalization history 3rd K-wave 1862-1921
20
15
10
5
0
-5
-10
-15
-20
1862
1866
1870
1874
1878
1882
1886
1890
1894
1898
1902
1906
1910
1914
1918
Globalization history 3rd K-wave 1862-1921
Poly. (Globalization history 3rd K-wave 1862-1921)
y = 3E-07x⁵ - 6E-05x⁴ + 0,0043x³ - 0,1236x² + 1,4102x - 1,0134
R² = 0,1782


Globalization history 4th K-wave 1921-1958
30
20
10
0
-10
-20
-30
-40
1921
1924
1927
1930
1933
1936
1939
1942
1945
1948
1951
1954
1957
Globalization history 4th K-wave 1921-1958
Poly. (Globalization history 4th K-wave 1921-1958)
y = -5E-06x⁵ + 0,0005x⁴ - 0,0186x³ + 0,2885x² - 1,7358x + 6,2476
R² = 0,0036

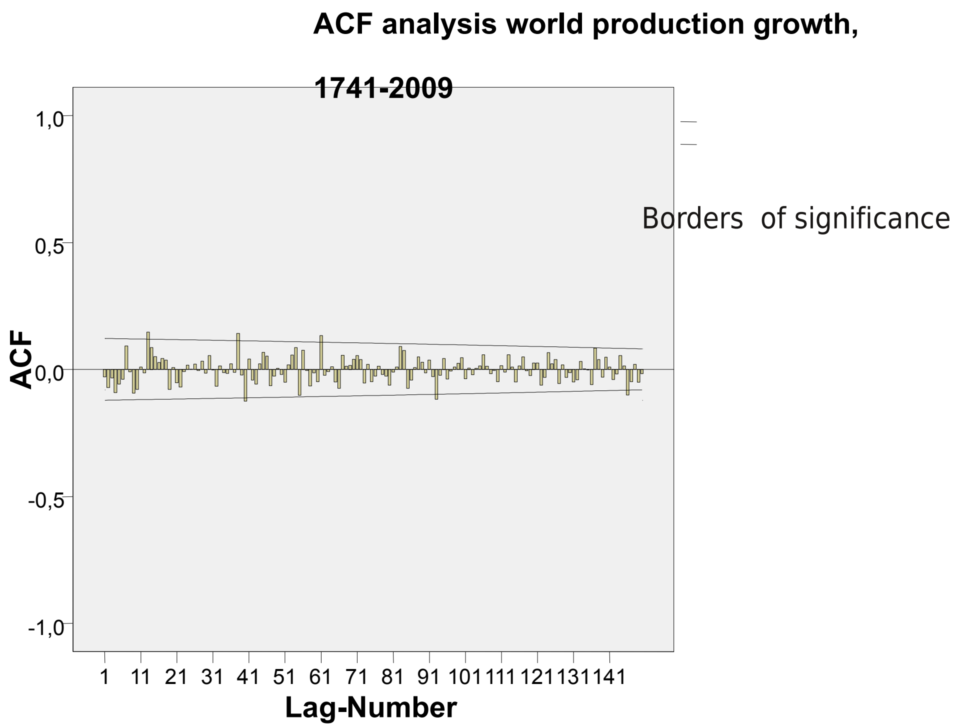


Especially the "globalized" cycles after 1862 and 1958 bear an interesting resemblance. In accordance with standard econometric practice on the subject, documented *inter alia* in Devezas, 2006, we also performed a spectral analysis and an analysis of autocorrelations about these time series, to answer the old question, whether these K-cycles exist at the end of the day. While spectral analysis only suggests the existence of 10 and 20 year cycles apart from the shorter economic fluctuations, our analysis with the untransformed and complete data series also suggests that in the light of the analysis of autocorrelations, there are not only 10 year cycles and cycles of about 35 to 40 years duration, but also 55 or 60 year cycles and even 90 year cycles, which all are significant in the strict statistical sense of this standard econometric test for time series.

Graph 3: **Spectral analysis of the world industrial production growth data series, 1741-2009**

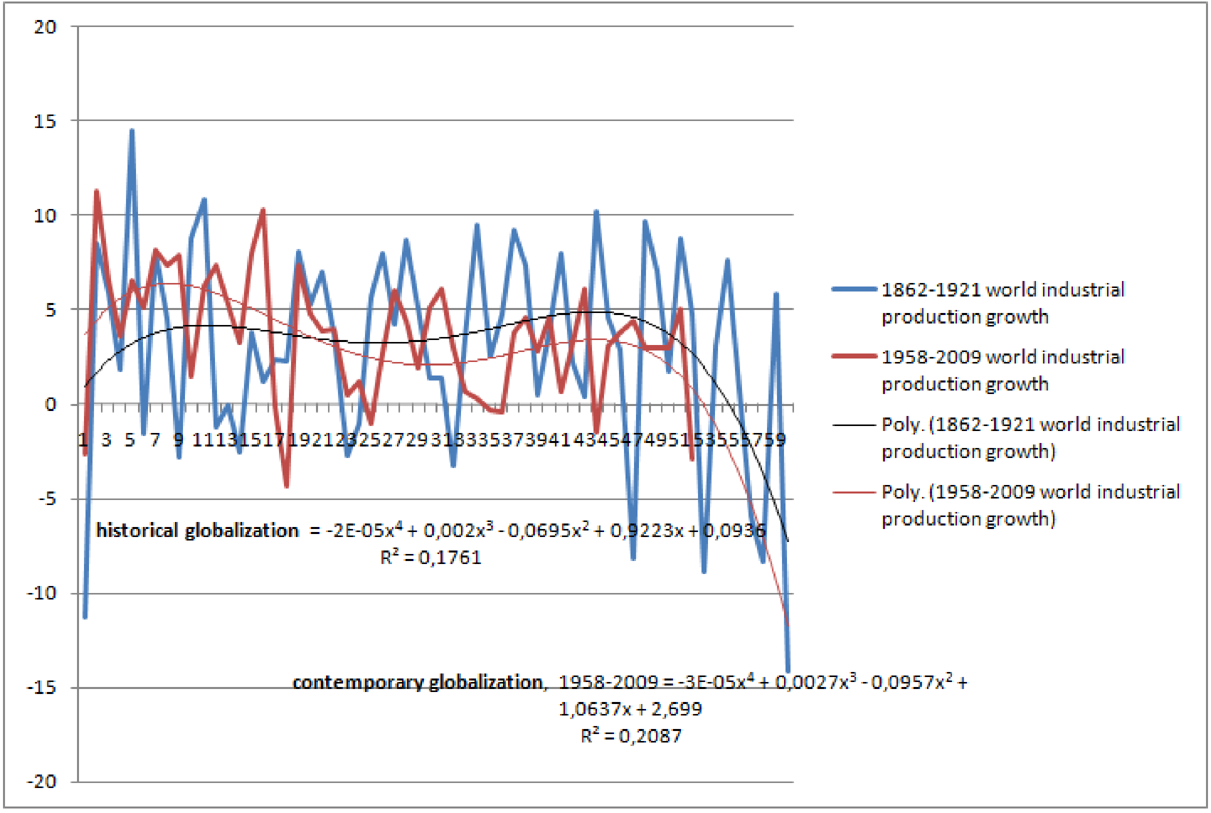


Graph 4: **Analysis of autocorrelations (ACF) of world industrial production growth, 1741-2009**



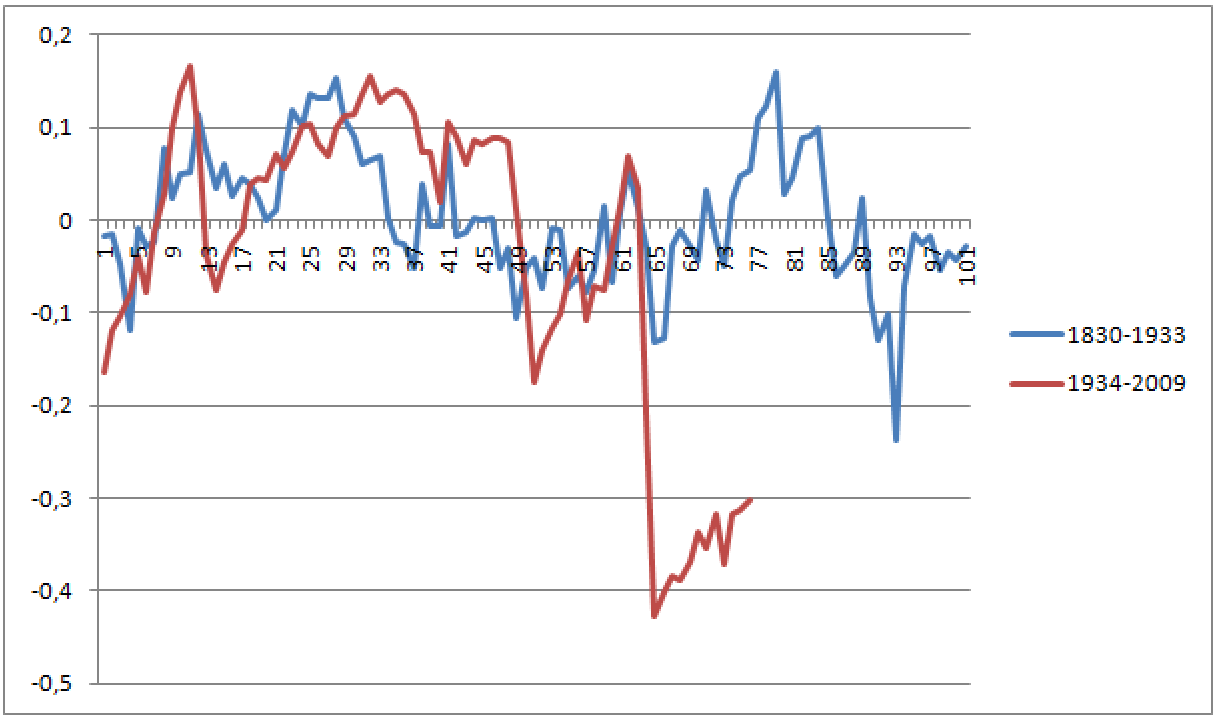
One of the most striking aspects of this kind of analysis is the fact that the two phases of ultraliberal globalization –post 1862 and post 1958– are so similar in tendency. We first show this by an overlapping graph of the two cycles and the 5th order polynomial regression with the untransformed original data:

Graph 5: **World industrial production growth during two globalization periods**



We also performed a 'sliding correlation' analysis, based on a projected 50 year time-series trend-line from 1830 and from 1934 onwards. The similarity in the **indented *W*-shaped trend** is –in our view– breathtaking, and we must be fast approaching the evil abyss at the end of the 19th Century, which, we all know, led to World War I, don't we?

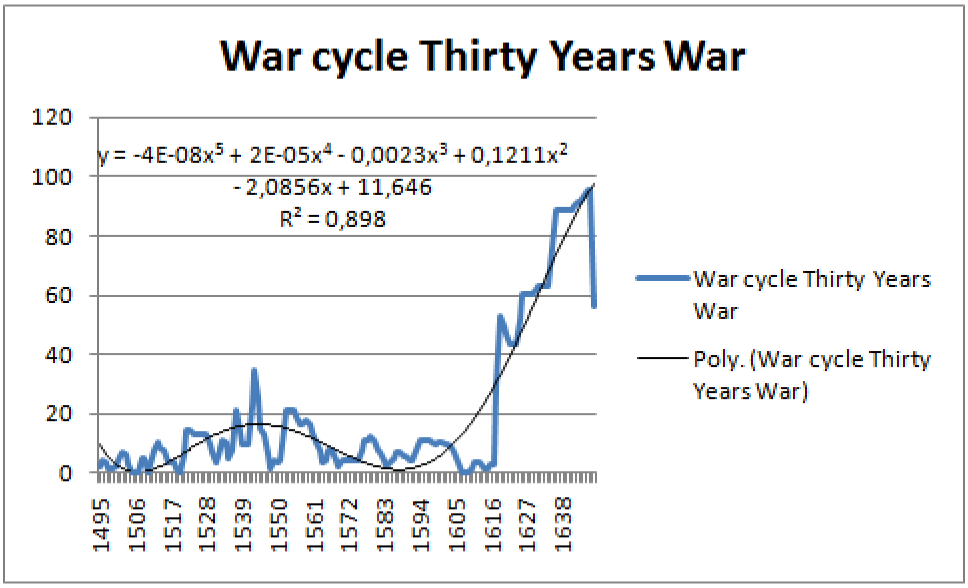
Graph 6: **A 50 year trend line correlation comparison of the trajectory of the societal models since 1830/1934**

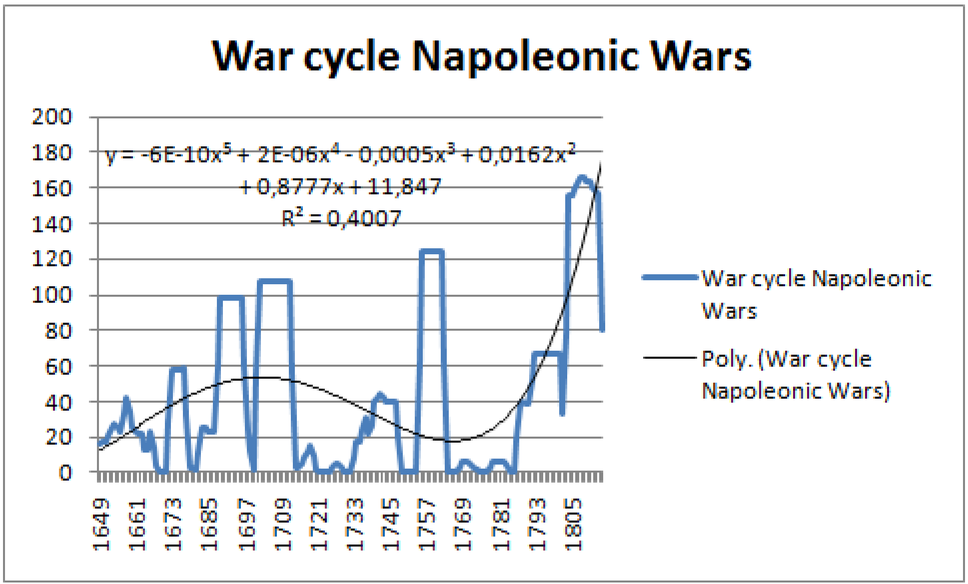


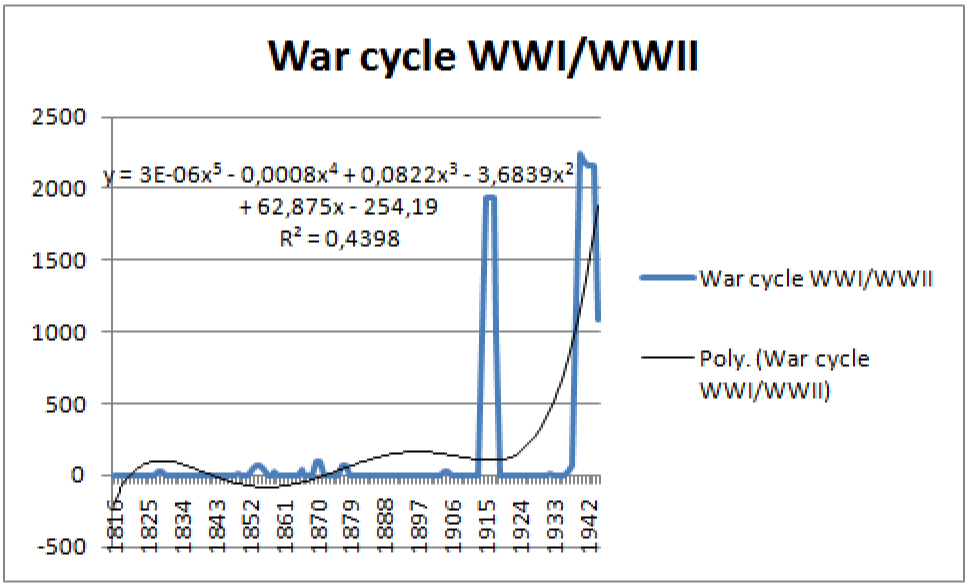
The empirical analysis of patterns of the evolving international system for quite some time now also is familiar with the closer inspection of wars and war intensities since 1495. In Tausch/Ghymers, 2006, the original data about military battle fatalities from major powers in the world system (today's 5 members of the UN Security Council plus Germany) end by 1975. In Tausch/Ghymers, 2006, these data were expanded with PRIO, Oslo data for the period until 2002.

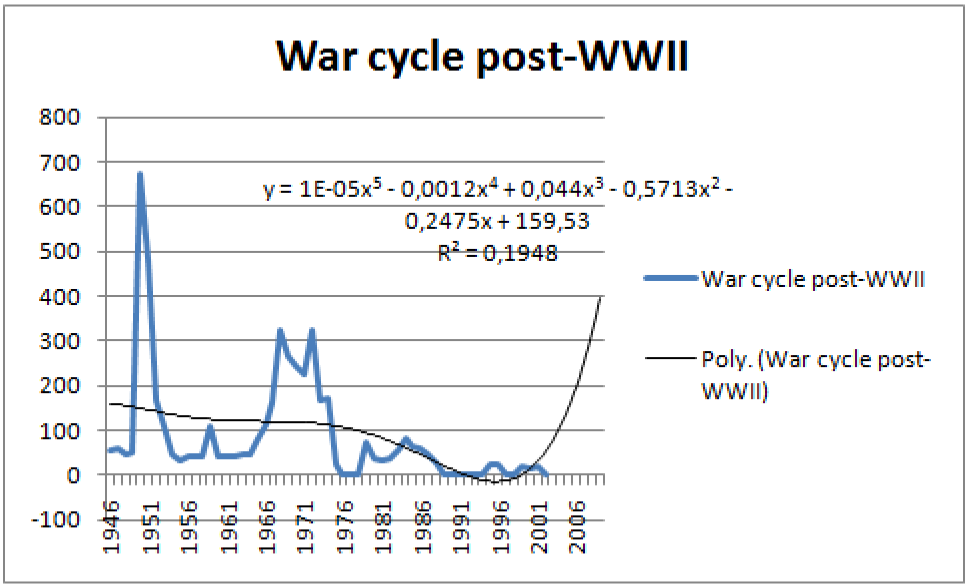
The startling discovery to make is that each global political cycle from 1495 ends in a period of sustained, three decade long bloodshed between central players of the international system. The 5th order polynomial statistical analysis of the original, untransformed data of battle fatalities from major power wars yields the following, indented W-shaped pattern of escalating global conflicts along the time-line since the last major global war:

Graph 7: **the war cycles in the world system, 1495-2002**



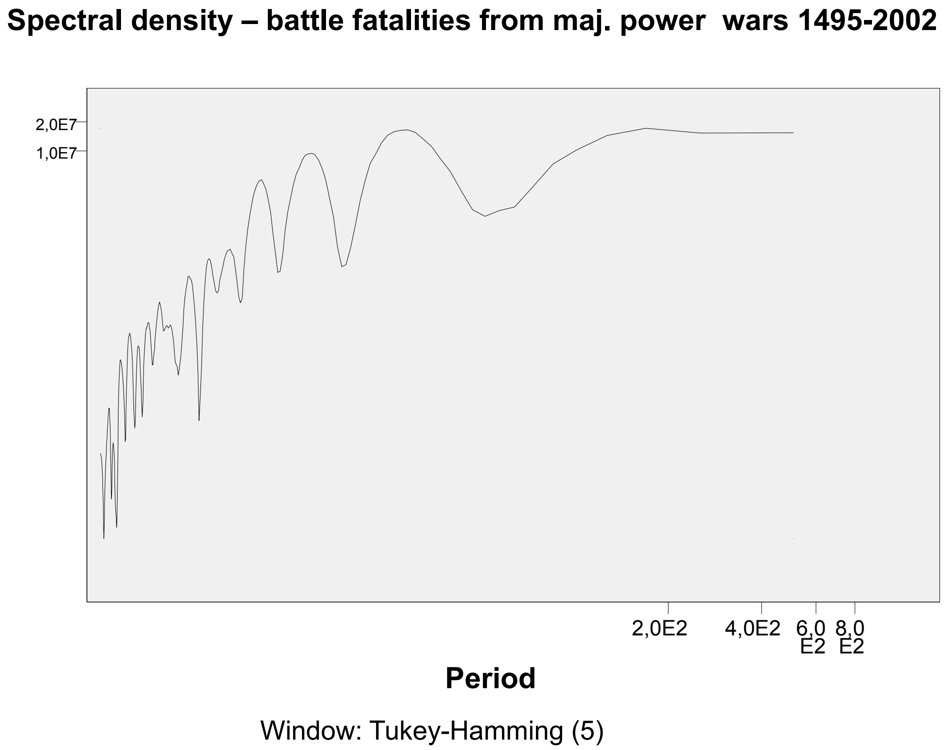




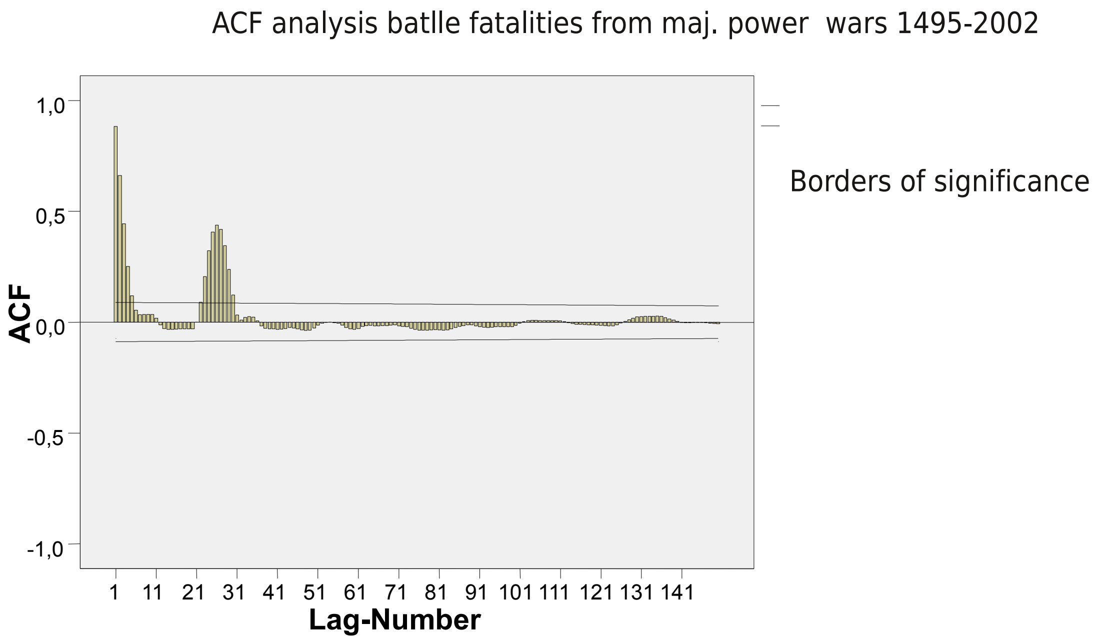


However, polynomial regression analysis in times of easily available advanced standard econometric time series analysis is never sufficient. In the literature, especially in Devezas, 2006, we find several references, which doubt the cyclical nature of international relations. Spectral analysis of the battle fatalities since 1495 yields the existence of 20 up to 40 years war cycles, while the analysis of autocorrelation suggests a similar result (Graphs 8 and 9):

Graph 8: **Spectral analysis of battle fatalities from major power wars, 1495-2002**

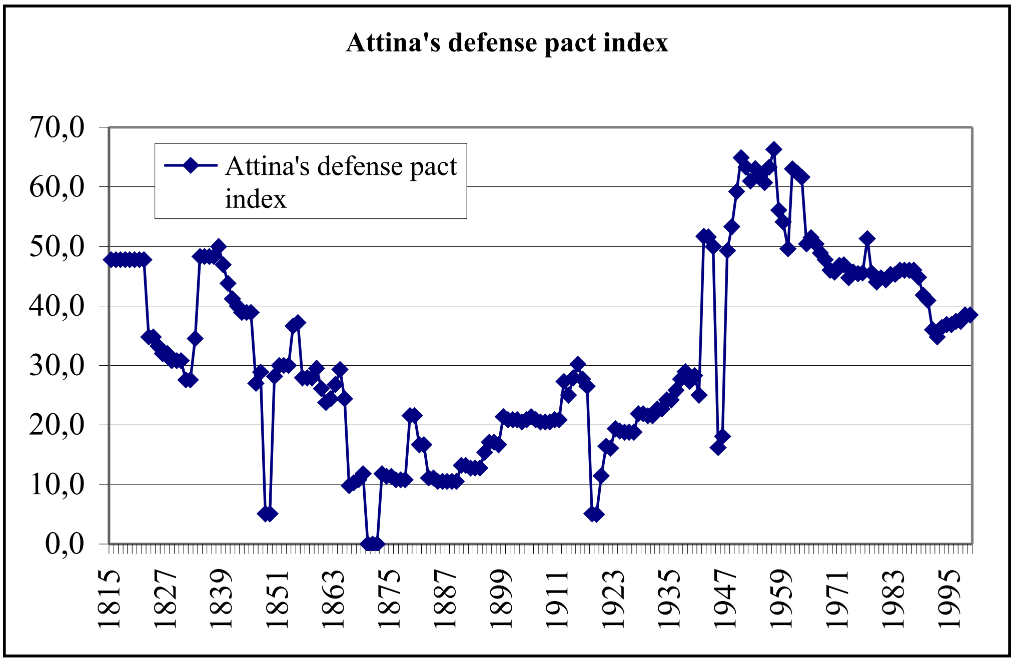


Graph 9: **Analysis of autocorrelations of battle fatalities from major power wars, 1495-2002**



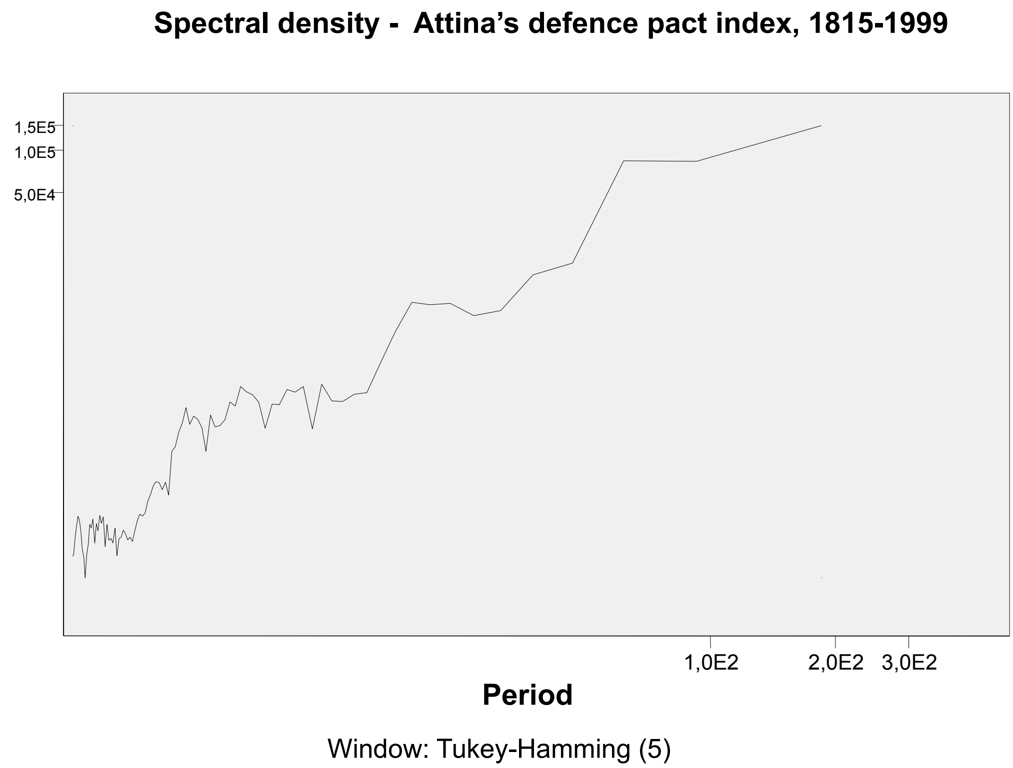
Also, the fluctuations of the international system, measured by defence pact index, proposed by Attinà, 2005 demonstrate the remarkable fluctuations of the international system. The index, as it is well-known, measures the percentage of the national states in the international system in comparison to the total number of states in the system, which at a given time, belongs to military alliances. The height of defence pact density is reached at around 1835 and 1955, and after these years, the defence pact system disintegrates and builds up anew in a renewed cycle of international war.

Graph 10: **the degree of organization of the states of the world system in defence pacts - % of states belonging to a defence pact**

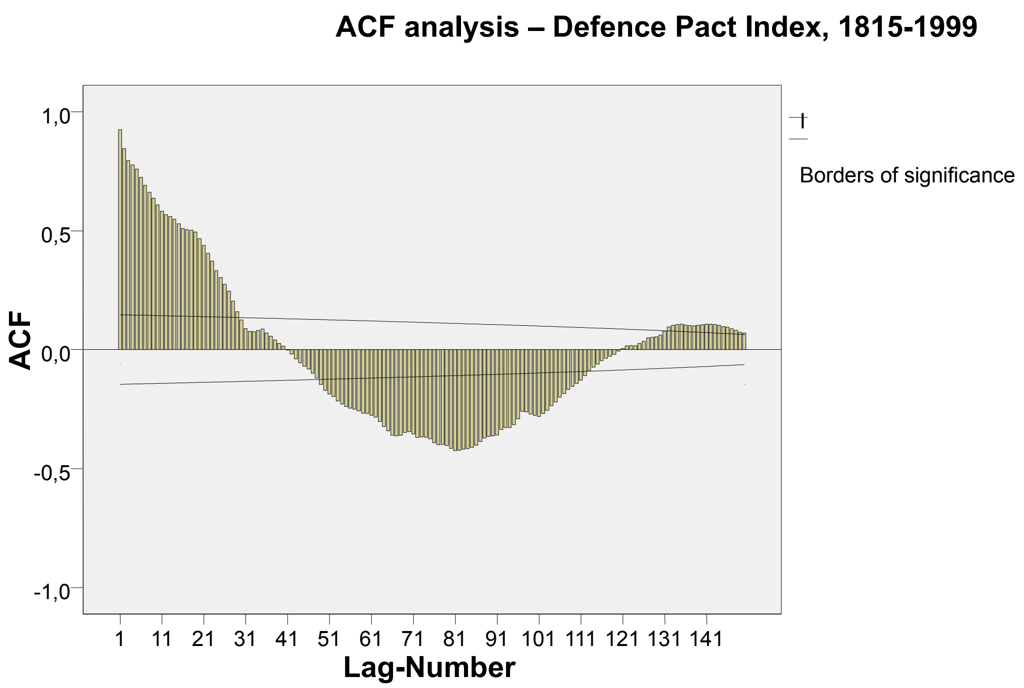


Graph 11 and 12 compare the results from spectral analysis and analysis of auto-correlation. While spectral analysis suggests no real longer cycle, the analysis of autocorrelation would suggest an 80-year and 135-year cycle.

Graph 11: **Spectral analysis of the defence pact index, 1815-1999**

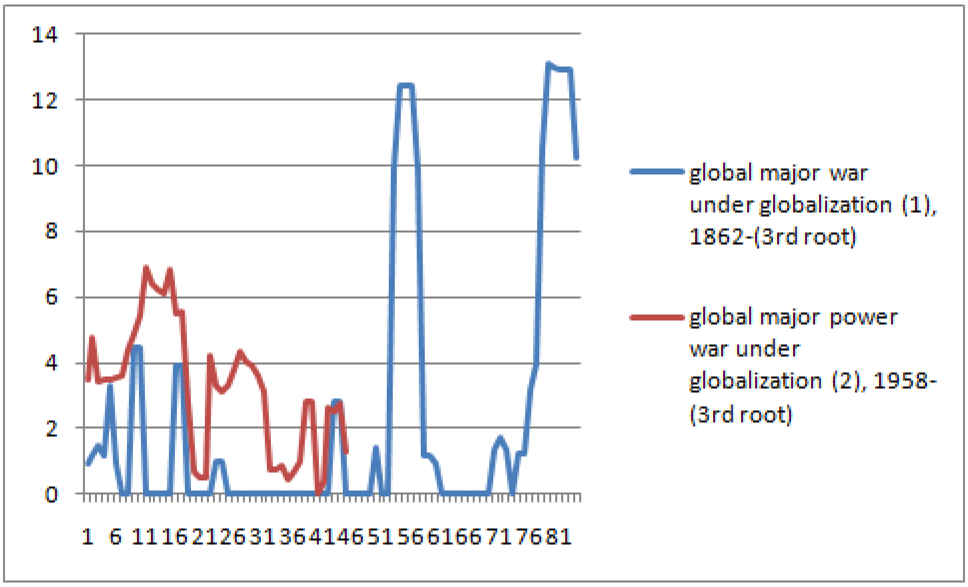


Graph 12: **Autocorrelation analysis of the defence pact index, 1815-1999**



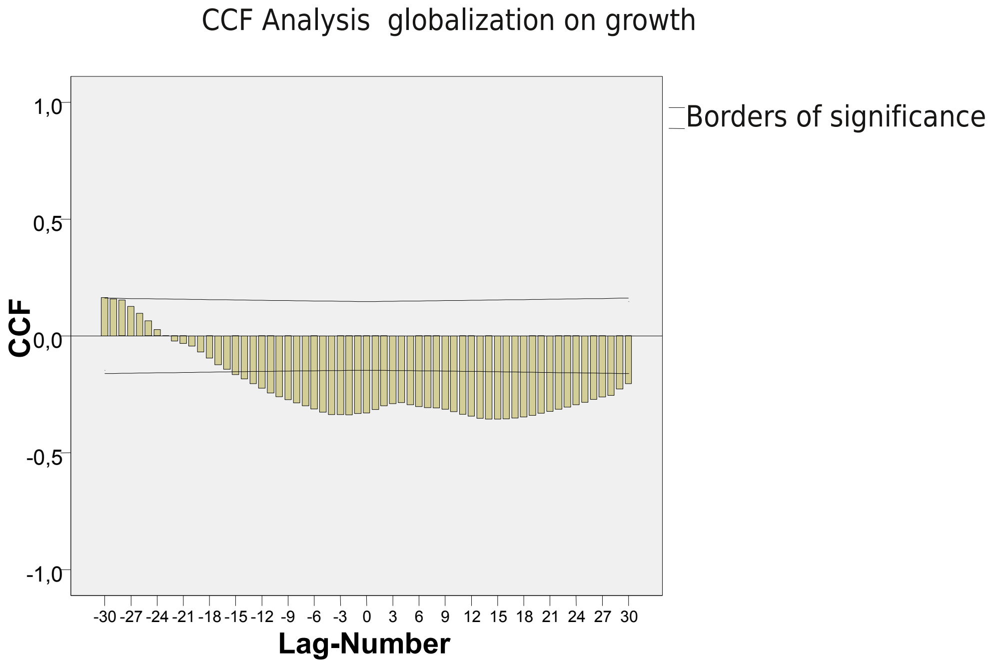
Equally astonishing are the results from the comparison of the world political cycle 1862 ff and 1958 ff, emerging from Graph 13. It is to be feared that the globalized world political order of the period after 1958 ends in the same catastrophe of global wars as the 'old' globalized world political order, which emerged during the heyday of liberal globalization before World War I.

Graph 13: **how the global war cycles are similar to one another: 1862 ff. and 1958 ff.**

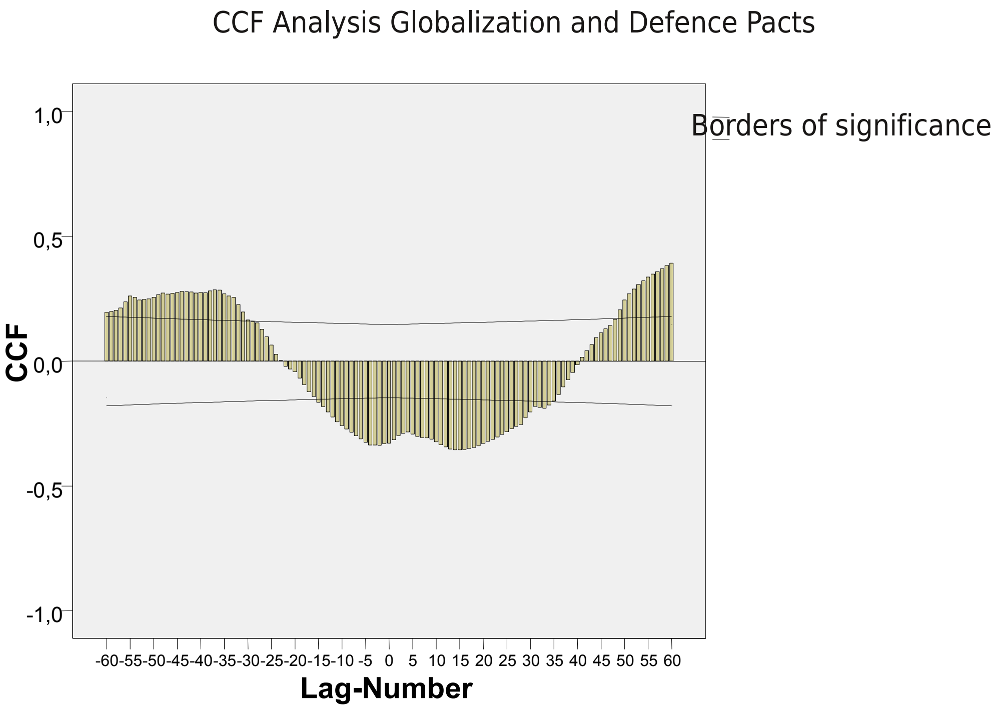


In Graph 14, we perform a cross-correlation time series analysis of the effects of globalization on economic growth in the world system since 1741. For reasons of simplicity, we defined in our time series the period between 1870 and 1913 and the period after 1975 to the present as the globalized years (dummy variable 1), and the other years were defined as being relatively free from globalization (dummy variable 0). With a time-lag of around 12 to 15 years, globalization leads to the slowdown of economic growth in the world-system and to the erosion of world military alliances. At the same time, war intensity in the international system increases, as a consequence of globalization, by a time-lag of about 40 years (Graphs 14-16).

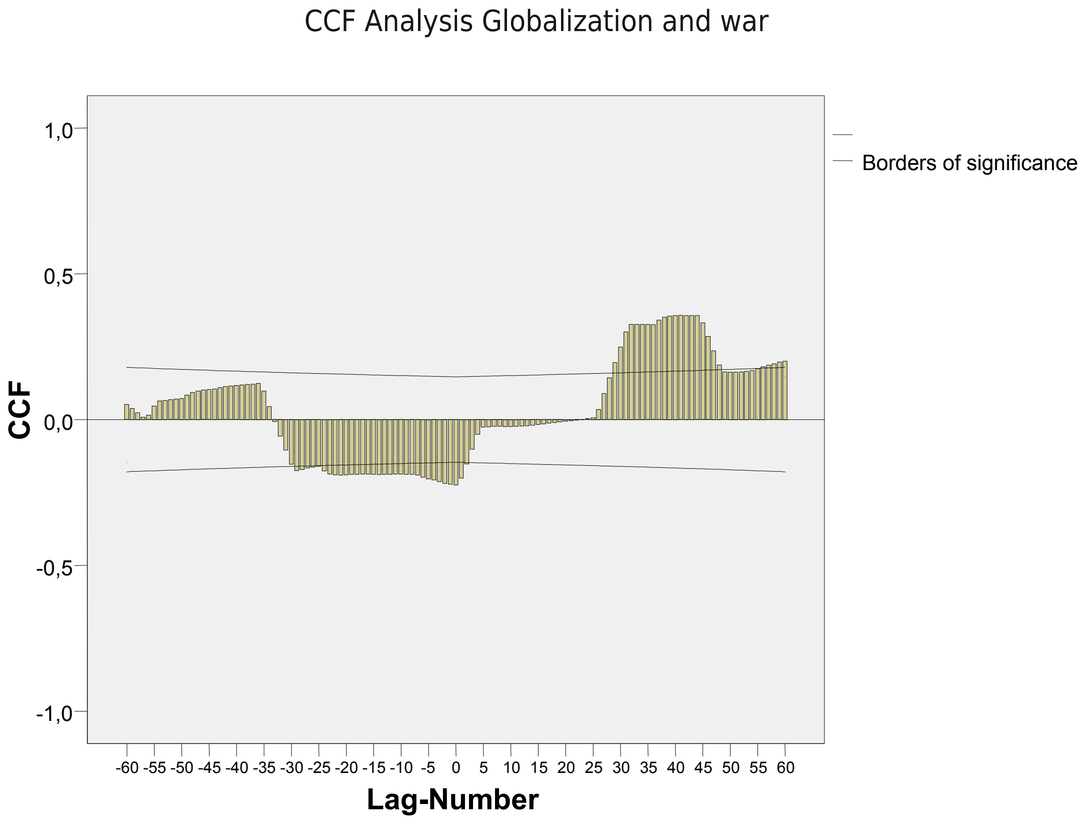
Graph 14: **cross-correlation time series analysis - globalization on growth in the world system, 1741-2009**



Graph 15: **cross-correlation time series analysis - globalization on defence pacts in the world system, 1815-2009**



Graph 16: **cross-correlation time series analysis - globalization on war in the world system, 1495-2009**



Reasons for this conflict-prone process at the level of the world capitalist system are manifold. As the 'critical' political economy of the international system demonstrates, the basic underlying reason for this has to be sought in the growing internal and international social contradictions, which globalization brings about. Our rigorous data analysis of the last four decades highlights the following main trends:

- Our time series investigation from 1970 to 2003 covers **92.47% of humanity** living in 117 countries and territories of the world.
- Indeed, **rising economic globalization is the defining element of the development trajectory of humanity** in the 1970s, 1980s, and 1990s until the beginning of the new Millenium –from Spain with the most rapid globalization process to Burkina Faso. **90.57% of humanity**, living in **108 countries** of the **117 countries** with complete data were affected by that process
- Only in **9 countries** [Algeria, Malawi, Fiji, Gabon, Oman, Swaziland, Barbados, Bahamas, Iran] we were confronted with a **negative time series correlation** between the **time axis** and **economic globalization**, measured by the KOF-Index. These countries amount to just 1.90% of the world population
- The brave new world of rising economic globalization is a world of **rising inequalities. 75.92%** of the global **population** lived in countries, where there was a **rising linear trend towards inequality** over time. For **54.05% of humanity**, this trend was **especially strong**,

and the time series correlation coefficient of the time axis with inequality was 0.500 or above. Ranked by the magnitude of this phenomenon, we find 60 nations, from Lesotho, Portugal and Lithuania at the top right through to El Salvador, Austria and the United States of America. Among the EU-27 countries, there are 13 nations, corresponding to this very strong trend towards rising inequality over time: Portugal, Lithuania, Czech Republic, Romania, United Kingdom, Slovenia, Slovakia, Bulgaria, Hungary, Germany, Ireland, Poland, and Austria.

- **79.61% of humanity** also experienced the dire fact that according to the available time series, **globalization** in their countries was **positively correlated with higher inequality**.
- For **48.97% of humanity**, living in 55 countries, this **trend was especially strong**. The time series correlation was 0.500 or above. **13 of the 27 EU countries are among them** and their experience gives a testimony about the Latin Americanization of the European continent: Romania, Hungary, Czech Republic, Portugal, Poland, Bulgaria, Ireland, Germany, Lithuania, United Kingdom, Slovenia, Austria, and Slovakia.
- Only 35 countries experienced some positive promises of globalization, i.e. a **negative time series correlation between globalization and inequality**. The inhabitants of these countries are a fortunate global minority, and comprise 12.86% of the global population. Only 7 EU-27 are among them, namely Latvia, Netherlands, Spain, Cyprus, Sweden, Finland, and France. Interestingly enough, in globalization critical France, this effect was strongest, and in Latvia, the effect was weakest. Other best practice highly developed economies with a very notable trend of globalization leading to less inequality over time are South Korea and Singapore

Our time series analysis evaluated the data from 117 countries with complete data:

Albania, Algeria, Angola, Argentina, Australia, Austria, Azerbaijan, Bahamas, The, Bangladesh, Barbados, Belgium, Benin, Bolivia, Botswana, Brazil, Bulgaria, Burkina Faso, Burundi, Cameroon, Canada, Central African Republic, Chile, China, Colombia, Congo, Rep., Costa Rica, Cote d'Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt, Arab Rep., El Salvador, Ethiopia, Fiji, Finland, France, Gabon, Germany, Ghana, Greece, Guatemala, Haiti, Honduras, Hungary, Iceland, India, Indonesia, Iran, Islamic Rep., Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kenya, Korea, Rep., Kuwait, Kyrgyz Republic, Latvia, Lesotho, Lithuania, Luxembourg, Macedonia, FYR, Madagascar, Malawi, Malaysia, Malta, Mauritius, Mexico, Moldova, Mongolia, Morocco, Mozambique, Nepal, Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Oman, Pakistan, Panama, Papua New Guinea, Peru, Philippines, Poland, Portugal, Romania, Russian Federation, Rwanda, Senegal, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sri Lanka, Swaziland, Sweden, Syrian Arab Republic, Tanzania, Thailand, Togo, Trinidad and Tobago, Tunisia, Turkey, Uganda, Ukraine, United Kingdom, United States, Uruguay, Venezuela, RB, Zambia, Zimbabwe

If the relationship between globalization and inequality is a clear numerically positive trade-off, the time series correlation must be high. A time series correlation coefficient to the magnitude of <.50 indicates the 55 countries of the world economy, most devastated by globalization (in order of descending magnitude of devastation):

Romania, Czech Republic, Hungary, Portugal, Angola, Poland, China, Ecuador, Australia, Azerbaijan, Iran, Islamic Rep., Bulgaria, New Zealand, Ukraine, Ireland, Germany, Mongolia, Zambia, Turkey, Mexico, Lesotho, Croatia, Lithuania, Honduras, Brazil, Cote d'Ivoire, Russian Federation, Trinidad and Tobago, Venezuela, RB, Egypt, Arab Rep., Pakistan, United Kingdom, Canada, Chile, Slovenia, Uruguay, Nigeria, Syrian Arab Republic, Philippines, Colombia, Austria, Togo, Slovak Republic, Japan, Senegal, Guatemala, El Salvador, Kuwait, Cameroon, Panama, Peru, Papua New Guinea, Our data analysis now shows the 61 states of the world that must be regarded as the chief victims of globalization (time series correlation globalization with inequality >.25; globalization with time >.25, and rising inequality over time (r >.00)).

Table 1:

The 61 chief victim states of current globalization

country	r, globalization with inequality	r, globalization with time	r, inequality with time
Albania	0.455	0.604	0.341
Angola	0.947	0.981	0.868
Argentina	0.286	0.935	0.462
Australia	0.894	0.967	0.831
Austria	0.662	0.969	0.557
Azerbaijan	0.892	0.926	0.949
Belgium	0.285	0.970	0.399
Bolivia	0.477	0.842	0.677
Brazil	0.821	0.762	0.678
Bulgaria	0.880	0.770	0.840
Cameroon	0.578	0.631	0.928
Canada	0.729	0.878	0.834
Chile	0.723	0.983	0.733
China	0.913	0.923	0.935
Colombia	0.673	0.933	0.600
Cote d'Ivoire	0.808	0.746	0.843
Croatia	0.835	0.686	0.658
Czech Republic	0.966	0.973	0.949
Denmark	0.479	0.945	0.372
Ecuador	0.912	0.952	0.822
Egypt, Arab Rep.	0.754	0.911	0.863
El Salvador	0.589	0.709	0.566
Germany	0.866	0.941	0.776
Guatemala	0.606	0.937	0.645
Honduras	0.828	0.896	0.662
Hungary	0.966	0.835	0.796
Ireland	0.870	0.967	0.737
Israel	0.403	0.759	0.825
Jamaica	0.446	0.931	0.697
Japan	0.649	0.955	0.785
Kuwait	0.587	0.404	0.637
Lesotho	0.845	0.932	0.977
Lithuania	0.835	0.957	0.955
Mexico	0.851	0.928	0.831
Mongolia	0.864	0.891	0.302
New Zealand	0.872	0.964	0.808
Nigeria	0.700	0.954	0.442
Norway	0.321	0.964	0.377
Pakistan	0.754	0.923	0.774
Panama	0.573	0.797	0.763
Papua New Guinea	0.503	0.327	0.615
Peru	0.508	0.931	0.609
Philippines	0.686	0.981	0.705

Poland	0.938	0.882	0.723
Portugal	0.950	0.954	0.973
Romania	0.986	0.777	0.922
Russian Federation	0.790	0.984	0.832
Senegal	0.624	0.701	0.744
Slovak Republic	0.652	0.828	0.846
Slovenia	0.712	0.958	0.856
Sri Lanka	0.281	0.958	0.057
Syrian Arab Republic	0.694	0.870	0.725
Togo	0.661	0.400	0.574
Trinidad and Tobago	0.784	0.864	0.837
Turkey	0.854	0.950	0.847
Ukraine	0.871	0.958	0.891
United Kingdom	0.751	0.938	0.859
United States	0.420	0.961	0.513
Uruguay	0.712	0.941	0.851
Venezuela, RB	0.757	0.891	0.576
Zambia	0.855	0.800	0.909

The following 29 countries experienced no rising inequality over time, and also, their time series correlation coefficient between globalization and inequality was negative. Further research will have to establish, why these lucky 29 countries could escape from the general deterioration of the social conditions, expressing themselves in rising inequality rates.

Table 2:

The 29 lucky ones who escaped: no major inequality increasing effect of globalization, no increasing inequality over time

country	r, globalization with inequality	r, globalization with time	r, inequality with time
Korea, Rep.	-0.791	0.966	-0.888
Cyprus	-0.532	0.722	-0.834
Singapore	-0.938	0.886	-0.833
Benin	-0.795	0.954	-0.816
Ethiopia	-0.394	0.833	-0.788
Finland	-0.668	0.964	-0.779
Kenya	-0.657	0.720	-0.742
France	-0.723	0.980	-0.727
Iceland	-0.653	0.916	-0.720
Rwanda	-0.707	0.713	-0.680
Sweden	-0.587	0.977	-0.674
Congo, Rep.	-0.875	0.821	-0.649
Indonesia	-0.522	0.897	-0.644
Nepal	-0.689	0.885	-0.563
Thailand	-0.516	0.952	-0.511
Mozambique	-0.453	0.941	-0.475
Mauritius	-0.591	0.908	-0.472
Spain	-0.342	0.986	-0.438
Tunisia	-0.394	0.952	-0.368
Netherlands	-0.340	0.981	-0.314
Haiti	-0.228	0.842	-0.277
Malaysia	-0.306	0.974	-0.239
Moldova	-0.317	0.702	-0.238
Jordan	-0.154	0.851	-0.181
Uganda	-0.023	0.788	-0.168
Latvia	-0.174	0.927	-0.072
Costa Rica	-0.018	0.933	-0.072
Zimbabwe	-0.208	0.847	-0.068
Kyrgyz Republic	-0.264	0.738	-0.034

Conclusions

Neo-Keynesians, in the tradition of Steindl and Kalecki, tend to analyze the current European policy alternatives in the following way:

Table 3:

The neo-Keynesian policy prescription, according to Guger/Marterbauer/Walterskirchen (2004), based on Steindl and Kalecki

Steindl-Kaleckian growth policy	*Current mainstream on growth policy*
Full employment As main political concern	Price stability and budget consolidation As main political concerns
Demand as growth driver	Supply as growth driver
Higher effective demand to raise employment	Higher labour market flexibility to raise economic growth
Technology and educational policy	Deregulation and privatisation
Lower household savings	Higher savings (for investment)
Stable or rising wage share	Falling wage share (real unit labour costs)
Anti-cyclical policy (cycle and trend have the same determinants)	No active anti-cyclical policy (irrelevant for growth path)
Rise of public sector promotes growth (through effective demand)	Decline and restructuring of the public sector (efficiency)
Tax coordination	International tax competition
International cooperation	International competition (location)

Source: Guger/Marterbauer/Walterskirchen, 2004

Paul Boccara, over the last decades, provided a coherent framework of analysis, which reached similar policy prescriptions, independently from the Steindl/Kalecki approach in political economy. A Boccaran worldview would hold that the contradictions of global capitalism increase over time, if markets are left for themselves. Boccara is right in stressing that this system is, as he puts it, 'mad' because its logic of profitability is reaching its climax. Capitalism as a system, which puts making money before and against people lives, needs to be questioned. It is really futile to speak of 'morality' and 'transparency' without attacking the logic of the system. There is indeed no possibility to going back to capitalism of our grandpas, because the exacerbating transformations are irreversible. Our own analysis, using advanced statistical techniques, has shown in addition the following things:

1) liberal and 'Marxist' analyses of all 'denominations' are right in emphasizing the severe cyclical fluctuations of the capitalist system on a global scale
2) there is a world political and world strategic swing of societal system, which accompanies the economic ups and downs
3) and three –and this is the most breathtaking aspect of it all– there is a striking similarity in the logic of the globalized period of the second half of the 19th Century with our age.

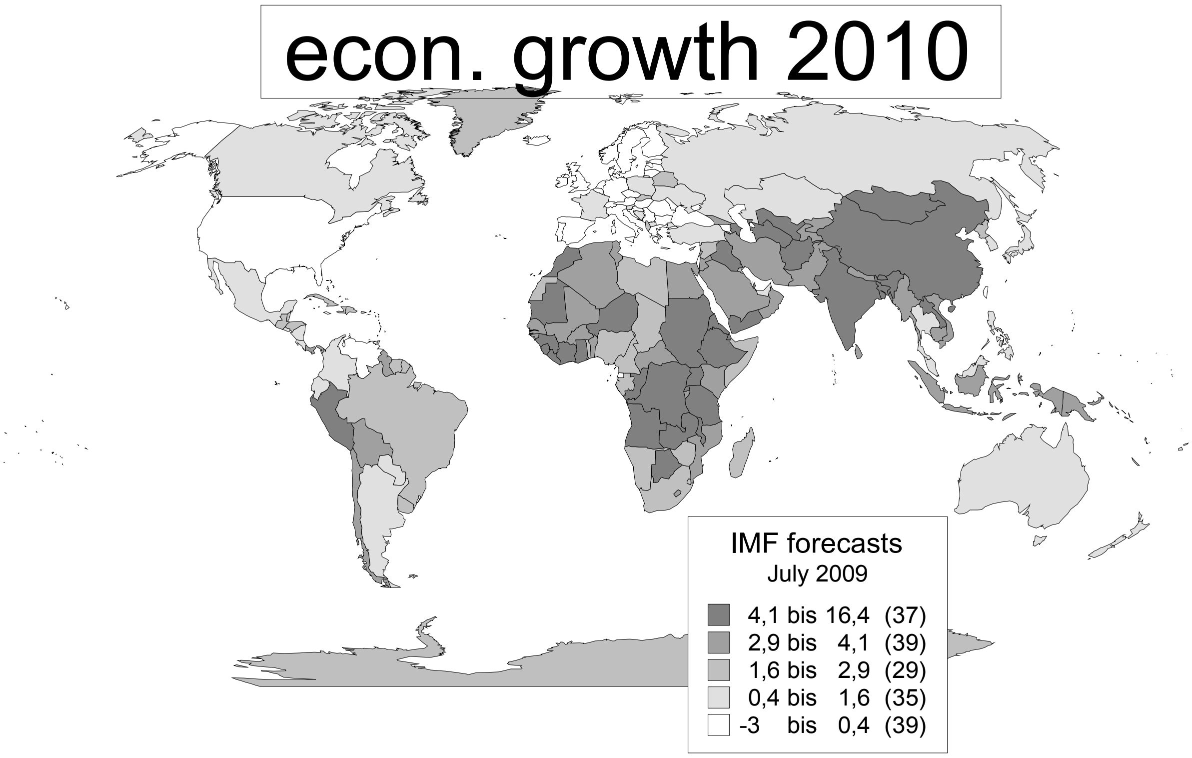
Globalization and monopolies, to be sure, and Boccara was right in emphasizing this from the 1970 onwards –lead towards stagnation. Some great political economists of the instability of the international order, like Rosa Luxemburg and Otto Bauer, foresaw the dark clouds of major inner-capitalist wars on the horizon, and in the light of our analysis, we are not too far away already from such dark times, if the logic of madness called contemporary globalization is not corrected.

Appendix 1: Economic Growth in the World System, 2009-2010 and after

Based on:

- IMF prediction growth rate in 2009 (issued **April** 2009)
- IMF prediction growth rate in 2010 (issued **April** 2009)
- residual measure: crisis recovery 2010 vis a vis 2009 (based on IMF prognosis, **April** 2009)
- resilience of economic growth during the crisis (regression residuals: growth 90-2005->growth 2009, based on IMF prognosis, **April** 2009)[7]

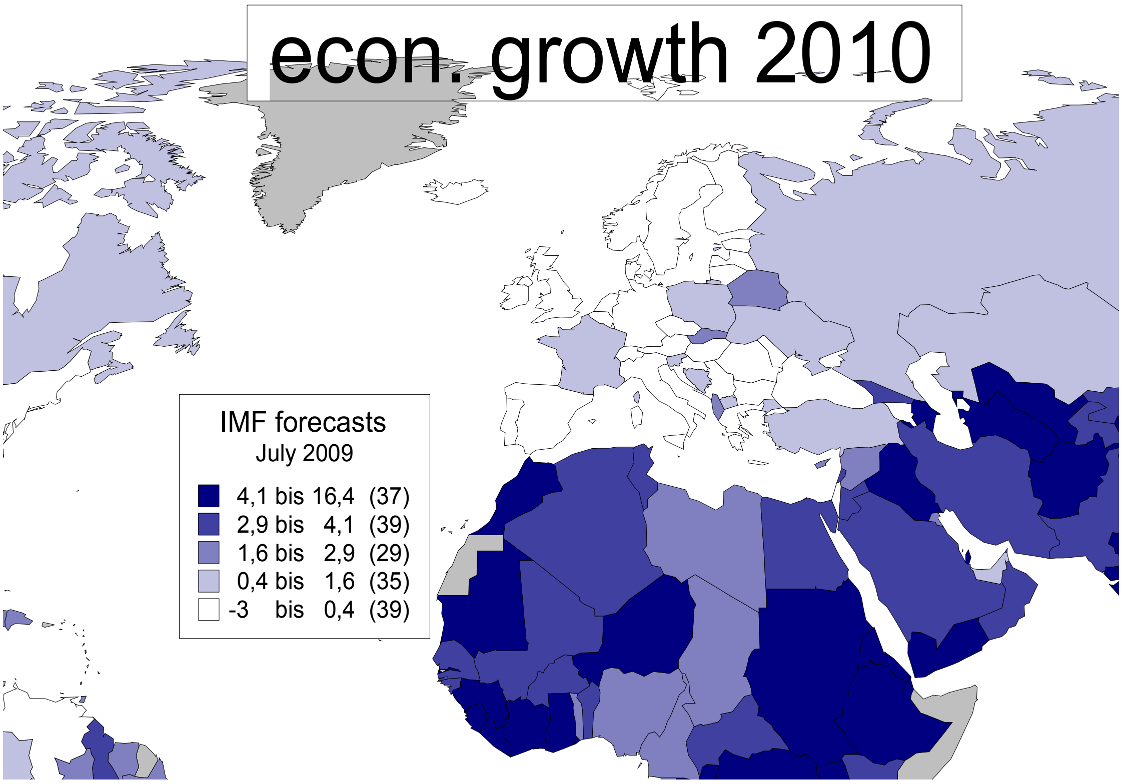
Predicted economic growth 2010



Bis is shorthand for 'ranging from …. to'

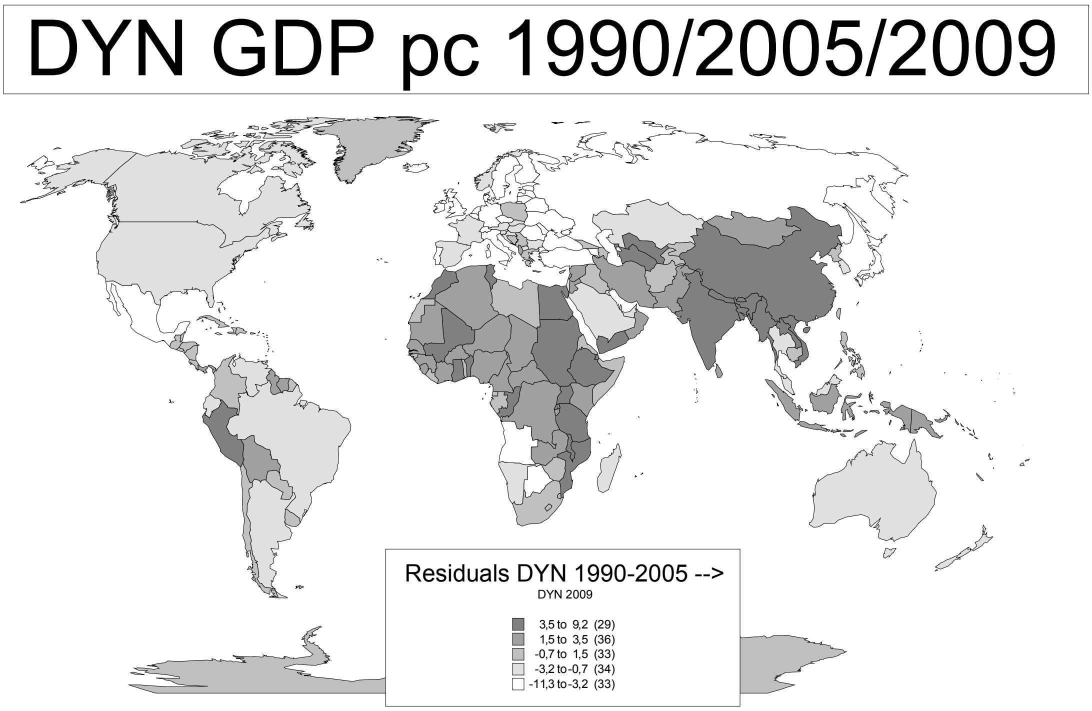
7 Vid. <http://www.imf.org/external/pubs/ft/weo/2009/01/weodata/weoselgr.aspx>

Predicted economic growth 2010



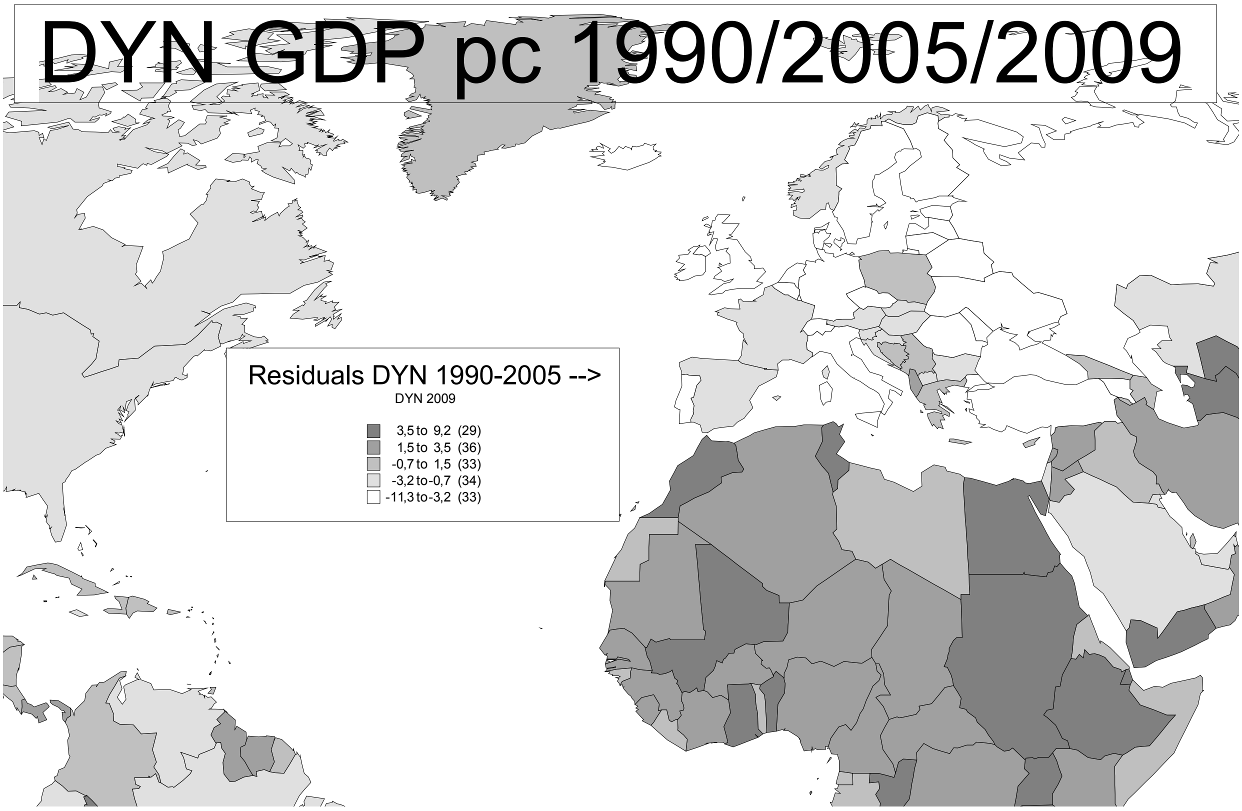
Bis is shorthand for ‘ranging from …. To’

The resilience of predicted economic growth 2009 vis a vis earlier growth



Bis is shorthand for ‘ranging from …. To’

The resilience of predicted economic growth 2009 vis a vis earlier growth



Bis is shorthand for 'ranging from …. To'

Statistical sources

Economic growth: IMF growth data and growth predictions, data download April 2009, http://www.imf.org/external/datamapper/index.php

Globalization: ETH Zurich globalization time series data, data download January 2010, http://globalization.kof.ethz.ch/static/rawdata/globalization_2010_short.xls

Inequality: Theil Index of Inequality, based on payment in 21 industrial sectors; calculated from UNIDO sources in University of Texas Inequality Project (data download January 2010), http://utip.gov.utexas.edu/data.html

Unemployment: unemployment as % of the civilian labour force: http://stats.oecd.org/Index.aspx

War data: The war data 1495-1945 (1975) were reported in Goldstein, 1988, the data 1946 -2002 are based on the war data base as reported by PRIO Oslo: http://www.prio.no/page/CSCW_research_detail/Programme_detail_CSCW/9649/45656.htm, recalculated for the aims of a comparison of 'great power battle fatalities from all wars". Great Powers: the members of the UN Security Council plus Germany.

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United States Central Intelligence Agency World Factbook, openly available at https://www.cia.gov/library/publications/the-world-factbook/

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