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Towards a better understanding of convergence and divergence: or, how the present EU strategy – at the expense of the economic periphery – neglects the theories that once made Europe successful.¹

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Introduction – the two Socio-economic Narratives.

This document attempts to address some of the main problems of the European Union today. The main thesis is that the *Weltanschauung* and the economic narrative on which the European project has been based have changed radically since the inception of the European Project, from one conducive to convergence and cohesion to another which is conducive to divergence and, in the last instance – I shall argue – to a form of internal colonialism towards the economic periphery.

The field of Science and Technology employs the term *sociotechnical imaginary*² about the collective narratives and visions of social futures and of the common good. I shall argue that the European Union has moved away from the sociotechnical imaginary, or narrative, that dominated after World War II. I shall argue that this post WW II *Marshall Plan Narrative* (which I shall call MPN) gave way to an equilibrium-based *Neo-Classical Economics Narrative* with an added innovation rhetoric, which I shall argue is based on a fairly shallow understanding of innovation (which I shall call NC + I).

Key economic features of the *Marshall Plan Narrative* were leftovers from the crisis of the 1930s. Important points were². Economic structure matters (= manufacturing matters). 2. The financial sector must be strictly controlled, so that money can only be made by helping economies to grow and not by shrinking them³, 3. A strong focus on employment. The *Marshall Plan Narrative* dominated in the late 1940s when the institutions appeared that were later to develop first into the *European Coal and Steel Community* and then into the *European Economic Community*. The German term *Wirtschaftsgemeinschaft* even more emphasises the communal feeling which, as I see it, slowly got lost after 1992 as the Marshall Plan Narrative disappeared. I shall argue that the last time the Marshall Plan Narrative (MPN) dominated, was in the 1980s with the slow integration of Spain – gradually lowering tariffs – in order to save its manufacturing sector. The change in the European socio-economic narrative was accentuated by the 1989 fall of the Berlin Wall, so the *European Union's* birth in 1992 to a large extent coincided with the change in economic narrative.

The present EU narrative and the so-called evidence-based policy backing it up suffer from some basic weaknesses. First of all most of the underlying

² For an explanation of the term see <http://sts.hks.harvard.edu/research/platforms/imaginaries/imaginaries-faqs/>

³ Presently the financial sector makes huge amounts of money by effectively shrinking the Greek economy. A basic rule of capitalism since the 1700s has been that the private interests in making money must coincide with the public interest of seeing economies grow rather than shrink. I shall return to this later.

ing theories all suffer from what economics Nobel Laureate James Buchanan called the *equality assumption*: 'Any generalized prediction in social science implies at its basis a theoretical model that embodies elements of an *equality assumption*'⁴. Since the time of David Ricardo (1817) international trade has been based on the barter of qualitatively identical labour hours. Common sense tells us that if a neighbouring country has moved from the Stone Age into the Bronze Age, maybe it would be a good idea for your own country to follow? But no, the economics profession will almost unanimously insist that the backward country should stick to its "comparative advantage" in the Stone Age. The meaninglessness of this theory was fully understood in the Marshall Plan Narrative until the 1980s, but was subsequently lost to the European Union. David Ricardo's comparative advantage was once used by England to defend the prohibition of manufactures in the colonies. Now the same theory impoverishes the EU periphery.

The present EU narrative and accompanying 'evidence based policy'⁵ are based on dramatic simplifications, Ricard's trade theory being one of them. Close parallels exist between the criticism of neo-classical economics and modern criticism of other sciences. A classical critique of the "physics envy" of economics is Phillip Mirowski's 1989 *More Heat than Light*⁶, a critique he has renewed ever since. The theories used and supposed evidence are based on dramatic simplifications and compressions of available perceptions of the state of affairs and possible explanations. Hypocognition is the term now being used for this oversimplification phenomenon.⁷ Another term used to describe this state of affairs is 'socially constructed ignorance'. This ignorance is not the result of a conspiracy, but of the sense-making process of individuals and institutions:

To make sense of the complexity of the world so that they can act, individuals and institutions need to develop simplified, self-consistent versions of that world. The process of doing so means that much of what is known about the world needs to be excluded from those versions, and in particular that knowledge which is in tension or outright contradiction with those versions must be expunged.⁸

⁴ Buchanan, James, *What Should Economists Do?*, Indianapolis, Liberty Press, 1979, p. 231. Italics added.

⁵ Saltelli, Andrea, and Giampietro, Mario, *The fallacy of evidence based policy*, 2015 http://www.andreasaltelli.eu/file/repository/PaperDraftPolicyCartesianDream_16c.pdf

⁶ Cambridge, Cambridge University Press.

⁷ Lakoff, G. 'Why it Matters How We Frame the Environment, *Environmental Communication: A Journal of Nature and Culture*, 4:1, 70-81, 2010. Also Saltelli & Giampietro, 2015

⁸ Rayner, S., 2012, 'Uncomfortable knowledge: the social construction of ignorance in science and environmental policy discourses', *Economy and Society*, 41:1, 107-125, 2012.

This type of problem has been discussed earlier by Jerome R. Ravetz under the term 'usable ignorance'⁹.

It should be noted that this document is written more based on my studies of industrial dynamic at Harvard Business School than on standard economic theory. The document is also written in a different language than most modern economics, in English rather than in mathematics. This was also the case with what I have labelled *The Marshall Plan Narrative* – that economic structure is the key factor explaining wealth – ever since its 1588 inception with Italian economist Giovanni Botero's bestseller *Sulle Grandezze delle Città* (English translation *On The Greatness of Cities* 1607). Languages have different strengths and different uses. I have argued for a long time that using mathematics in order to qualitatively understand economic development is like writing a thesis on snow in Swahili, where there are likely to be few words to distinguish between types of snow. On the other hand, the Saami language in Northern Fennoscandia has more than 300 different terms that describe different qualities and conditions of snow¹⁰.

Through its equality assumption, neo-classical economics kills our understanding of the importance and profound consequences of diversity. This is extremely serious for our perception of the world around us, not only because diversity has been and is a central feature of European nature, culture, and political history, but also because understanding economic development and its absence – understanding convergence and divergence – requires a profound understanding of diversity¹¹.

Combined with the use of mathematical symbols, the equality assumption carries with it an unconscious – but artificial – feeling of being an objective observer. In spite of perhaps having observed reality from only one of many possible angles and having unconsciously made sweeping generalisations – assuming that things which are very different are in fact alike – the modern economist is easily trapped in a false belief in his or her own objectivity, into hypocognition. I find that Friedrich Nietzsche warned against this lack of perspective over a hundred year ago.

⁹ Ravetz, Jerome., R., 1987, "Usable Knowledge, Usable Ignorance, Incomplete Science with Policy Implications", *Knowledge: Creation, Diffusion, Utilization*, 9(1), 87-116, 1987.

¹⁰ Source: Eira, Inger Marie, *Muohttaga jávohis giella. Sámi árbevirolaš máhttu muohttaga birra dálkkádatrivdanáiggis/ The Silent Language of Snow. Sámi traditional knowledge of snow in times of climate change*, Ph. D. Thesis, University of Tromsø, 2012.

¹¹ For a discussion of diversity which may be seen as an integral part of this work, see Reinert, Erik and Ting Xu, 'Declining Diversity and Declining Societies: China, the West, and the Future of the Global Economy', *The Uno Newsletter*, Vol. II, No. 13, Working Paper Series 2-13-2, 25 December 2013, Musashi University, Tokyo. Downloadable at [http://pure.qub.ac.uk/portal/en/publications/declining-diversity-and-declining-societies-china-the-west-and-the-future-of-the-global-economy\(b48ed0b2-9924-4220-8832-97b7327905cb\).html](http://pure.qub.ac.uk/portal/en/publications/declining-diversity-and-declining-societies-china-the-west-and-the-future-of-the-global-economy(b48ed0b2-9924-4220-8832-97b7327905cb).html)

*The only seeing which exists is a seeing in perspective, a seeing with perception; and the more feelings we allow to get involved about an issue, the more eyes – different eyes – that we mobilise to observe one thing, the more complete will our concept of this thing, our objectivity, be. Would not eliminating the will....be the same as to castrate the intellect?*¹²

In other words, we must attempt to perceive the complex realities behind simple numbers.

The document contains a brief description of the long-term political background for the shift in the European socioeconomic narrative. This story necessarily starts in the 1840s, with the coming of age of two *cosmo-political* economic theories: Communism and what was then called Manchester liberalism (now neoliberalism). The contrasts and conflicts between these two politically extreme theories – communism and extreme liberalism – and above all the compromises which were forged between them formed what Europe finally became. A key point here is how the two cosmo-political philosophies – called the *irrational twins* by German economist Gustav Schmoller – came to lose their glitter towards the end of the 19th century, yielding to theories which, because they understood the links between economic structure and economic wealth, argued against *both* cosmo-political economic theories. I argue that the 1989 death of one of the irrational twins – communism – led to a totally unwarranted resurrection and domination of the second irrational twin in the form of neoliberalism – completely overshadowing the sensible compromises that had been worked out over time. The death of one irrational twin led to the triumphalism of the second, and equally irrational, twin, i.e. neoliberalism. This heavily influenced the Maastricht process and the Maastricht criteria leading to the demise of the Marshall Plan Narrative. As I see it, decisions made in the age of partly irrational market triumphalism from 1989 to 1992 are the core of many of the present problems of the EU. I would argue that the present economic divergence process within the EU would have been much better understood and preventable by the economic understanding of 1947, and I shall try to rebuild my narrative on neo-classical economics + shallow innovationism in that spirit.

A brief note on how the innovation narrative was introduced in the European Union appears as a necessary part of the introduction. After he

¹² „Es gibt nur ein perspektivisches Sehen, nur ein perspektivisches ‘Erkennen’; und je mehr Affekte wir über eine Sache zu Worte kommen lassen, je mehr Augen, verschiedene Augen wir uns für dieselbe Sache einzusetzen wissen, um so vollständiger wird unser ‘Begriff’ dieser Sache, unsre ‘Objektivität’ sein. Den Willen aber überhaupt eliminieren, die Affekte samt und sonders aushängen, gesetzt, daß wir dies vermöchten: wie? hieß das nicht den Intellekt kastrieren?“ (Nietzsche 2000:7394-7395)

passed away, the economic theories of Austrian-born Harvard economist Joseph Alois Schumpeter (1883-1950) – the “prophet of innovation”¹³ – declined into obscurity. However, Richard Nelson and Sidney Winter’s 1982 *An Evolutionary Theory of Economic Change*¹⁴ launched a neo-Schumpeterian narrative that revived the importance of innovation. In the late 1980s this narrative reached the institutional level with OECD’s TEP (Technology-Economy) programme (1988-92). In 1993 the narrative was picked up by what was then called The European Economic Communities with Jacques Delor’s *White Paper on Innovation*¹⁵. Two years later, the new narrative was published by what in the meantime had become the European Community, as EUs *Green Paper on Innovations*¹⁶. Richard Nelson is an American, but the other important scholars in the new field of innovation studies were all Europeans: Richard Freeman, Giovanni Dosi, Bengt-Åke Lundvall, and Luc Soete. The two latter founded an international network, *Globelics*, dedicated to innovation studies, which has held international conferences since 2003. More recently the idea of “open innovations” has apparently brought the innovation process closer to a neo-classical model, but as I see it such “open innovations”¹⁷ – while very useful in some industries, like IT – are not representative of the economy at large.

This report – which criticizes the European Union’s innovation narrative – is written by a convinced Schumpeterian, a person who thinks that innovation indeed should be put at the centre of the economic narrative. I am, however, convinced that the present EU narrative of innovation fundamentally is a neo-classical narrative, not reflecting the context- and industry-specific nature of the innovation process. Since my student days at Harvard in the mid-1970s – thanks to being taught by one of Schumpeter’s best friends at Harvard¹⁸ – I have considered myself a Schumpeterian economist. Schumpeter’s understanding of the world – his techno-economic narrative – satisfied both my queries as a businessman – I had started a manufacturing company at the time – and my queries on uneven economic development which I had tried to understand during my work

¹³ This is the title of Harvard professor Tom McCraw’s biography of Schumpeter.

¹⁴ Cambridge, Mass, Harvard University Press.

¹⁵ *Growth, Competitiveness, Employment. The Challenges and Ways Forward into the 21st Century*, Bulletin of the European Communities, Supplement 6/93. This White Paper starts with the phrase: “Why this White Paper? The one and only reason is unemployment. We are aware of its scale, and of its consequences too. The difficult thing, as experience has taught us, is knowing how to tackle it”.

¹⁶ European Commission, *Green Paper on Innovation*, December 1995.

¹⁷ See e.g. Hippel, Eric von (2011). “Open User Innovation”. In Soegaard, Mads and Rikke Friis Dam, *Encyclopedia of Human-Computer Interaction*. Aarhus, Denmark: The Interaction Design Foundation.

¹⁸ Australian economist Arthur Smithies (1907-1981)

in Peru. I therefore enthusiastically joined the neo-Schumpeterian tribe and *Globelics*. But I soon saw what was coming. Already at the First Globelics conference in Rio de Janeiro in 2003 I warned that “by integrating some Schumpeterian variable to mainstream economics we may not arrive at the root causes of development. *We risk applying a thin Schumpeterian icing on what is essentially a profoundly neoclassical way of thinking*” (i.e. a neoclassical cake).¹⁹ The next year I published an alternative Schumpeterian narrative,²⁰ where economic activities were seen as being qualitatively different.

Perhaps I should also add that I consider myself a convinced European, who twice voted in favour of Norway joining the community. It is easy to pinpoint when my enthusiasm for the European Union turned to deep scepticism, it was in the evening of April 30, 2004 – the night before many former Soviet Republics joined the EU – and the place was the Tallinn Opera House, where next day’s accession was being celebrated. I was suddenly struck with the thought that what I was attending was essentially the funeral of the European welfare state as we had known it. A virtually instant integration between a recently de-industrialized group of countries, involving millions and millions of people, where the “winners” were making 1 Euro an hour, and a wealthy Europe where the “losers” were probably making 10 Euro an hour would have to wreck at least some welfare in the European Union. That same year, with an Estonian colleague, we predicted the Latin-Americanization of Europe: falling wages and larger economic differences.²¹ In 2007 we followed with a paper called *European Eastern Enlargement as Europe’s attempted suicide?*²² In 2013 we published an article arguing that the roots of present European crisis long preceded the financial

¹⁹ Reinert, Erik S. & Sophus Reinert, *Innovation Systems of the Past: Modern nation-states in a historical perspective. The role of innovations and of systemic effects in economic thought and policy*, Paper prepared for the 1st Globelics Conference, Rio de Janeiro, November 2003, p. 63. Italics added.

²⁰ Reinert, Erik S. ‘Catching-up from way behind – A Third World perspective on First World history’ in Fagerberg, Jan, Bart Verspagen and Nick von Tunzelmann (eds.) *The Dynamics of Technology, Trade, and Growth*, Aldershot, Edward Elgar, 1994, pp. 168-197. Published as a working paper in 1993 as Fremtek-Notat No. 8/93, Oslo, Norwegian Research Council (at the time NAVF – Norges Almenvitenskapelige Forskningsråd)

²¹ Reinert, Erik S. and Rainer Kattel, ‘The Qualitative Shift in European Integration: Towards Permanent Wage Pressures and a ‘Latin-Americanization’ of Europe?’, Praxis Working Paper no. 17, Praxis Foundation, Estonia, 2004. Downloadable at: [http://www.praxis.ee/index.php?id=402&L=1&tx_mmmdamfilelist_pi1\[showUid\]=198&cHash=30287c5917](http://www.praxis.ee/index.php?id=402&L=1&tx_mmmdamfilelist_pi1[showUid]=198&cHash=30287c5917)

²² Reinert, Erik S. and Rainer Kattel, ‘European Eastern Enlargement as Europe’s Attempted Economic Suicide?’, WP No. 14, TOC-TUT WP series, 2007. <http://hum.ttu.ee/tg/> Portuguese translation ‘O Alargamento da União Europeia a Leste: Uma Tentativa de Sucídio Económico’, in *As Economias de Leste, a Crise da Transição e a Crise Global: Os Caminhos da Democracia a os da Autocracia*, TAGV / FEUC, Coimbra, 2009, pp. 76-116. http://www4.fe.uc.pt/ciclo_int/doc_09_10/04_textos.pdf

crisis.²³ I have previously applied the same type of narrative as used here on poor countries.²⁴

A recent working paper by the German Bundesbank produces the following conclusion regarding EU convergence: "Our main findings suggest no overall real income per capita convergence in the EU, however, we identify subgroups that converge to different steady states using an iterative testing procedure..... The empirical evidence suggests a clear separation between the new and old EU member states in the long run".²⁵ It is my hope that the qualitative economic aspects discussed in this paper may shed some light on this lack of convergence.

1. A Brief Background for the Irrational 1989/1992 Triumphalism: The 1840s and the Birth of the Irrational Twins.

Der naive Optimismus des „laissez faire“ wie der knabenhafte frivole Appell an die Revolution, die kindische Hoffnung, dass die Tyrannis der Proletarier große Weltreiche glücklich leiten könne, zeigten sich mehr und mehr als das, was sie waren, die Zwillingsgeschwister eines unhistorischen Rationalismus.

Gustav Schmoller, German economist,
Inaugural speech as Rector of the University of Berlin, 1897.

But the emerging regimes of fascism, socialism, and the New Deal were similar only in discarding laissez-faire principles

Karl Polanyi, The Great Transformation, the Political and Economic Origins of our Time, New York, 1944.

The 1840s were a period of intense social, economic, and political tensions, and the start of a series of ideological and theoretical developments which have been with us until today. In the 1840s Charles Dickens (1812-1870) – himself at one time a child worker who had been forced to leave school to work – epitomized the criticism of the social conditions of the time. The idea that “the dark satanic mills” of the Industrial Revolution brought destruction of nature and human relationships became obvious during the 1840s. Once this zeitgeist has been internalized, one

²³ ‘Failed and Asymmetrical Integration: Eastern Europe and the Non-Financial Origins of the European Crisis’, with Rainer Kattel. The Other Canon Foundation and Tallinn University of Technology Working Papers in Technology Governance and Economic Dynamics, No. 49, 2013 and in Sommers, Jeffrey & Charles Wolfson (eds.), The Contradictions of Austerity. The Socio-Economic Costs of the Neoliberal Baltic Model, London, Routledge, 2014, pp. 64-86.

²⁴ Reinert, Erik S. *How Rich Countries Got Rich... and Why Poor Countries Stay Poor*, London, Constable, 2007. This book has been published, or is under translation into, 18 languages.

²⁵ Borsi, Mihaly Tamas and Norbert Metiu. “The Evolution of Economic Convergence in the European Union” *Deutsche Bundesbank Discussion Paper*, No 28/2013

can almost guess that Danish storyteller H. C. Andersen's *The Little Match Girl* – about the girl who freezes to death on New Year's Eve because she dares not go home with no matches sold – is from same period. It is, from 1845.

The year after, in 1846, the free English free trade movement, based on the 1817 work of David Ricardo – *Principles of Economics* – reached its zenith when the English Government abolished the import duty on grain, the Corn Laws. That England stopped protecting her agriculture led to a setback for the movement in other countries to protect manufacturing, and in November 1846, faced with this and a number of other problems, the prophet of industrialization and infrastructure, German economist Friedrich List (born 1789) committed suicide.

From this 1846 peak of economic liberalism, at the time called Manchester liberalism, the rest of the 1840s was represented by economic turbulence. A massive financial crisis in England in 1847 coincided with a dramatic crop failure in Europe, from Finland to Spain. In 1848 Marx and Engels' *Communist Manifesto* was published, and the same year 1848 brought political revolutions to all large European countries with the exception of Russia and the United Kingdom.

1848 represented the end of Ricardian liberalism, and communism came into being in that same year. But neither of these two political extremes won the long-term battle, and – as the quote from Gustav Schmoller above testifies – the two extremes gradually came to be seen as equally irrational. They were both utopias that had to be rejected by rational and practical people.

Interestingly enough, David Ricardo – who again is seen as the founding father of formal economics – in the late 1800s came to be vilified as the spiritual father of both irrational twins, of both communism and what we today call neoliberalism. His simple modelling of world trade as the barter of qualitatively identical labour hours opened the way for economics as a *Harmonielehre*, a system creating automatic harmony (later called “factor-price equalization”²⁶). On the other hand, David Ricardo's labour theory of value also created the foundation-stone for communism.

Gustav Schmoller's criticism, quoted above, voiced against David Ricardo and his theory at the end of the 19th century, could just as well be voiced against mainstream economics today. A key problem is that the theory operates at a level of abstraction too high to give meaningful recommen-

²⁶ Stolper / Samuelsson 1949 and 1950

dations, and void of context. At about the same time, English economist Herbert Foxwell said about his fellow countryman Ricardo:

'The fact seems to be that, after the appearance of Ricardo's *Principles*, the economists were largely given over to sterile logomachy (i.e. disputes about words, controversy turning on merely verbal points, esr) and academic hair-splitting. (Foxwell 1899, p. lxxii)

It was Foxwell who spelt out the danger of what Schumpeter later labelled 'The Ricardian Vice' in economics:

'Ricardo, and still more those who popularised him, may stand as an example for all time of the extreme danger which may arise from the unscientific use of hypothesis in social speculations, from the failure to appreciate the limited applications to actual affairs of a highly artificial and arbitrary analysis. His ingenious, though perhaps over-elaborated reasonings became positively mischievous and misleading when they were unhesitatingly applied to determine grave practical issues without the smallest sense of the thoroughly abstract and unreal character of the assumptions on which they were founded.' (Foxwell 1899: xli)

This criticism fits today's mainstream economics just as well as it fitted Ricardian economics in the late 1890s. Since then, communism and Manchester liberalism have represented Europe's ideological counterpoints, and they did so for about 140 years until the 1989 fall of the Berlin Wall. At that point – the logic seemed to go – communism lost and the Manchester liberalism, under the new name of neo-liberalism, had won. 1989 was, as the literature told us, not only *The End of History* but also *The End of the Nation State*. We are now gradually seeing that the fall of the Berlin wall led to a time of intellectual hubris, of "voodoo economics" as one author has called it.

On the ruins of two World Wars – about 70 years ago – Europe embarked on a long road to integration. The process was built on strong idealism, and for decades there was little doubt that the process was very successful, and – as a consequence – the EU was seen as simultaneously creating peace and economic prosperity under a process of economic and social convergence. "The incoming tide lifted all boats" – as the saying goes – and the projects and processes met with little political opposition.

Already under the process leading up to the creation of the single market – from 1989 to 1992 – there were, however, signs that the highly motivating visions of a united Europe were moving ahead without well-con-

templated analysis of what would actually happen on the ground. Including the poor peripheral countries in the Euro was seen as doing them a favour. In fact it proved to be a major disaster for them. Here we find the seeds of the analysis which slowly became both dominating and very destructive: "This process is so idealistic and well intentioned that it cannot go wrong". The 2012 Nobel Peace Prize to the European project – when so many problems were already visible – seemed to underline and give credibility to the argument "we do not care what happens in reality as long as the intentions are good". Superficial intentions, a cynic might add.

Gradually the econo-political common sense which – overruling ideology – had dominated Europe since World War II gave way to political wishful thinking based on the ideology that came to dominate the West after the 1989 fall of the Berlin Wall. One aim of this report is to show why the dominating picture in the EU today is perhaps more one of divergence than of convergence, both economically and socially. I shall argue that the main problems of the EU today – a *gradually impoverished and geographically growing periphery*, a *financial crisis which is not ending*, and *problems related to high extra-European immigration* – are all intellectually and politically connected. I shall try to explain how Europe discarded important insights that – until the late 1980s – were shared by the political right, left and center. These insights, I shall argue, gave way to political hubris – unfounded and politically deaf optimism – based on the intellectual hubris of a type of economics that so far had been limited to the academic sphere, but was brought out in the daylight.

The drama here was that the political middle, the compromises that had been built between the positions of the irrational twins – communism and neoliberalism – died out. The Marshall Plan Narrative was one of them. Here is where the above quote from Karl Polanyi comes in: before WW II the whole political axis – from communism via Roosevelt's New Deal to fascism – had agreed that laissez-faire did not work. However, in 1989 laissez-faire again became the dominating narrative.

From the Polanyi quote we can pick two economic lessons – two principles divergent from laissez-faire – that used to be well understood along the whole political axis, but were completely lost:

First lesson: A manufacturing industry is necessary in order to create national wealth. Historically, only manufacturing has created a critical mass of activities under increasing returns to scale under dynamic imperfect competition, which is what has lifted real wages and thus created an incentive system for a continuous substitution of capital for labour.

Second lesson: A theoretical separation of *financial capital* from *production capital* is necessary in order to keep the two sectors in symbiosis, rather than financial capital becoming a parasite on the real economy.

There is probably no better symbol of what was lost along the whole political axis than German economist Friedrich List – mentioned above – the man who became the prophet of industrialization for virtually all nations that followed England on the path to industrialization and national wealth. The fact that he was honoured by stamps – with identical portraits – by both the communist and the capitalist Germanies symbolizes this lost understanding.



Figure 1. Friedrich List, the German economist who convinced the world that only manufacturing industry could create national wealth and emphasized the role of railroads, was a hero both in West Germany (Deutsche Bundespost stamp to the left) and in communist East Germany (German Democratic Republic stamp to the right). Influential evolutionary economist Christopher Freeman (1921-2010) was of the opinion that List was the originator of the idea of a national innovation system.

From the works of Friedrich List it is possible to draw three key principles which stand in contrast to the policies of neoclassical economics, of the economic theory which has guided the European Union project since the late 1990s. As we shall see, the first principle corresponds to the first lesson drawn above:

First Listian principle: The preconditions for wealth, democracy and political freedom are the same: a diversified manufacturing sector subject to increasing returns (which would historically mean manufacturing, but also includes a knowledge-intensive service sector). This was the principle upon which the United States economy was built, this was the principle promoted by the first US Secretary of the Treasury, Alexander Hamilton, and this same principle was rediscovered by George Marshall in 1947 as the foundation for the Marshall Plan.

Corresponding neoclassical principle: All economic activities are qualitatively alike, so it does not matter what you produce. Ideology based on

'comparative advantage' without an understanding that it is actually possible for a nation to specialize in being poor and ignorant, in economic activities that require little knowledge, operate under perfect competition and diminishing returns, and/or bereft of any scale economies and technological change.

Second Listian principle: A nation first industrializes and is then gradually integrated economically into nations at the same level of development. I shall argue that the last country to be integrated into the European project in this way was Spain in the 1980s.

Corresponding neoclassical principle: Free trade is a goal per se, even before the required stage of industrialization is achieved. The 2004 EU enlargement went directly against Listian principles. First the former communist countries in Eastern Europe (with the exception of Hungary) to varying degrees suffered deindustrialization, unemployment and underemployment. These countries were then abruptly integrated into the EU, creating enormous economic and social tensions. From the point of view of Western Europe, the factor price equalization promised by international trade theory proved to be an equalization downward.

Third Listian principle: Economic welfare a result of societal synergy. Already in the 13th century Florentine Chancellor Brunetto Latini (1210-1294) explains the wealth of cities as a common weal (*un ben comune*). Investments in infrastructure, education and science are an integral part of this type of policy. The state is therefore an important unit of economic analysis.

Corresponding neoclassical principle: The state no longer a unit of analysis and the synergies within it are no longer captured by economists' tools. 'There is no such thing as society', Margaret Thatcher (1987).

The integration of the de-industrialized former Soviet republics created an asymmetrical economic integration which – from the point of view of many wage earners – became a zero-sum game. What some nationalities gained in wages, others lost. The ties of common interest that for the first decades had kept the European community – the *Gemeinschaft* – together disintegrated as the interests to some degree became in opposition to each other, and no longer common. In this way also the basic republican value – freedom from arbitrary decisions – became threatened. It does appear arbitrary to wage earners in some countries that their wages are cut apparently for the benefit of other nationalities, not to mention the arbitrariness of people losing jobs and livelihood because the financial sector grows at the expense of the real economy. Greece is of course the

country where the European Union more than anywhere else seems to have broken with the basic republican ideals of freedom. Keeping Friedrich List’s guidelines in mind would have contributed to prevent the degeneration of what was once a symmetrical economic integration that produced convergence in Europe, into the present asymmetrical system which – to some – produces painful divergence. At the extreme, a Rumanian colleague reports that conditions similar to feudalism are on the rise in rural Rumania. Homeless people are given free housing against the duty to work for free.

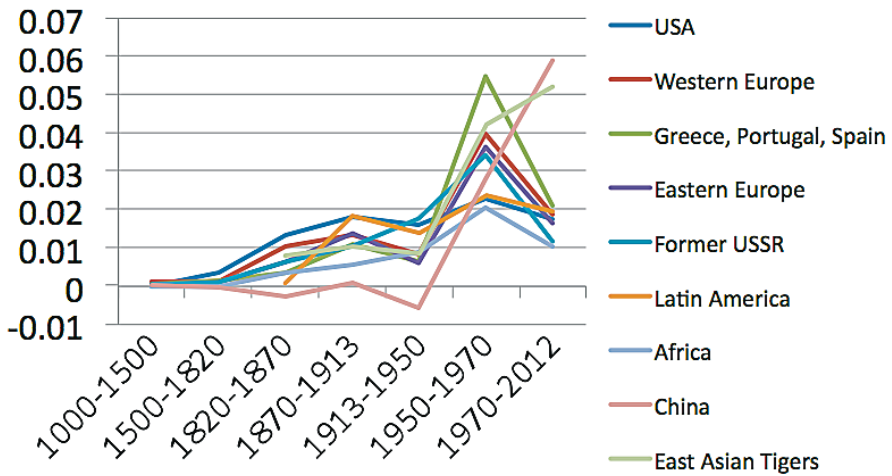


Figure 2. *The Marshall Plan Era and the Golden Age of Economic Development. The two decades from 1950 to 1970 – the decades of intense manufacturing growth in Europe – was also the historical period with fastest growth in the Western World. Note the fast growth of Greece, Spain and Portugal before they joined the European Union*

3. EUs Three Slippery Concepts: an Overview.

Three key terms in the present EU narrative carry much more weight in the present public discourse than they deserve: *competitiveness, productivity, innovation*. As I see it, these terms are frequently used to obfuscate – to confuse and mystify – the issues at stake rather than to illuminate and clarify the choices that have to be made. Not without reason did the Financial Times see “competitiveness” as a form of *corporate graffiti* when the term invaded public discourse in the early 1990s. As we shall see, the degree of obtrusiveness of terms has only increased since then. We think we understand what politicians and experts say, but the terms they use may just add to the confusion.

It should be added that this is not only an EU issue, the problem is a global one which appeared after mathematics-centred neo-classical economics became the only theoretical game in town: When the EU institutions were first formed in the post WW II era, the Marshall plan was the socio-economic narrative on which these institutions were built. The Marshall Plan narrative was what Jean-Christophe Graz fittingly calls *Transnational Mercantilism*²⁷: a system where it was understood a) that every nation needed a manufacturing sector in order to be wealthy and b) that the financial sector was limited in size and limiting speculation. Figure 2 above testifies to the success of this transnational mercantilism: never in human history have so many nations increased the wealth of their inhabitants so much (note the impressive growth of Spain, Portugal, and Greece *before* they joined the European Union, when their manufacturing industries were allowed to grow with tariff protection).

The sentence which most incisively renders the core of socioeconomic narrative of the Marshall Plan is found in a letter from US former President Herbert Hoover to then ruling President Harry S. Truman, dated March 1947. The sentence establishes the relationship between a nation's economic structure and its carrying capacity in terms of population. Hoover explains to Truman why Germany must be allowed to rebuild its manufacturing industry, contrary to the prohibitions at the time imposed by the so-called Morgenthau Plan:

'There is the illusion that the New Germany left after the annexations can be reduced to a 'pastoral state'. It cannot be done unless we exterminate or move 25,000,000 out of it'.

In a matter of weeks, the Morgenthau Plan was scrapped and the Marshall Plan, a re-industrialization plan, was launched. The original EU economic narrative was based on this Marshall Plan economic understanding, as were the new global rules for international trade – the Havana Charter – which was signed by all members of the United Nations in March 1948. This charter, which became the foundation stone for GATT and ITO, allowed all nations to protect their manufacturing sector if that was part of a national plan or if the nation's labour was not fully employed. So the international agreements of the time were completely in line with the European understanding of the importance of the economic structures of nations and of the practice of letting every nation develop its own industry (The Marshall Plan Narrative).

²⁷ Jean-Christophe Graz, "Transnational Mercantilism and the Emergent Global Trading Order", *Review of International Political Economy*, Vol. 11, No. 3 (Aug., 2004), pp. 597-617

At the same time – much as had happened in the early 19th century until 1848 – economic theory resurrected a narrative that economic structure did not matter. In what can be seen as a response to communism’s promise of “from every man according to his ability and to every man according to his needs”, Paul Samuelson launched a theory which – under extremely unrealistic assumptions – ‘proved’ that free international trade would lead to global equalizations of wages²⁸. Two of the key assumptions in the model disregard the key differences between the production of raw materials and of manufacturing goods: The model assumes constant returns to scale, whereas raw materials are produced under diminishing returns and manufacturing under increasing returns to scale, and that markets operate under perfect competition, which is normally true of raw materials (if the markets are left to themselves), whereas it is almost never true in manufacturing. Proving that a country without manufacturing could be as wealthy as a manufacturing country was only achieved by assuming away the qualitative differences between these two types of activities.

In a famous and controversial passage in Milton Friedman’s influential 1953 book²⁹, Friedman writes that:

Truly important and significant hypotheses will be found to have “assumptions” that are wildly inaccurate descriptive representations of reality, and, in general, *the more significant the theory, the more unrealistic the assumptions* (in this sense) (p. 14, italics added).

Samuelson and Friedman’s cold war developments in economic theory are – as I see it – at the root of many of today’s economic problems. All economic activities are assumed to be alike (Samuelson) + the more irrelevant the assumptions are the more “scientific” your theory (Friedman) together brought down the Marshall Plan Narrative (which still remained true in praxis though) and laid the foundation for neoclassical theory, which came to be “the only game in town”. The neo-classical vision brought with it a new master narrative, a new *sociotechnical imaginary*.

In EU practice, however, the Marshall Plan Narrative continued in operation. As already mentioned, Spain was included in the European Community of the 1980s by slowly lowering its import duties in order to make

²⁸ Samuelson, P. A. (1948). “International Trade and the Equalisation of Factor Prices”, *Economic Journal*, June, pp. 163-184.

²⁹ Milton Friedman, *Essays in Positive Economics*, Chicago, University of Chicago Press, 1953.

Spanish industry survive. The new neo-classical narrative became dominant only after the 1989 Fall of the Berlin Wall. This theory predicted that integration would lead to economic convergence (*factor-price equalization*). It was after this that the need for a new terminology arose, and what I call “slippery concepts” arose. These slippery concepts made it possible – in an opaque language – to blame the victims of poverty for their own situation: you are not *competitive* enough, you are not *productive* enough, you are not *innovative* enough.

The former communist world, the transition economies, needs special mention. The free trade shock after the fall of the Berlin wall provided a de-facto Morgenthau Plan – a deindustrialization plan – for many of these countries. Figure 3 below shows the fate of former Soviet republics between the 1989 fall of the Berlin Wall and the time when many of them joined the European Union in 2004. Hungary, as the only country which had opened up for international business before the fall of the Berlin Wall – e.g. with the sale of light bulb factory Tungstam to General Electric – was the only country which saw its industrial sector grow between 1990 and 2001. Romania, seeing industrial production fall from 43.5 per cent of GDP to 26.2 per cent, represents the other extreme. It should be noted that there were several warnings against the coming free trade shock³⁰, but these warnings were not listened to.

With hindsight the free trade shock and the abrupt transition of the former Soviet Republics caused damage which, at least in the medium term, appears irreparable and is a deadweight to the European Union. Hungary testifies to what a more gradual transition could have achieved.

³⁰ One book put together by a prominent team of economists and of institutions was Kregel, Jan, Egon Matzner and Gernot Grabher, *The Market Shock, An Agenda for the Economic and Social Reconstruction of Central and Eastern Europe*, Vienna, Austrian Academy of Sciences, 1992 Distributed by the University of Michigan Press, Ann Arbor)

Country	1990			2001		
	Agriculture	Industry	Services	Agriculture	Industry	Services
Armenia ¹	17.7	30.4	38.3	44.4	14.1	37.2
Azerbaijan	30.9	22.9	31.1	40.0	10.8	49.3
Bulgaria	18.5	44.2	37.3	26.3	27.6	46.0
Czech Republic	12.3	45.5	42.2	4.8	40.4	54.8
Estonia	21.0	36.8	41.8	6.9	33.0	60.1
Hungary ²	8.7	33.0	58.1	6.2	34.7	58.9
Kazakhstan ³	22.3	31.5	40.7	22.0	18.3	59.8
Kyrgyzstan ³	32.7	27.9	39.4	52.4	11.6	36.1
Latvia	17.4	37.4	45.2	15.0	25.6	59.4
Poland	25.2	37.0	35.8	19.1	30.5	50.4
Romania	29.1	43.5	27.4	42.3	26.2	31.5
Russian Federation ³	13.9	40.2	45.6	11.8	29.4	58.8
Slovakia ²	10.1	39.6	50.0	6.1	37.6	56.2
Slovenia ⁴	10.7	44.1	45.1	9.8	38.1	50.8

Figure 3. Integration and Deindustrialization 1990-2001: Employment Structure by Sector, Selected Transition Economies, 1990 and 2001 (per cent).³¹ Note how employment shifts from industry back into agriculture in nations with relatively recent industrialization, while unemployed industrial workers shift into “services” (probably to a large extent urban unemployment and underemployment) in nations with longer industrial traditions.

Source: International Labour Office 2004 / Reinert and Kattel 2004.

With the main explanation of differences between rich and poor nations – the qualitative differences between the production of raw materials and manufactured goods (i.e. the Marshall Plan Narrative) – effectively eliminated from academic economic discourse, new narratives had to be created in order to explain these differences. It is important to keep in mind that by assuming away any “friction” in the economy, by assuming totally perfect markets, a key feature of neo-classical (mainstream) economics, it becomes possible to put the blame of economic hardship directly on the victim itself. For example, since perfect labour markets are assumed, the only unemployment which can exist is voluntary unemployment. In my view the postulates of neoclassical economic theory contribute to the sad prejudices and ethnophobias inside today’s European Union.

At the global level, the belief-system that ruled at the time of the Fall of the Berlin Wall thought that if only the price-distortions were removed, the market would restore spontaneous order and harmony. So the first rule was ‘get the prices right’. When that did not work in the poor countries, the next cure-all for the Third World was (2) ‘get the property rights right’, then followed 3 ‘get the institutions right’, 4. ‘get the governance right’ (‘governance’ was a word that replaced “state”, since the state was seen as a bad thing), 5. ‘get the competitiveness right’, 6. ‘get the innovations right’,

³¹ 1 2000; 2 1994; 3 1999; 4 1994. Numbers do not add up to 100% because some industries are ‘not adequately defined’.

7. 'get the entrepreneurship right', 8. 'get the education right', 9. 'get the climate right', 10. 'get the diseases right'³². The answer from the Marshall Plan Narrative – that the solution to the problems of Third World poverty lies fundamentally in the economic structures – was simply no longer part and parcel of the theoretical package of most economists. These economists would never say to their children “you have an obvious comparative advantage in washing dishes, so you should make a career in restaurant kitchens”, but – in order to qualify as an economist – applying this type of intuition at a higher level of abstraction was impossible. That putting all people washing dishes in London in one country and all the lawyers of London in another would make for one poor country of people washing dishes and a much richer country of lawyers is not fathomable or explicable with the set of tools modern economists have chosen to work with.

Inside the European Union three of these “quasi-explanations” – these red herrings – have dominated the discourse. This is essentially because the key theoretical elements behind the Marshall Plan Narrative had been left out of neo-classical theory: the qualitative difference between economic activities in terms of increasing/diminishing returns and imperfect/perfect competition. In an interview Paul Krugman essentially admitted the collective irrelevance of the profession as regards this when he said:

‘I think there’s a pretty good case to be made that the stuff that I stressed in the models is a less important story than the things that I left out because I couldn’t model them.’³³

3.1. Competitiveness.

What does it mean when we read, as we have done several times over the last years that “Merkel pushes for boost to Greek competitive-

³² See Reinert (2007) for a discussion.

³³ Paul Krugman in *The New Yorker*, March 1, 2010. Part of this story is that Paul Krugman received the 2008 Nobel Memorial Prize in economics mainly for having modelled increasing returns, with no mention of its mirror image diminishing returns which apply in the production of food and raw materials. In one older article (Krugman 1980) he also included diminishing returns, and employing the dichotomy increasing vs diminishing returns Krugman essentially confirmed the validity of the Marshall Plan Narrative. At the time Krugman admitted that the classical development economists, and even Lenin, had been right about this dichotomy being at the root of the mechanisms creating wealth and poverty. This dichotomy dates back to Italian economist Antonio Serra (1613), based on Botero (1588), but Krugman had picked it up from US economist Frank Graham (1923). A few years ago I had a research assistant go through Krugman’s academic papers, and he did not find the increasing/diminishing returns dichotomy (which is the key variable explaining EU divergence today) ever used again. In (Reinert 1994) I commented that Krugman in his 1980 article had opened up Pandora’s Box, but had been sitting on the lid ever since. Nobel Prizes are not given out to people who directly confront the politically accepted narrative.

ness”? Since the year the Maastricht Treaty was signed, the term competitiveness – as defined by the OECD – has undergone a complete transformation:

Competitiveness, OECD Definition 1992:

“Competitiveness may be defined as the degree to which, under open market conditions, a country can produce goods and services that meet the test of foreign competitions *while simultaneously maintaining and expanding domestic income*” (italics added). In OECD, *Technology and the Economy*, page 237.

Competitiveness, OECD Definition 2015:

“Competitiveness is a measure of a country’s advantage or disadvantage in selling its products in international markets” Context: The OECD Secretariat calculates two different measures of competitiveness based on the differential between domestic and competitors’ unit labour costs in manufacturing and consumer prices both expressed in a common currency” (webpage).

So if Merkel or someone else had “pushed for boost to Greek competitiveness” in 1992 – the year of the Maastricht Treaty – they would have indicated that they wanted Greek domestic income to rise, while the country stilled remained competitive on the international markets. When Merkel says the same thing today and we try to decipher the meaning of this phrase using the OECD website, she means that labour unit costs in manufacturing are too high. In today’s mainstream logic this could be solved either by increased productivity (see below) or by lowering wages.

So the phrase “push to boost Greek competitiveness” means the opposite in 2015 of what it did in 1992. In 1992 the phrase would have meant Merkel wants Greek wages to *grow*, today it essentially means she wants Greek wages to *fall*. Of course the best way to boost Greek competitiveness today – both by the 1992 and the 2015 definitions – would be to allow Greece to devalue; to get out of the Euro straightjacket. That is, however, a different discussion, to which we shall get back at the end of the document.

It should be pointed out that the problem of “competitiveness” as basis for both EU and global policy was heavily criticized already in the early 1990 by the *Group of Lisbon*. As they say in their 1995 book: “How is it possible, however, to believe that there is a reasonable solution to competition between one country in which the average person works 2,200 hours per year for USD 1,000 and another in which individuals work 1,600 hours

for USD 30,000? Under these conditions, it is simple demagoguery to claim that the competitiveness of the latter will be increased by a reduction in labor costs³⁴. This is in fact – apart from the actual numbers – a reasonably good approximation of what happened to wages for many people in the old European Union with the 2004 opening up to the East.

These effects were fairly predictable, and a slower pace of integration – allowing for some local industries in the transition countries to recover (again, having given them the transition time that Spain got) – would have reduced or eliminated this effects. This wage-reduction effect is of course why the OECD had to redefine “competitiveness” in a way that totally perverted the original meaning of the term. Had this been done, it is in my view likely that the coming UK referendum on The European Union could have been avoided. As the Americans say, “the chickens are coming home to roost”, the EU is presented with the negative effects of decisions taken in the befuddled mood of post-1989 triumphalism.

3.2. Productivity.

“Productivity isn’t everything but in the long run it is almost everything”, Paul Krugman.

This phrase from Paul Krugman has become part of the newly adapted common (un)sense on both sides of the Atlantic. As we shall see in this document productivity is:

- a) at any given point in time very differently distributed among different economic activities. Productivity growth will in most cases vary much more from industry to industry than from country to country.
- b) the correlation between productivity and rising wages – i.e. the 1992 definition of competitiveness – is, at best, spurious. In most countries the highest productivity increases in post WW II Europe were achieved in dairy production. However, dairy production stayed what we shall call a low activity that continuously has needed subsidies, price controls, and import duties or prohibitions in order to create decent income levels for the farmers.

So, adding “productivity” to “competitiveness” to the sociotechnical narrative of the European Union, or anywhere else, just adds another level of opacity. It is not so that the cleaning lady will get richer if she gets more productive. It is not so that the bus driver in Frankfurt, although his salary might be 15 times higher than his counterpart in Lima, Peru, is 15

³⁴ The Group of Lisbon, *Limits to Competition*, Cambridge, Mass., MIT Press, 1995, p. 97.

times as efficient. He is probably equally efficient. How “productive” a nation is depends more on its economic structure and its choice of export industry than anything else.

Economists look for what they can measure, and productivity appears to be easily measurable. However, changes in productivity are not the most important things that happen. Lighting did not improve through productivity increases in the kerosene lamp, but because Edison invented the electrical light bulb. “In the long run productivity is almost everything” is a fairly silly statement, but welcome in a profession where the quantum leap from kerosene lamps to electric lightbulb is difficult to measure in economic terms and therefore not considered.

Much wiser is the quote attributed to Alan Greenspan, that “all productivity measurement outside the agricultural sector is hogwash”. A ton of carrots is a ton of carrots, or is it? A ton of tiny carrots for snack purposes is certainly much more worth than a ton of huge industry grade carrots. With manufactured goods, quality changes make productivity measurements difficult. Here is 10.000 dollar worth of car, but how do the qualities of that car change over time? When we get to the traditional service sector, the measurements get even more difficult. We shall get back to this problem.

The effect called Baumol’s Law³⁵ must be considered when discussing productivity. This law points to the fact that in some activities productivity increases are very difficult to achieve without a reduction in quality. The classical example is a symphony orchestra. There are essentially two ways to increase productivity when performing Chopin’s *Minute Waltz*, one can either play it in 50 seconds or, alternatively, reduce the size of the orchestra. In both cases quality will be affected.

More activities subject to Baumol’s Law are normally found in the public sector – e.g. nursing homes – than in the private sector. “Productivity commissions” proving a slower productivity growth in the public rather than in the private sector can therefore be useful tools for governments wishing to reduce the size of the public sector.

3.3. Innovation.

“Our objective is to develop policy initiatives aiming at **the modernization of the EU industrial base through accelerating the uptake of innovation**”, EU Innovation Policy Document (boldface in the original), http://ec.europa.eu/enterprise/policies/innovation/policy/index_en.htm Accessed February 2015.

³⁵ After US economist William Baumol.

The third term in the EU sociotechnical narrative – its sociotechnical imaginary – is innovations. One important aspect with the term innovation is that it is a completely foreign element in the neo-classical economic discourse which forms the basis of today's economic discourse in the West. Neo-classical theory is based on a system which *seeks* equilibrium, whereas innovations are what *break* equilibrium. I have previously referred to the practice on adding innovation policy to the standard mainstream narrative as putting a "Schumpeterian icing on a solid neoclassical theoretical cake".³⁶ Adding the somewhat outdated term "modernization" to the narrative, as the EU website does, creates a newspeak putting together an intellectual cacophony of sorts. As they are normally used in theory, equilibrium and innovation are opposite phenomena. By absorbing the otherwise incompatible idea of innovation as the driver of the economy, the neoclassical mainstream – as it did with Keynesianism – again has shown a great ability to usurp, absorb, and subdue a threatening alternative theory.

The potential for productivity increases is highly activity-specific: How much productivity increase you can achieve largely depends on what economic activity you are in. In the Stone Age productivity increases were in the stone making tools, while in the Bronze Age it was in the production of bronze articles. With Carlota Perez, the modern equivalents of these periods have come to be called techno-economic paradigms.

Figure 4 below shows productivity development in the cotton-spinning industry from 1750 onwards. The curve is dominated by what I call a *productivity explosion* in cotton spinning, "competitiveness" (in the 1992 sense), innovation, and productivity all exploded, only to fall. In order to have an industrial revolution, all nations had to embrace this particular industry.

It would be silly at the time to blame the poverty of countries in the woolen or linen industries – which did not experience such mechanization – on their lack of "competitiveness" or productivity increase, or on innovation. The problem of these countries was that they were not into cotton spinning. Period. Only cotton spinning exhibited "competitiveness", productivity increase, and innovation of any magnitude. Yet it is exactly this blame-game the European Union gets away with. You can blame Moldova for lack of EUs holy trinity – competitiveness, productivity increases, and innovation – but the economic infrastructure of Moldova makes it virtually impossible to make important innovation. If you want to innovate in pickled cucumbers you must probably buy most inputs, like jars and lids, from abroad, which will make it extremely difficult to compete.

³⁶ Reinert & Reinert 2003, Reinert 2007.

This is why, in my view, there is an element of “Why don’t they eat cake” in the facile prescriptions of the EU to its poor periphery. During the golden decades of the Marshall Plan, terms like “vicious economic circles” and “perverse backwashes” could put a label on the poverty traps experienced. These labels have been unlearned.

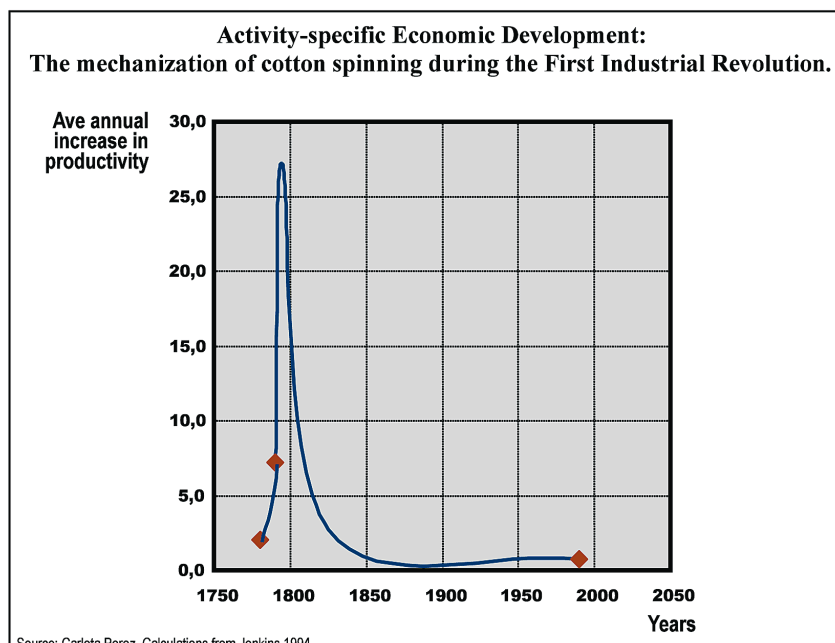


Figure 4. This Figure shows the Productivity Explosion in Cotton Spinning in the late 1700s. At the time this was the only industry which exhibited such behaviour. In no other industry, at the time, could similar productivity increases, similar speed of innovation, and similar “competitiveness” be observed. A nation not in cottons spinning would simply not have an industrial revolution. Today Moore’s Law, the doubling of the capacity of the silicone chip every 18 months since the 1970s, would produce a similar graph.

The equilibrium metaphor has blinded us for all the forces which produce dis-equilibria. To quote Arthur F. Burns (1904-1987) a former President of the US Federal Reserve:

‘The warnings of a Marx, a Veblen, or a Mitchell³⁷ that economists were neglecting changes in the world gathering around them, that preoccupations with states of equilibrium led to tragic neglect of principles of cumulative change, went unheeded’.³⁸

³⁷ Burns here refers to Wesley Claire Mitchell, founder of the National Bureau of Economic Research, and a student of Thorstein Veblen

³⁸ Arthur F. Burns, *The Frontiers of Economic Knowledge*, Princeton: Princeton University Press, published for the National Bureau of Economic Research, 1954, p. 46.

What the European Union is experiencing at the moment is cumulative change, of the vicious circle kind, and would do well in looking into these principles, long used in classical development economics. We should also note the surprising fact that Burns, President of the US Federal Reserve from 1970 to 1978, actually quotes Karl Marx. This fact alone shows us how polarized the academic and political world became after 1989.

4. The Alternative Sociotechnical Narrative: How Innovations Differ in Occurrence and Diffusion.

At the dawn of European exceptionalism – probably two centuries before Europe surpassed China as an economic power – England started its Industrialization process with the 1485 ascent of Henry VII to the English throne³⁹. At the time of Henry VII, out of all existing human activities, only *one* experienced rapid technical change: the manufacturing of woolen textiles. Most other activities were basically carrying on as before. This one activity absorbed capital, because only here were there large scale investments to be made. This one activity had technical change and innovation. Only in this activity were there economies of scale and scope. Only this one activity offered any possibility for new learning. Only this activity created a *demand* for ‘organizational capabilities’. At that moment in time it was clear that economic progress was *activity-specific* – it was basically taking place in one economic activity and not in any of the others. The basis for building a ‘National Innovation System’ was to protect and support the one economic activity where innovation was taking place.

Studies of patents confirm the idea that economic progress develops through changing ‘focal points’ of technological change (MacLeod 1988). The concentration of patenting in changing areas of manufacturing – and its almost complete absence in agriculture and services – give us a clue as to why the winning combination of *innovation* and *imperfect competition* is found mostly in manufacturing. The combination *innovation* + *imperfect competition* produces the kind of economic growth which ‘sticks’ in the producing nation.⁴⁰ 19 The mercantilist ‘national innovation system’ achieved this combination by protecting any economic activity in the process of being mechanized – the ‘good’ economic activities. In the remainder of this section we discuss issues related to this:

³⁹ Henry’s predecessor Richard III, killed in the Battle of Bosworth Field on August 22, 1485, the battle which won Henry the throne, recently made history when his body was found in a parking lot in Leicester and reburied in 2014 in the local cathedral.

⁴⁰ Innovations applied under near-perfect competition, like the invention of the container, tend to lower prices and GDP as measured, and therefore create so-called ‘Solow-Paradoxes’.

- How to determine 'good' and 'bad' economic activities as carriers of economic growth and development.
- The two modes of diffusion of the benefits of new technologies.

4.1. The "Quality" of Economic Activities as a determinant for Economic Welfare.

The obstacle to our understanding the distribution of wealth and poverty between nations is embedded deeply in the equality assumption, in an economic theory which sees all economic activities as being alike. The root of this is that David Ricardo (1817) modeled international trade as bartering of labour hours which were qualitatively alike. Other models have been made, but have failed to reach the policy level.

'All Chinese look alike to me' is hardly a scientific approach to a study of China and Chinese culture. In neoclassical economic theory, on the other hand, the core assumptions make all economic activities 'alike'. In a world with perfect information, no increasing returns to scale, and full divisibility of all factors, the outcome of increased world trade will be factor-price equalization. In the real world the gap between rich and poor nations – also within Europe – is often found to increase rather than decrease, in spite of huge increases in trade. Clearly *relative efficiency* in the export sector is not a main determinant of wealth: a study a few years ago showed that the world's most efficient golf ball producer (in an industrialized country) receives a monetary wage 30 times higher than the world's most efficient baseball producer (in Haiti) – 30 cents an hour compared to a typical industrial country wage of 9 dollars an hour.

We have seen that the growth of the presently rich countries was based on a theory where economic development is *activity-specific*: it happens on a large scale only in a limited part of the whole spectrum of economic activities at any one point in time. Today, locating these 'superior' activities concentrated in any broad industrial category, as in the past, is difficult. Almost all activities and industries, even the most pedestrian ones, have some segments offering the winning combination of innovation and imperfect competition. The process is not fully understood until one reaches the product and brand level. Figure 5 shows us, in a historical example how different manufacturing industries in the United States differed in terms of increase or decrease in output, increase or decrease in employment (wage earners), and in productivity.

What is missing from this picture is what we shall discuss in the next section: to what extent will the productivity increases achieved stay in the

producing country – as higher profits and higher wages – and to what extent must the fruits of this increase in productivity be given away as lowered prices? The big difference here is not between different manufacturing industries, which mostly operate under high barriers to entry and imperfect competition, but rather between manufacturing on the one hand and agriculture and mining on the other. The main difference here is between the activities where there is a certain leeway in setting your own prices – like the situation Bill Gates is facing – and those who read in the newspaper what the market is willing to pay for their products (farming and mining).

Figure 5 shows the distribution of technological opportunities in 51 industrial sectors of the US economy from 1899–1937.⁴¹ The growth in productivity rates varies enormously; although we can assume that the same capital, skills and institutional factors were present over the whole spectrum of activities. Clearly, the US would not have taken world leadership if it had been only in industries 27–51. No amount of capital or learning would have achieved the results that in fact were achieved, without the industrial activities on the left side of the chart. Secondary effects spiral from the activities to the left: these activities are the ‘wage setters’ of the economy, and the upward pressure on wages in turn increases the use of capital in the rest of the economy at the expense of the increasingly more expensive factor labour. Demand grows as the result of higher monetary wages. In the end, the multiplier effect of technological progress in ‘wage setting activities’ is formidable, and forms a core mechanism in the virtuous circles of development. We tend to forget, however, that technological change comes in focused ‘clusters’; in the stone-working industry in the Stone Age, bronze-working industry in the Bronze Age, etc.

The advantage of these data is that they give us a perspective on things. Today it is more obvious than at the time that hat and glove industries, sleighs and carriages, would have to lose out to cars and chemicals. One important observation to come out of these data is *Verdoorn’s Law*: There is a key link *between growth in output and growth in productivity*. In recent years IT industry has played the same role as automobiles played in the dataset – very high growth in output and very high growth in productivity. As we shall discuss later, Ireland as a country increased its “competitiveness” (by the old 1992 definition) riding on the steep learning curves – with fast growth in output and in productivity – in the IT industry.

⁴¹ This chart is taken from Solomon Fabricant (1942)

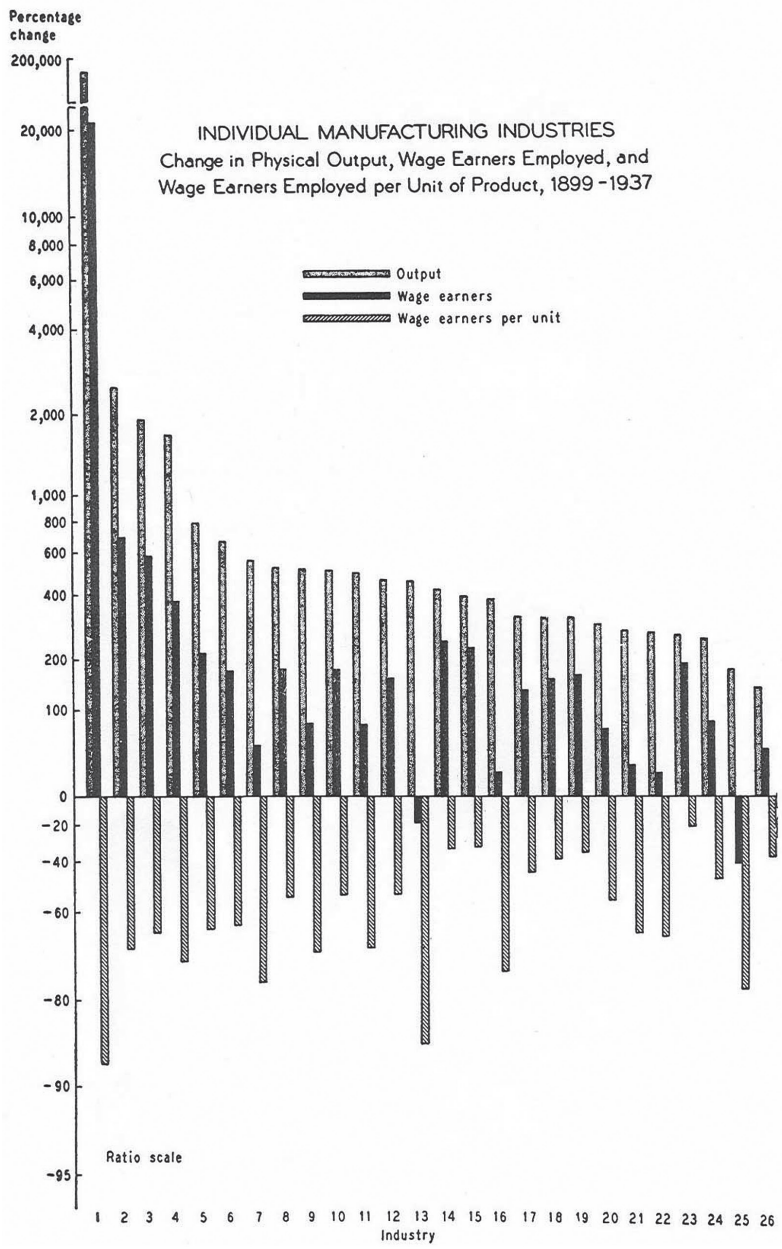


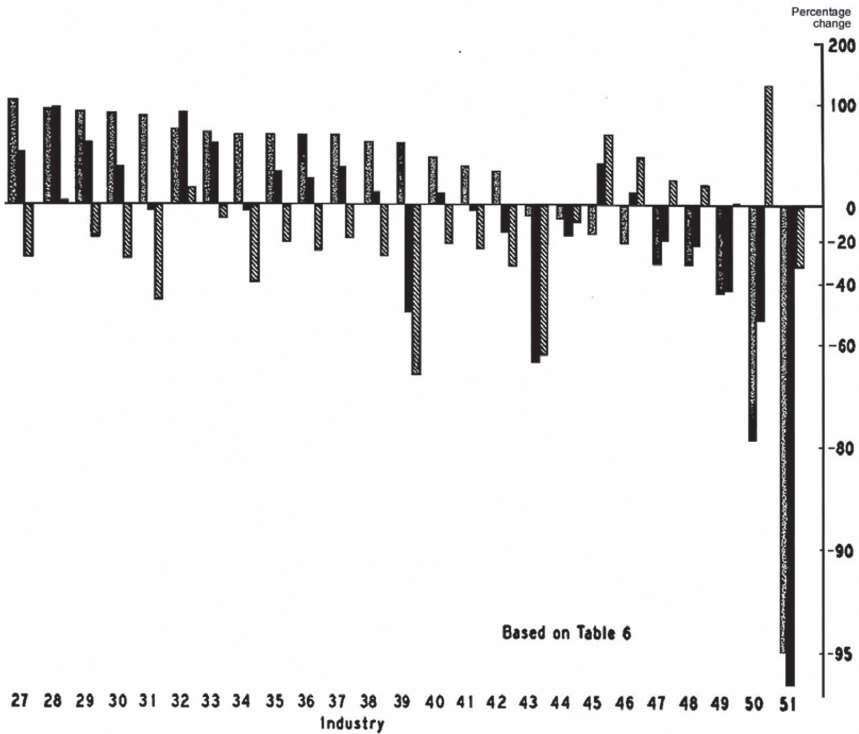
Figure 5. How Economic Activities Differ: A Historical Example.

INDUSTRY

- 1 Automobiles, incl. bodies and parts
- 2 Chemicals, industrial, incl. compressed gases and rayon
- 3 Petroleum refining
- 4 Beet sugar
- 5 Fruits and vegetables, canned
- 6 Ice
- 7 Glass
- 8 Paper and pulp
- 9 Silk and rayon goods
- 10 Knit goods
- 11 Printing and publishing, total
- 12 Butter, cheese and canned milk
- 13 Cigars
- 14 Rice
- 15 Paints and varnishes
- 16 Coke-oven products
- 17 Zinc
- 18 Liquors, distilled
- 19 Steel-mill products
- 20 Tanning and dye materials
- 21 Copper
- 22 Explosives
- 23 Wood-distillation products
- 24 Fertilizers
- 25 Blast-furnace products
- 26 Jute goods

INDUSTRY

- 27 Cotton goods
- 28 Hats, wool-felt
- 29 Shoes, leather
- 30 Cane sugar
- 31 Salt
- 32 Meat packing
- 33 Cottonseed products
- 34 Leather
- 35 Woolen and worsted goods
- 36 Liquors, malt
- 37 Shoes, rubber
- 38 Carpets and rugs, wool
- 39 Lead
- 40 Cordage and twine
- 41 Gloves, leather
- 42 Hats, fur-felt
- 43 Chewing and smoking tobacco
- 44 Flour
- 45 Ships and boats
- 46 Cars, railroad
- 47 Lumber-mill products
- 48 Turpentine and rosin
- 49 Linen goods
- 50 Locomotives
- 51 Carriages, wagons and sleighs



However, the fruits of increased productivity as measured in figure 5 will spread in the economy in two different modes (or rather, in a mix of two different modes):

The Classical Mode: as lower prices to the consumers (in perfect competition markets as in agriculture, mining, and with process innovations)

The Collusive Mode: as higher profits and higher wages to the producers ("The Fordist wage regime"), in activities with high barriers to entry and increasing returns to scale (manufacturing), and with product innovations.

As with productivity increases, the windows of opportunity for innovation will vary vastly from one economic activity to another. We must keep in mind that it is entirely possible for a nation to be locked into technological dead-ends bereft of any possibilities for increasing returns and innovations. We have already mentioned the example of baseballs, where advanced technology has not been able to mechanize the production; the most efficient producers in the world still produce these by hand at extremely low wages. This means that it is possible to specialize in the international division of labour in being poor.

Economic development is a process which requires the presence of several *reactants*: capital, education, skills training, institutional factors (property, credit, even trust), entrepreneurship, and a technological 'wave' or 'window of opportunity'. The absence of any of these reactants will impede the development process. The understanding of this process is difficult, because not only does the 'formula' – the right mix of reactants – for growth change over time, it also changes from industry to industry at any point in time. What US economist Moses Abramowitz called the factor-bias of economic development varies from one technology to another, so growth-producing innovations have different 'fingerprints'.

An innovation creates a *demand* for education, for skilled labour, for R&D, and for capital. By identifying the economic activities which at any point in time were *in the process of being mechanized* – where new skills were in high demand – the 'primitive' industrial policy of mercantilists and cameralists centuries ago managed to single out the 'winning' activities, those at the start of a steep learning curve.

If we draw Figure 4 – the figure showing the productivity explosion in cotton spinning during the First Industrial Revolution – in a different way, we can produce a learning curve which plots the development of produc-

tivity over time in man-hours per unit of produce. In figure 6 we have done this exercise for the production of a standard pair of shoes in the United States. We can observe how productivity increases – also “competitiveness” and “innovation” – came apparently very easy from 1850 to 1900, but then grew more difficult. Can we conclude from this that US workers got more lazy after 1900, should they be scolded for their lack of productivity improvements or their lack of “competitiveness”? Of course not, the window of opportunity for fast productivity improvements in the manufacturing of shoes had been exhausted, in the same way as the technological opportunities of the Stone Age and Bronze Age were once exhausted. As I see it, this dimension of the trinity of slippery concepts – competitiveness, productivity and innovation – appears to be missing from today’s European Union narrative.

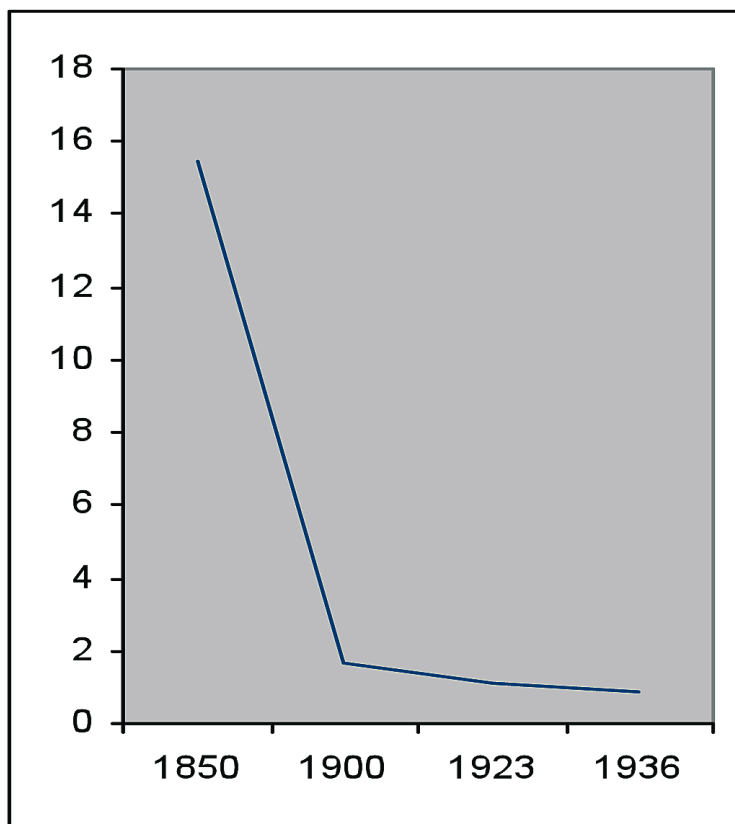


Figure 6. *Learning Curve of Best-Practice Productivity in Medium Grade Men’s Shoes at selected dates in the United States (in man-hours).*
Year: Man-Hours per Pair. 1850: 15.5 hours, 1900: 1.7 hours, 1923: 1.1 hours, 1936: 0.9 hours.

Source: Reinert 1980 / US Bureau of Labor Statistics.

Uneven distribution of wealth seems to have the same basic causes within Europe and globally. Wage-level differences inside Europe are caused by the same mixture of static and dynamic factors, which cause the polarization of the world in a rich and a poor convergence group. Interestingly, in the 1980s sociologists studied the US economy with a dual-economy approach, an approach used in development economics for a long time.⁴² This resulted in a ranking of economic activities similar to our Quality Index of Economic Activities in Figure 7 – from ‘good’ to ‘bad’ – which is inexplicable, or rather not very sensible, from a neo-classical viewpoint.⁴³

The challenge in economic theory is to find a level of abstraction, where useful generalizations can be made without making all economic activities either *all equal* or *all different*. To a businessman, his firm is unique. The opportunity seen by an entrepreneur is a unique vision, if not in other ways, in the geographical location of his business. At this level of abstraction we are faced with billions of economic agents that are all *unique*. As we have already discussed, on the other extreme – in neoclassical theory – all economic activities are *equal*.⁴⁴ Case studies of firms, industries, and nations are useful building blocks for theories, but a theory on a higher level of abstraction is needed.

What, then, are the characteristics of growth inducing – ‘good’ – economic activities? In economic theory we have defined two extremes of a continuum reasonably well: perfect competition and, at least statically, monopoly. Under perfect competition and certain other conditions we would achieve factor-price equalization, we would all be equally rich. Under monopoly, we can predict high rents transferred to the monopoly holder from the rest of the world. A core problem in economic theory is that the profession has, at least until the recent events of new growth and trade theory, *little meaningful to say about varying degrees of imperfect competition*, the conditions under which virtually all economic activities produce and trade. The situation is similar to being able to measure two extremes, black and white, without having any way of measuring the various intermediary shades of grey. This is particularly bothersome in economics, where no activities over any length of time belong to either

⁴² The concept can be traced back to the first years of the 20th century, see The Royal Tropical Institute (1961).

⁴³ These issues are discussed in Reinert, Erik ‘Emulation vs. Comparative Advantage: Competing Principles in the History of Economic Policy’. In Cimoli, Mario, Giovanni Dosi and Joseph Stiglitz (eds), *Industrial Policy and Development; The Political Economy of Capabilities Accumulation*, Oxford University Press, 2009, pp. 79-106.

⁴⁴ See, however, Lucas (1988, 1993) for examples of neoclassical models incorporating differences with regard to learning between activities.

of the categories we have defined well. In terms of 'degree of perfect/imperfect competition', economic activities are scattered over the spectrum from almost white – where the assumptions of neoclassical theory are reasonably valid – to almost black, where the same assumptions are highly unrealistic.

Differences in wage levels, both nationally and between nations, seem to result from varying degrees of imperfect competition – caused by both static and dynamic factors. The factors at work have long been identified both by businessmen and in industrial economics, and they are correlated. In Figure 7 I attempt to create an area from light to dark grey where 'the quality' of economic activities at any time can be roughly plotted on a scale from white – 'perfect competition' – to black: 'monopoly'. The latter is only a temporary state, as new technologies fall towards a lower score as they mature. The upper part of the quality index corresponds to a metaphor once used by Joseph Schumpeter that the upper strata of a market economy are like luxury hotels which are indeed always full of people, but people who are forever changing. Activities with a high score are *growth inducing*, activities with a low score are *growth inhibiting*.

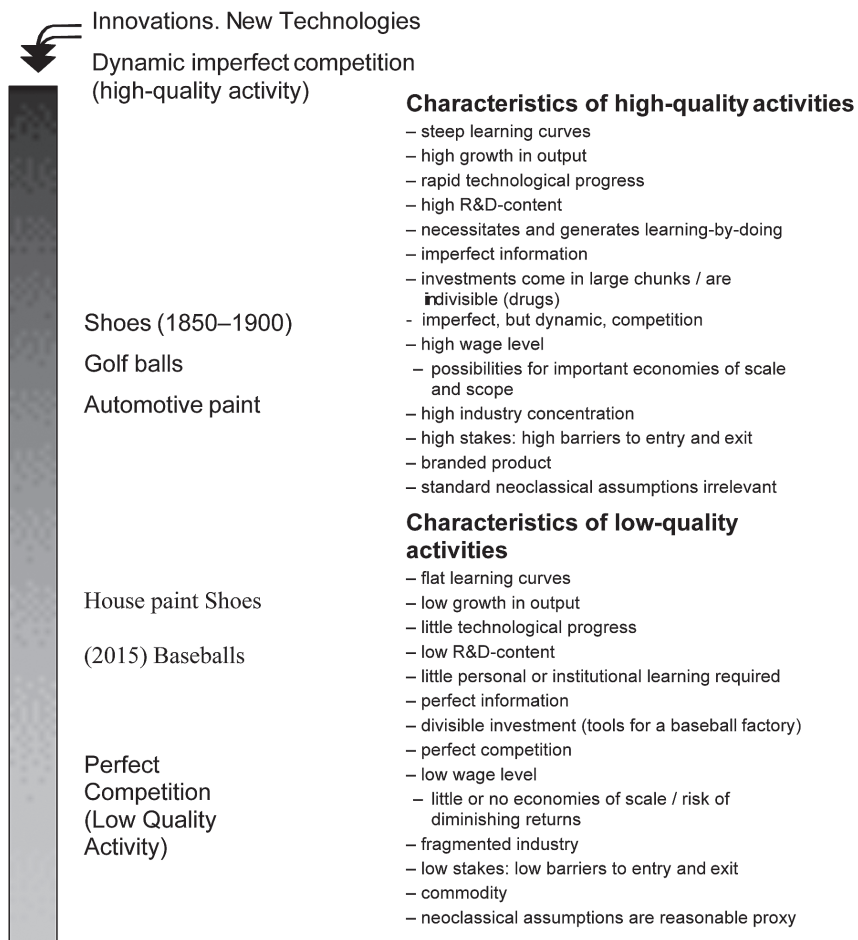


Figure 7. *The Quality Index of Economic Activities.*

The factors listed are correlated, but clearly not in any way perfectly so. The two lists of factors, those creating high-quality and those creating low-quality activities, exhibit a negative type of correlation: in their extreme form, the characteristics in the two groups are mutually exclusive. Each of the characteristics in one group is, in this form, incompatible with *all* characteristics in the other. The 'quality' of an economic activity for a nation, its ability to pay high wages and potential for high profits, can be read off on this scale. High-quality activities carry with them high risks in innovation and new technologies, and high barriers to entry also carry with them high barriers to exit. Consequently, there is no direct relationship between the quality of an activity and its profit level, only its *potential* profit level. A high-quality activity can be ruined in shake-out

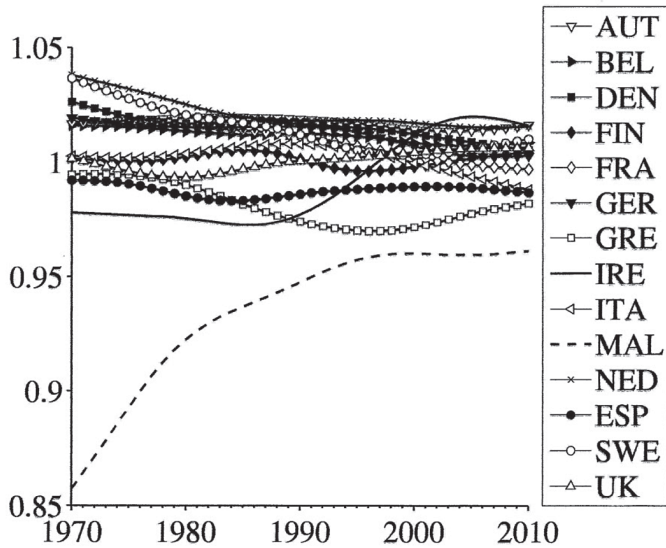
periods by huge losses across the industry. These losses are caused by high barriers to exit.

As they are presented here, the factors are a blend of causes and effects. I therefore choose to call them 'characteristics'. *Barriers to entry* boils down to being a common denominator of the forces at work. The system is a closed one, except for an opening at the top, in the black end. Here new knowledge – technological change – enters the system as a temporary monopoly, and then falls towards perfect competition over time at greatly differing speeds. A frequently used example of innovations with low barriers to entry is shipping-containers, which in this system fell reasonably fast on the scale towards perfect competition, although they had a huge impact on lowering global shipping costs. Patented drugs fall more slowly, but they fall sharply when patents expire. Patents are of course set up for this very reason, to keep profits up in order to encourage investment in research. Even when technological progress no longer takes place in an economic activity, static scale effects may give the activity in question a high value score (= dark grey).

The gravity in the system – the speed with which economic activities fall from temporary monopolies to perfect competition – is also determined by the intensity of competition. More intense competition causes the gravitational power to increase, as we have experienced with successive generations of computers. A more rapid fall of innovations through the system – more perfect competition and more classical spread of benefits (next section of the chapter) – combined with a lack of demand will by itself increase unemployment.

This Quality Index is in my view useful in conceptualizing a number of issues in economics, old and recent: competitiveness, the US past crusade for high-quality jobs, national wage differentials, and, most importantly, the clustering of the world in two groups of nations, the haves and the have-nots. Historically, the Quality Meter opens for an explanation as to why colonialism made sense to the colonial powers. Colonial economic policy assured the mother-country exclusive access to the activities with the highest score on the Quality Index. There is also considerable historical evidence that the colonial powers consciously pursued policies based on notions which are compatible with the Quality Index – that access to high-quality activities was prohibited in the colonies. The 'industrialicides' – the conscious killing off of advanced sectors in colonial economies – testify to this. Perhaps the clearest examples are from British colonial policy: the prohibition of the prosperous woollen industry in Ireland starting in 1699, described by Hely-Hutchinson (1779), and the destruction of the cotton-textile industry in India around 1814 (Chopra 1990). The prohibitions on

the export of machinery, in force in Britain until 1843, also indicate an understanding of economic power which is compatible with the Quality Index. The machinery question is described in Berg (1980). All in all, the Quality Index is not only able to throw new light on why mercantilism and cameralism of the past were essentially right, it is also useful in understanding some of the present issues in the European Union.



Note: Relative transition curves of countries in club 1 for the 1970-2010 sample.

Figure 8. *The Productivity Explosion in Information Technology in Ireland (solid line) starting in the 1980s. An example of how extremely steep technological learning curves combined with a high score on the Quality Index (i.e. a high degree of imperfect competition) can catapult a nation to a much superior convergence group = a much higher wage level. (I leave Malta unexplained)*

Source: Deutsche Bundesbank, op. cit., p. 17.

For a long time – until the country drowned itself in debt during the financial crisis – Ireland was for a long time perhaps the most successful example of EU integration. At the same time it is an example of how the learning curve effects and the Quality Index of economic activities work out in practice in raising real wages. Ireland had joined the European Community in 1973, and massive community funds had floated into its agricultural sector. However, this had caused overcapacity and highly indebted farmers in a very difficult market.

As an employee of US Consulting firm *Telesis*, I came to spend most of the year 1980 in Ireland following what was to become the Irish “produc-

tivity explosion” fairly closely. Our assignment was to evaluate Irish industrial policy after World War II and to make recommendations for the future, reporting to the Prime Minister Charles Haughey’s Office. It should be noted that Mr. Haughey was – as is Mr. Beppe Grillo – an accountant by profession. There were only three people present in the Prime Minister’s office for the kick-off meeting for our mission, and my recollection of the meeting was that Mr. Haughey recognized that the balance sheet of the Republic was in bad shape and that he had a vision: ‘out there is a new technology coming, and I want you to help Ireland be number one in that technology’. Haughey referred to information technology – his vision was one of emulating the rich countries, of catching up with them and forging ahead with the new technology. I was the only economist on the team in Ireland, but more than economic theory our advice was based on theories from industrial economics, like finding a steep learning curve and run down the curve fast to accumulate volume and experience. So our advice was later made along the lines of business strategies analysis, treating Ireland as a company which was trying to maximize real wages instead of maximizing profits.

Today Haughey is credited with the extremely successful transformation of the Irish economy starting in the 1980s, based on being an early mover into information technology. A special Irish tax treaty with the United States was also of great importance. After a while real wages in Ireland surpassed the real wages in England, the old colonial master.

If the Marshall Plan worked wonders in a few years in postwar Europe, it was because the nations in question – like Ireland was for the first time in the 1980s – were brought back in the high quality industries (dynamic imperfect competition) with steep learning curves, where they had been before the war. If the competitiveness/productivity/innovation rhetoric does not work in the EU periphery it is mainly because these nations are not in industries which behaved like information technology did in the 1980s.

The Deutsche Bundesbank paper, from which figure 8 is taken, says “Thus, overall we observe a gradual setback of Mediterranean countries, resulting in a South-East vs. North-West separation of European economies by the mid-nineties”.⁴⁵ This effect can in my view be better understood by the tools presented here, by a better understanding of the qualitative differences between economic activities and resulting dynamics.

⁴⁵ Borsi, Mihaly Tamas and Norbert Metiu. “The Evolution of Economic Convergence in the European Union” *Deutsche Bundesbank Discussion Paper*, No 28/2013

4. 2. The Classical and Collusive Modes of Diffusion of Technological Gains.

To the classical economists, productivity improvements would show up in the economy as lowered prices for the goods which experienced these improvements (see e.g. Smith 1776: 269, and Ricardo 1817: 46–7). In fact, David Ricardo was not very interested in machinery and productivity improvement; they show up only in the third edition of his classical book. At the time of Smith and Ricardo, the gold standard facilitated the result they predicted. In a closed economy, holding velocity of circulation constant, the increase of goods in the economy resulting from technological progress would chase only the same amount of bullion. Prices *would have to fall*. Rapid technological progress would therefore lead to deflation – which it in fact often did until the gold standard was abolished.

When the gold standard was abolished, people in the industrialized countries got rich in a different way than before. Instead of seeing the price of industrial goods fall as it used to, they now saw their monetary income rise. Previously deflation had caused awkward social problems: it was difficult to convince people who had to take continuous pay cuts that, in spite of these pay cuts, they were still getting richer, because the price of the goods they purchased fell at an even faster rate than their wages. The monetary policy which followed after the gold standard was abolished became, from the point of view of the industrialized nations, a more sensible one: money supply kept rising with the amount of goods in the economy, or slightly faster, creating a small inflation which seems to have served to oil the machinery of development. This is the root of what we have called the Fordist wage regime, which we shall discuss in detail later. Now the producer in an activity not exhibiting productivity improvements – e.g. the barber – got rich by raising his prices at the rate everybody else had their salaries raised, not only by having the price of manufactured goods lowered.

As shown in Figure 5, from 1899 through 1937, within the US, labour productivity in the automotive industry increased by about 900%, and many other industries recorded productivity improvements exceeding 100%. However, in many US industries: meat packing, hats, railroad cars, lumber-mill products and others, labour productivity did not change at all in the same period.⁴⁶ Yet, the workers in the industries which had no productivity increase at all over this 40-year period had their good share in the unprecedented growth in the US economy over that period. But, as opposed to what was expected in the classical model, this did not come

⁴⁶ Data from Fabricant, *op. cit.*, pp. 90–91.

through an improvement in their terms of trade. The increase in real wages came essentially through increased monetary wages as the national stock of money grew, not through improvements in the terms of trade in the 'dog' – i.e. low-productivity – industries. In this way the huge productivity advances in the 'star' industries spread to a much larger extent *inside the producing nation* than to customers abroad. A similar view on wage determination is held by the French regulation school (see Boyer 1988).

Terms of trade between developed and developing countries seem to have changed very little, in spite of the widely different changes experienced in productivity between industries within each nation. This observation would support the impression that each country keeps its 'average' productivity increase in the form of a higher standard of living. This again suggests that the *choice of economic activity* is strategically crucial to a nation.

As we have mentioned, the benefits of technology may spread in the economy in a different pattern from what the classical and neoclassical economists expect. I call this the *collusive* mode of diffusing the benefits from technological change: the benefits are divided among the capitalists, the workers, and the government *in the producing nation*. (The word collusive does not imply a conspiracy. This collusion comes about by the normal working of the economic, social, and political forces.) Inside a nation, social and democratic forces, labour mobility, and the distributive effects of a huge government sector ensure that the wage level and standard of living in the 'dog' industries do not lag too far behind those of the 'star' industries. Inter-industry differences are, of course, much greater in a society like the US than in a 'wage solidarity' culture like the Scandinavian, but the same mechanisms are at work.

Faced with a *collusive spread*, the US during the period covered in Figure 5 would grow richer if it could move workers from the hat industry to the automotive industry. Importing hats and exporting cars will – under the collusive diffusion of technological improvements that in fact happened – improve the US welfare position as compared to autarky. This opportunity is created by the fact that not all economic activities are mechanized at the same time and to the same extent. Things would look different, as US economist Henry Vethake said in 1838, 'if improvement in all the arts were to take place *at the same rate*.'⁴⁷ This is clearly not the case. A more realistic picture is the one given by Japanese researcher Fumio Kodama: 'It is more like the principle of surf-riding; the waves of innovation come one after another and you have to invest to ride the waves; if you miss, you are out of the game' (Kodama 1991).

⁴⁷ Italics in original.

A *classical* spread is the result of the usual assumptions in neoclassical economics. However, in a Schumpeterian world view, a purely classical spread is hardly plausible. The dynamics of the system are generated by the technological change which creates disequilibria – and the higher profits created in the industries experiencing technological change are necessary in order to draw capital to these higher risk and more capital-intensive activities. In addition, a classical spread of the benefits – only in the form of price reductions to customers at home and abroad – would not be seen as fair and democratic in the producing country. That industrialized country workers receive their share in the productivity improvements in terms of higher wages is an integral part of the credo of industrialized societies.

I have found myself re-inventing mechanisms which were known during the crisis years in the 1930s, then virtually forgotten, but should probably now be reinvented during this new time of crises. In the late 1930s, the US Brookings Institution published a series of books aiming at ‘nothing less than a general re-examination, in the light of modern developments, of the operation of the capitalistic system of wealth production and distribution’ (Bell 1940). The studies conclude that the benefits of technological progress may be spread in the economy in two different ways:

1. *Raising money wages (my collusive mode)*. ‘The most obvious method by which the income of the masses might be expanded... it is the method which has been steadfastly pursued by labor organizations... and it is the method which has been officially experimented with under the auspices of the National Recovery Administration.’ (Moulton 1935). It was recognized, however, that this gives a disproportionate wage lead for manufacturing and railway workers.
2. *Price reductions (my classical mode)*. The series of studies concluded that ‘the *most advantageous* means of broadly distributing the benefits of technological progress was by reducing prices in line with increasing efficiency in production’ (Bell 1940). The practical difficulties in achieving this were outlined in a third volume in the series: *Industrial Price Policy and Economic Progress* (Nourse and Drury 1938). The conclusion was that in a market where both the industry in question and the labour unions charge what the market can take for products and labour respectively, a large amount of what from an international trade point of view is a ‘collusive spread’ is inevitable in a market economy.

Clearly, in most industries, the benefits of technological development spread with elements of both modes. Distribution problems *within* a nation, which was the object of the Brookings Institution study, will be alleviated through competition in the labour market, through labour mobility, through the high government share in GNP, through the relocation of

industry to areas in the country with less expensive labour, and, particularly in the case of Europe, through the 'wage solidarity' of labour unions. Internationally, these mechanisms work in a very limited way, as does the huge redistributive machinery of national governments. The inevitability of a 'collusive spread' makes a nation's *choice of economic activity* so crucial. As a result of the collusive spread of technological progress, the world's most efficient baseball producer makes 30 US cents an hour in Haiti, and the world's most efficient golf ball producer makes 30 times as much in an industrialized country, as alluded to above.

Hans Singer, a former student of Joseph Schumpeter, raised the distribution issue of technological progress in his paper to the 1949 meeting of the American Economic Association. Singer⁴⁸ pointed out unquantifiable factors, however, and his important insight drowned in the attention paid to the terms of trade argument presented by Raul Prebisch and the Latin American school of economists. Measuring prices – terms of trade – appealed to the traditions and static world view of the economics profession. The remarkable lack of change in terms of trade between industrialized and primary-producing nations over time, showed by Joseph Kindleberger and others, really served to reinforce Singer's point: each group of nations is able to keep its own productivity improvements as an increase in national welfare.

Table 1 shows the characteristics of the *classical* mode (price reduction) and the *collusive* mode (raising money wages). In a truly classical spread, the innovation immediately falls to the lower level of the Quality Index in Figure 7. The use of containers – already mentioned – could be an example of such an innovation. The two modes are not mutually exclusive – in most cases they are both present to some degree. Under autarky, it makes no immediate difference to GNP whether the benefits spread in a classical or in a collusive way. Inside the European Union today it makes a big difference.

In the 1980s and early 1990s, the neoclassical paradigm in economics was being challenged by new theoretical approaches, the evolutionary paradigm. But, in terms of practical policy, the challenge did not succeed, and one can argue that the reason for this failure was the triumphalism that followed the fall of the Berlin wall. Had this challenge succeeded in a paradigm shift in economics, a central feature in a Kuhnian change in paradigm would have been a 'Gestalt-switch': The object of study – in this case the economy – starts to be perceived as a different *Gestalt*. If economics is to make progress towards understanding the causes of national wealth and poverty, it is necessary to dispense with the view of

⁴⁸ Published as Singer (1950).

the world economy as a *Gestalt* consisting of a mass of undifferentiated 'representative firms', all operating under perfect information and competition. The implicit assumption that 'all economic activities are alike' will have to be abandoned. A new and more relevant economic theory would have to consider the differences between economic activities – their use of factors like fixed costs, scale, and knowledge – and the cumulative effects of these factors over time. The description of this new multifaceted world-economy *Gestalt* will require new, but unfortunately less accurate tools than those presently used. The Quality Index of economic activities is one example of such a tool. Simple and absolute 'truths' – like the absolute superiority of free trade under all circumstances – would yield to much more complex, but also more useful, views. The Quality Index of economic activities is one example of such a tool. Simple and absolute 'truths' – like the absolute superiority of free trade under all circumstances – will yield to much more complex, but less useful, views. Readers who are worried about this development may find some consolation in Schumpeter's words: 'The general reader will have to make up his mind, whether he wants *simple* answers to his questions or *useful* ones – in this as in other economic matters he cannot have both'.⁴⁹

If a nation's economic activities historically are concentrated in the lower area of the Quality Index, the workings of the market will reinforce this position by assigning only mature products, produced with common knowledge and technology, to the poor nation. As the pressures of an increasingly perfect competition weigh on a product, cheap and unskilled labour becomes a key success factor for companies. Therefore, the production of a product like baseballs – until now unmechanized – is farmed out to Haiti, while the mechanized production of golf balls and tennis balls is kept in the industrialized countries.⁵⁰ The Baltic countries export firewood, but – from the same trees – Finland produces paper and even machinery for the production of paper. In practice the peripheral countries in the European Union are assigned – by the forces of the market – the low-tech activities working under perfect competition and a *classical spread* of benefits, while the core countries monopolize the upper part of the Quality Index, the top floor of Schumpeter's capitalist hotel. The invisible hand tends to shuffle the gains from technological progress to the core countries in the form of rents, through the mechanisms described in this chapter. Understanding both the historical strategies of the core countries of industrial Europe, and the differing 'qualities' of economic activities, are necessary ingredients in economic strategies of the Euro-

⁴⁹ Schumpeter in his foreword to F. Zeuthen (1930).

⁵⁰ This argument can be seen as an extension of the product life-cycle effects associated with Raymond Vernon and Lou Wells.

pean periphery now facing a catching-up process. If these mechanisms are left to the forces of the market alone, internal migration inside the EU will continue to increase dramatically.

Table 1 below attempts to list the factors which makes technological progress spread as lower prices to the consumers (the *classical* mode) vs. as higher income in the producing country (the *collusive* mode). My contention is that European convergence is made difficult by the fact that the core industrial countries operate under conditions close to my *collusive* mode, whereas the periphery operates more under the *classical* mode.

Table 1. Characteristics of the two modes of diffusion of productivity improvements

	The Collusive Mode	The Classical Mode
Characteristics of mode		
Divisibility of investments Degree of perfect information	Indivisible, comes in 'chunks' Imperfect (e.g., patents, internal R&D)	Divisible Perfect (competitive market for technology itself)
Source of technology from user company point of view	Internal, or external in big chunks = high degree of economies of scale	External
Barriers to entry Industry structure Economies of scale Market shares	Increase Increases concentration Increase Very important	No change Neutral No change Unimportant
How benefits spread		
GNP as measured	Highly visible	Tends often not to appear (Solow- paradoxes)
Profits level	Increases stakes: possibilities for larger profits or losses	No change
Monetary wages Real wages (nationally) Price level Terms of trade	Increase Increase No change No change	No change Increase Decreases Turns against industries experiencing technological progress
Examples of innovations in the two groups	New Pharmaceuticals, mainframe computers, automotive paint production	Electricity, telephones, sewing machines, use of PCs, dispersion paint production, containers
Where found	Mainly in industry, in recent products and processes	In primary and tertiary industry, use of new basic technologies, mature industry

Source: Reinert 1994.

5. Key Mechanisms of Economic Retrogression; De-industrialization, the Ratchet Wheel that Collapsed, and Overvalued Exchange Rates.

A key element in the incredible post-WW II growth of the European economy was what French economists call *the Fordist wage regime*. In short this means that if productivity increase in the advanced manufactur-

ing sector was e.g. 4 per cent, wages would also be allowed to increase by some 4 per cent. Also the wages in the professions with little productivity increases – like barbers and symphony orchestra musicians – would raise their prices and wages over time by roughly the same percentage. I have described this as a ratchet wheel effect: wages and purchasing power could only move one way: upwards (see figure 9 below).

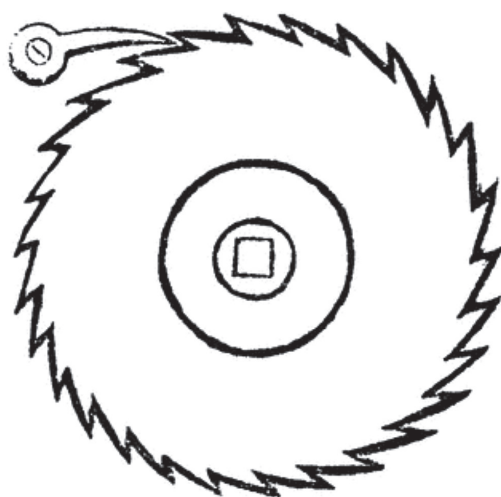


Figure 9. *A ratchet is a mechanical device that allows continuous linear or rotary motion in only one direction while preventing motion in the opposite direction. During most of the 20th century wages in the Western industrialized world behaved if they were ruled by such a ratchet wheel mechanism: wages could only move one way, i.e. upwards.*

This has several beneficial effects. First of all this mechanism secured that demand kept pace with supply, avoiding capitalism's endemic crises of overproduction/ underconsumption. Secondly it made labour increasingly expensive compared to capital, especially with the often negative interest rates in the inflationary 1970s. This double incentive for capital to invest – rapidly increasing demand and increasingly inexpensive cost of capital compared to cost of labour – was extremely powerful. As owner and manager of manufacturing firms for almost 20 years, I experienced these powerful virtuous circles first hand. The wages of my workers were increasing fast, while capital costs were very low – sometimes even negative.

This extremely powerful economic machinery – virtuous circles irreversibly moving only in one direction – would be understandable for classical development economists who were used to dealing with the opposite, with vicious circles. However, I doubt if the economic mainstream understood it. If so, they are unlikely to have wanted to destroy it as was actually done.

The beneficial ratchet wheel effect came to an end due to a combination of factors mutually reinforcing each other: the opening up of the Western European labour markets to cheap labour from the new member states, the loss of power of labour unions, opening up for free trade with China, which – due to the enormous population in the hinterland – for a long time kept wages extremely low in spite of rapidly increasing productivity. Even more than Japan did in the 1970s, China also seems to be able to climb into basic research and high quality activities. Austerity of course provides the final blow to any hope of resurrecting the ratchet wheel of prosperity that Europe once enjoyed.

We have already mentioned the de-industrialization to which the new EU members, as well as old EU members in the Southern periphery, were subject to different degrees. I shall use the case of Russia to illustrate how the locked exchange rate – the Euro – contributes to the destruction of the productive sector in the EU periphery.

In 2010 my Estonian colleague Rainer Kattel and I were asked by a Russian think-tank to evaluate the Russian economy since the fall of the Berlin Wall and recommend strategies. The result was presented at a conference in Yaroslavl honouring the birthday of President Medvedev. Not finding the data we looked for in the way we wanted it, Prof. Kattel reconstructed and put together some basic data on the Russian economy. This data is shown in Figure 10 below.

The effect of the shock therapy can easily be read off the charts we produced. Industrial production – to our surprise also agricultural production – was reduced by more than 50 per cent, more than halved, between 1992 and 2001. Real wages fell only slightly less, by 46 per cent, from the highest to the lowest point.

The real surprise was the role of the rouble exchange rate in all of this, until the exchange rate collapsed in August 1998. Clearly the rouble had earlier been very undervalued, but the meteoric rise of the exchange rate while the *economy was rapidly shrinking*, is extremely surprising. The point here is not how to explain this –when I last presented these data in Moscow it was suggested they be given to the general prosecutor’s office – the issue here is that this data set mimics what is happening to the peripheral members of the European Union who were so ill advised in joining the Euro.

For the European Union today the most interesting aspect of figure 10 is to see how the overvalued rouble “choked” both industrial and agricultural production while reducing real wages. This is the same effect the Euro has on the peripheral economies that should be allowed to leave the

common currency. Note how rapidly production grew after the devaluation. It is of utmost importance not to wait with these devaluations, if most industrial activities have died out, there will be very little left on which to base the rebound. Time is of the essence when it comes to free weak economies of the European periphery from the Euro.

It is also important to keep in mind that an important reasons for the relative success of Poland is that the country kept an independent currency. Other reasons for Poland’s relative success seemed to be that agriculture had not been collectivized, and the relatively large size of the internal market.

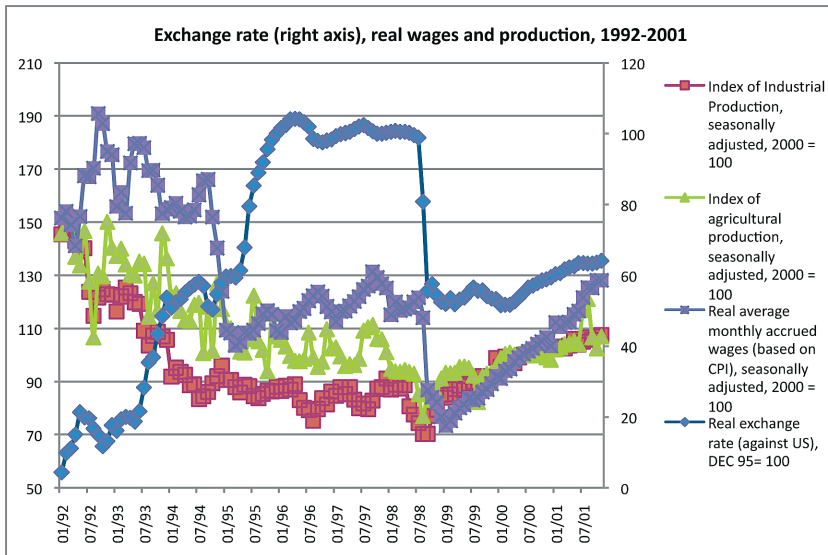


Figure 10. How an Overvalued Exchange Rate contributed Importantly to the Collapse of the Russian Economy 1992-2001. The peripheral Euro countries are now subject to the same effects of de-industrialization, de-agriculturalization, and de-population as was Russia at the time

Source: Reinert & Kattel, 2010⁵¹

It is import to understand what mechanisms were in place before the Euro, and it is in this perspective we need to understand the “irresponsibility” of the Southern EU periphery, which appears to be an important issue in the European Union. As an old Latin Americanist I recognize inflation primarily as a sign of a democracy under stress. Dictators – as

⁵¹ ‘Modernizing Russia: Round III. Russia and the other BRIC countries: forging ahead, catching up or falling behind?’, The Other Canon Foundation and Tallinn University of Technology Working Papers in Technology Governance and Economic Dynamics, No 32, 2010. <http://hum.ttu.ee/tg/>. Report for Global Policy Forum ‘The Modern State: Standards of Democracy and Criteria of Efficiency’, Yaroslavl, Russia, September 9-10, 2010. In *Modernization of the Russian Economy: from Theory to Practice*, pp. 2-33. Published in Russian and English, Moscow, 2010.

Stroessner in Paraguay or Duvalier in Haiti – do not create inflation. Inflation is a sign of democracies under stress, democracies which attempt to please the people by spending more than they have. Indeed, the first important cases of hyperinflation in Latin America was found in the two most democratic countries of all, Chile and Costa Rica.

In Italy, decades of terrorism both from the right and from the left dominated Italian politics during the period Italians call *gli anni di piombo* or the “years of lead (leaden years)”. Highlights of this terrorism were the killing of Prime Minister Aldo Moro by the left in 1978 and the 1980 massacre at the Bologna railway station by right-wing political forces. Under these circumstances – much like in Latin America – social peace could be achieved only through compromises that necessarily would produce increased inflation. The government made more commitments than could be met with domestic resources, given the constraints of the then ruling Exchange Rate Mechanism. Inflation was, in a real sense, the price of democracy and peace.

Before EMU (Economic and Monetary Union) was converted into the straightjacket enforced by the Euro – the “irresponsible” inflationary systems in Southern Europe took on the same logic as in Latin American democracies: inflationary budget spending led to falling exchange rates and to devaluations. In Europe this took place within the ERM. In this way international “competitiveness” (in the 1992 sense of the word) of the real economy was saved. Government debt also tended to be issued in local currency, so government debt was devalued with the currency.

What the Euro did was effectively to plug this very efficient system of safety valves – of *market mechanisms* – which adjusted exchange rates and kept the productive sector of all EU members “competitive” in the 1992 sense: that real living standards could rise regardless of differences in underlying inflation rates.

6. Separating the Real Economy from the Financial Economy.

And therefore so much of them ought not to be allowed to be applied to other uses that there should not be enough left for money. It was this consideration that led Theodoric, king of Italy (493-526⁵²), to order the gold and silver deposited according to pagan custom in the tombs, to be removed and used for coining for the public profit, saying: ‘It was a crime to leave hidden among the dead and useless, what would keep the living alive’.

Nicolas Oresme, *De Moneta*, 1356.

⁵² Years added by this author.

A key element in Western culture has been the prevention of hoarding: in other words making sure money was circulating, not idle. The quote from 14th century monetary theorist Nicolas Oresme testifies to the importance of keeping money in circulation in order to keep the real economy going. An early expression of it is in the Bible (Mathew 25; 14-30) where servants are given money (*talents*), and the servant who has simply buried the money, instead of putting it in circulation, is severely punished.

An important element in German-language economics has been the separation of the *financial economy* from the *real economy*. We find this from Marx to the left of the political axis to the conservative Schumpeter on the right. Figure 11 below renders Schumpeter's idea of separating the *money* (Rechenpfennige/accounting units) from what you can buy for money in the *real economy* (Güterwelt, the world of goods and services).

The Circular Flow of Economics

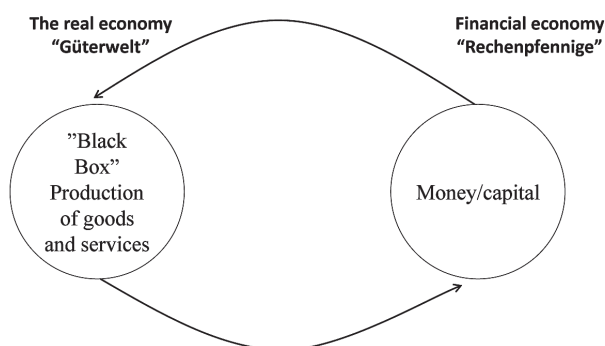


Figure 11. Separating the Real Economy in a Schumpeterian fashion, *Güterwelt* = the world of goods (and services), *Rechenpfennige* = accounting units. The EU solution to the financial crisis has been to create more "accounting units", inflating the size of the financial sector, but – through austerity – preventing these newly created accounting units from reaching the real economy in the form of increased demand for goods and services. In this way the financial economy goes from working in symbiosis with the real economy into being a parasite decreasing the size of the real economy.

In good times the financial economy serves as scaffolding for the real economy, as a bridge in time as Keynes put it. If allowed to grow in ways that do not positively impact the real economy – by making money on money without going through production in the real economy – the financial sector will become like a parasite which grows at the expense of the real economy. Since the times of Hammurabi, 1.500 BC, societies which

survived have managed to cancel unpayable debt⁵³. Bankruptcy, like book-keeping, was a necessary invention in the early centuries of capitalism, At the moment the combination of printing new money, which are assets in the financial sector but liabilities in the real economy⁵⁴, coupled with austerity in the real economy appears to be producing the situation Lenin looked forward to: the last stage of capitalism will be when financial capital takes the reign. Presumably because the real economy will collapse under the weight of debt and underconsumption.

As I see it, the decision to put bankers – Mario Monti and Mario Draghi – in charge of the economy was a result of not having understood the huge imbalances which might be created if the real economy was sacrificed to the interests of banks. With a single-minded focus on preventing inflation – at all cost – Mario Draghi was elected for an eight-year period, from 2011 to 2019. It is tempting to compare the length of Mario Draghi’s term as not publically elected de-facto economic dictator to the terms of elected officials of early democracies in the Italian city states. Officials of the *signoria* of Florence were elected for two months, and the ruling council was so distributed between the professions that only one banker could be a member. Venice’ Council of Ten (*Consiglio dei Dieci*) was elected for 6 months at a time.

Also in this case there were warnings. Interestingly enough, Mario Draghi himself has issued a written warning against monetary power coming into the hands of the wrong people:

“The currency...is one of those precious institutions which may become malignant if used to the advantage of organized groups”.⁵⁵

This is an exact description of what happened to the Euro in the hands of Mario Draghi: the currency is used to the advantage of the financial sector – *of high finance* – in the disfavor of the real economy. German fear of inflation and that country’s obvious short-term benefits from the present situation increases the power of the financial sector. What is now taking

⁵³ See my article “Mechanisms of Financial Crises in Growth and Collapse: Hammurabi, Schumpeter, Perez, and Minsky”, in *Jornal Ekonomi Malaysia*, No. 46 (1) (2012), pp. 85-100, and *The Other Canon Foundation and Tallinn University of Technology Working Papers in Technology Governance and Economic Dynamics*, No 39, 2012. <http://hum.ttu.ee/tg/>

⁵⁴ This is one of the basic principles of double entry bookkeeping, a system which macro-economists rarely study.

⁵⁵ Draghi writes this in reference to economist and first President of Italy, Luigi Einaudi: “La moneta, nella sua visione (i.e. Einaudi’s), è una di quelle istituzioni preziose che possono però divenire perniciose se usate a vantaggio di gruppi organizzati”, Draghi, Mario “Prefazione”, in Gigliobianco, Alfredo, *Luigi Einaudi: Libertà economica e coesione sociale*, Collana Historica della Banca d’Italia, Bari, Laterza, 2011, p. vii.

place is financial hoarding on a large scale, huge amounts of money are essentially out of circulation in the real economy. It is time to go back and read Nicolas Oresme and Martin Luther⁵⁶ on the subject of hoarding.

In 2008, Francesco Cossiga – Christian Democrat, former Prime Minister and Former President of Italy – issued another warning by accusing Draghi of being an evil speculator (*vile affarista*)⁵⁷, and rejected the idea that Draghi had a future in Italian politics because he would “sell off everything to his American friends”. We assume what was meant was Wall Street. In a recent book chapter I have contrasted the times, attitudes and policies of Marriner Eccles – who, as chairman of the US Federal Reserve led the US out of the crisis in the 1930s – and the policies of the European Central Bank now⁵⁸. The differences are alarming, possibly with an exception for those, like Lenin, who wish the capitalist market economy to collapse.

But, *cui bono?* – who benefits from the present crisis? The answers are very clear: The major beneficiary of the crisis is the financial sector, which is growing far too big also according to IMF⁵⁹. When the financial sector is allowed to print money, they in effect print debt. What is on the asset side of the balance sheets of the banks is on the liability side of the balance sheets of the real economy. When bankruptcies are no longer permitted, the financial sector becomes a parasite shrinking the size of the real economy.

In the real economy, the only beneficiary is Germany and to some degree Holland, which gets to keep a large manufacturing sector. On the other hand, this advantage is shrinking as the purchasing power in the rest of the EU – important customers for Germany and Holland – is shrinking.

It is remarkable how the European Union seems consciously to copy the serious mistakes of the German reunification, the *Wiedervereinigung*. At the time of the 1990 monetary unification of the East and West Deutschmark the market exchange rate was as low as 4,3 *Ostmark* to one *Westmark*. In spite of this, running wages were converted at an exchange rate

⁵⁶ See Rössner, Philipp Robinson, “Burying Money. The Monetary Origins of Luther’s Reformation”, *The Other Canon Foundation and Tallinn University of Technology Working Papers in Technology Governance and Economic Dynamics*, No. 54, 2013. Downloadable on <http://hum.ttu.ee/tg/>

⁵⁷ The interview, in the programme Unomattina, is found on youtube in different wrappings.

⁵⁸ Financial Crises and Countermovements. Comparing the times and attitudes of Marriner Eccles (1930s) and Mario Draghi (2010s)”, in Dimitri Papadimitriou (ed.), *Contributions of Economic Theory, Policy, Development and Finance. Essays in Honor of Jan A. Kregel*, London, Routledge, 2014, pp. 319-344.

⁵⁹ <http://www.ft.com/cms/s/0/4b70ee3a-f88c-11e4-8e16-00144feab7de.html>

of 1 to 1. This of course gave an initial burst of increased purchasing power in the East, but – in spite of probably being the most high-tech of the Soviet Block – and in spite of some large relocations eastward, the technologically inferior East German industry could not survive the cost shock. In spite of Germany doing all the right things in terms of building infrastructure, production – and with it people – moved to the West. The destructive long-term effects of an over-valued currency were obvious, but still the same mistakes were repeated again and again in the EU. The alternative to correcting exchange rates is to move people.

It may be argued – as it has – that this way was the only politically feasible. Maybe so, but this is absolutely no excuse for repeating the same mistake again in the EU periphery. I am not suggesting that West German economic interests learned an important lesson from how the *Wiedervereinigung* killed competing industries in former East Germany and decided to repeat this strategy by including the European Union periphery in the Euro – which was originally intended only for strong currencies – but in fact the very same destructive mechanism was repeated with the very same destructive results for the economic periphery!

There is – I have argued – a qualitative quantum leap towards the worse in the philosophy of European integration between the careful and gradual economic integration of Spain, Portugal and Greece, on the one hand, and the 1 May 2004 integration eastwards on the other. The first integration was pragmatic, gradual, and Listian; the second was much more ideological, based on free trade shocks, a product of economists and politicians who had come to believe in the crude propaganda version of economics where markets create automatic economic harmony. The errors created by the ideology of the 1990s now threaten wealth and welfare all across Europe. Failing to take into account the forces that by their very nature make economic development into an uneven process, the Lisbon Strategy becomes merely a list of good intentions which – faced with the totally unsurprising effects of normal economic gravity – appear more and more utopian. But the state of denial continues: largely to the short-term benefits of the financial sector and at considerable long-term expense to the real economy and to human welfare in Europe.

7. Diversity as the forgotten dimension, with a Note on Kant vs. Fichte.

“How fortunate we are in this regard that there are still so many distinct and separate German states! What is so often said to be our disadvantage can perhaps work to our advantage in this important national matter. Perhaps imitation on the part of the majority, and the desire to get ahead of the others, will bring about something that the tranquil self-satisfaction of the individual states would not; for it is plain that the one state among all German states that makes a start with this will gain a definite lead in the

*respect, love, and gratitude of all; it will be the supreme benefactor and true founder of the nation. It will give the others courage, provide an instructive example, and become their model; it will remove all reservation that they might still have; it will be the source of the first teachers and the first textbooks, upon which the others may draw; and whichever state becomes the second will have the reputation of having been second”.*⁶⁰

Johann Gottlieb Fichte, *Addresses to the German Nation*, 1808.

A key characteristic of the 20th century was standardization. The need for standardization was brought about by industrialization: lowering costs was intimately tied to standardized mass production. The use of standardized and interchangeable parts had already started with gun production during the US Civil War, but the real starting point for mass production was Henry Ford’s assembly line. “Any customer can have a car painted any colour that he wants so long as it is black” was Ford’s message in 1909. In 1996 the cult of standardisation in a sense peaked with the cloning of the first mammal, the sheep “Dolly”, in Edinburgh. In between US author Ira Levin had produced a thriller, *The Boys from Brazil* (1976), where the cult of “sameness” led to an attempt to clone Hitler. The IT revolution in the 1990s made much more flexible production possible, and the need for and cult of “sameness” diminished.

Neo-classical economics – and therefore also economic logic behind the European Union – come to conform to the standardisation zeitgeist. As economics Nobel Laureate James Buchanan, already quoted, wrote: ‘Any generalized prediction in social science implies at its basis a theoretical model that embodies elements of *an equality assumption*. If individuals differ, one from the other, in all attributes, social science becomes impossible.’⁶¹ Faced with this trade-off between “science” and “diversity”, neo-classical economics chose the “scientific” path, by in effect making all human beings (perfect information) and all economic activities (perfect competition) qualitatively alike. The basic metaphor of economics became equilibrium, taken from the physics profession of the 1880s.

A great intellectual mystery of the 20th century is how, on the one hand, standardized mass production and the concomitant growing importance of increasing returns to scale under imperfect competition came to dominate economic life in the rich industrialized countries. On the other hand, sometime in the 1930s increasing returns to scale – the very basis for standardized mass production – was thrown out of economic theory

⁶⁰ Fichte, Johann Gottlob, *Addresses to the German Nation*. Translated, with Introduction and Notes, by Isaac Nakhimovsky, Béla Kapossy, and Keith Tribe. Indianapolis, IN, Hackett Publishing Co., 2013, p. 141.

⁶¹ Buchanan, James, *What Should Economists Do?*, Indianapolis, Liberty Press, 1979, p. 231. Italics added.

because it was not compatible with equilibrium⁶². The logical thing had been to throw out equilibrium because it was not compatible with the most prevalent of all economic “laws” at the time, increasing returns. The 1988 Cecchini report, which made the theoretical case for the European single market, was heavily influenced by the importance of increasing returns to scale. Around 85 per cent of the benefits from the single market were seen to come from this factor (increasing returns) alone.

The trend towards standardization and ever-increasing size of firms and organizations was very much the reality of the 20th century, but not in economic theory. A theory which assigned increasing returns and imperfect competition to industrial activities and diminishing returns and perfect competition to agriculture and mining would have contradicted the overriding paradigm of the need for free trade. As discussed elsewhere, that understanding – which in practice had been basis for most of European history – slowly died out after its extremely successful reintroduction with the Marshall Plan.

In 1982 two US economists, Richard Nelson and Sidney Winter, published a volume, already mentioned, which would bring back the perspectives of Fichte, as quoted above, *An Evolutionary Theory of Economic Change*⁶³. In the spirit of Schumpeter, Nelson and Winter base their economics on metaphors from biology: the market – rather than merely a machine setting prices – becomes a laboratory where *different* products and *different* solutions compete, innovations become the counterpart of nature’s mutations, and the end-point is not an equilibrium but rather an open-ended development where “optimality” (from whatever viewpoint) is not secured or perhaps not even likely. In this setting diversity becomes an important asset: the more different approaches available, the better the outcome is likely to be. This approach was taken over by an OECD programme – *Technology and the Economy* – in the early 1990s⁶⁴, but in terms of practical influence over the policy of the European Union the influences of the neo-Schumpeterian wave boiled down to “a laundry list of good intentions”⁶⁵ not capturing the key differences between economic activities and, consequently, not the importance of economic structure.

⁶² For a discussion see Reinert 2007.

⁶³ Cambridge MA, Harvard University Press.

⁶⁴ OECD, *Technology and the economy: The key relationships*, Paris, OECD, 1992.

⁶⁵ Reinert, Erik ‘European Integration, Innovations and Uneven Economic Growth: Challenges and Problems of EU 2005’, in Compañó, R, C. Pascu, A. Bianchi, J-C. Burgelman, S. Barrios, M. Ulbrich, I. Maghiros (eds.), *The Future of the Information Society in Europe: Contributions to the debate*, Seville, Spain, European Commission, Directorate General Joint Research Centre. Institute for Prospective Technological Studies (IPTS), 2006, pp. 124-152. Also published in *The Other Canon Foundation and Tallinn University of Technology Working Papers in Technology Governance and Economic Dynamics*, No 5, 2006. http://tg.deca.ee/eng/working_papers/

It is common to see theoretical, historical and practical links between Immanuel Kant (1724)-1804) and his idea of a cosmopolitan federation and the formulation of the European Union. In a way the European Union – disregarding the asymmetrical contexts inside the Union – came to take over the simplistic view of the cosmo-political “irrational twins”, as Gustav Schmoller called what is now neoliberalism and communism. This means that the European Union, rather uncritically, faced with increasing problems argue for “more of the same”. Even Thomas Piketty, who has convincingly established the increasing gap between wealth and poverty in the West⁶⁶, seems to see no other political solutions than “more of the same”. This is certainly related to Piketty’s lack of engagement with technology, the fall of labour unions, and economic power in general.

In his opposition to Kant, Johann Gottlob Fichte (1762-1814) did not see cosmopolitanism as necessarily being the optimal solution. “Fichte sought to establish that there were no inherent limits on the extent to which a world of multiple states would come to approximate his humanitarian ideal, despite remaining a world of states”.⁶⁷ With an asymmetrical economic integration tearing the union apart, Fichte’s is a perspective which is probably worth re-considering in Europe.

8. The Killer Apps of Capitalism: Ferguson (2011) vs. Reinert (2015).

In his 2011 bestseller *Civilization: The Six Ways the West Beat the Rest*⁶⁸, economic historian Niall Ferguson introduced a set of six “killer apps” – six ways – Western civilization had beaten the rest of the world. In this section I briefly compare Ferguson’s success factors – “killer apps” – with what seems to me a better version of Europe’s historical success factors.

Ferguson: Killer Apps.

1. *Competition*. Ferguson compares China to Europe in 1500. He argues that the Chinese empire remained under an isolationist regime, leading to little competition among polities. Europe, long fragmented, encouraged competition and led to increased travel to seek meaningful opportunities abroad.
2. *Scientific revolution*. Ferguson claims that breakthroughs in science are mostly attributed to European innovations, particularly in weaponry which allowed military predominance.

⁶⁶ *Capital in the 21st century*

⁶⁷ Isaac Nakhimovsky in the introduction to Fichte, *op .cit.*, p. xvi.

⁶⁸ London, Allan Lane.

3. *Property rights*. Ferguson believes that the firm grounding in respect for democracy and property ownership led to successful economic growth with a government reflective of these ideals.
4. *Modern medicine*. The West found vaccinations for smallpox and yellow fever and doubled life expectancies. Many of these vaccinations were disseminated in the colonies and seen as important matters of public health.
5. *Consumer society*. In the 18th and 19th centuries, Britain was a keen example of an all-encompassing spending society, and ideas exported to the colonies and also reflective of sweeping popularity of Western clothing.
6. *Work ethic*. Ferguson directly attributes hard work to the rise of Protestantism, which stressed hard work, saving, and reading.

Reinert: Key Success Factors of the West; Renaissance and Enlightenment.

1. *Knowledge for the sake of knowledge* (Veblen's *idle curiosity*). Duty to Invent. "The *da Vinci* Gene".
2. *Magna facere and Emulation*. That production did not stop when the family's needs were met is a key element distinguishing capitalism from other economic systems (Werner Sombart). Bologna from 12th century: competition by building towers rather than plain war. Hirschman's *The Passions and the Interests*. Trade as *war by other means* in a game of emulation between states (also in war and luxury)
3. *Virtue and Instinct of Workmanship*. Capitalism required three fictitious commodities: ownership to land, labor as a commodity, and money (Polanyi). Civilizing this system required virtue. Florence: Leon Battista Alberti, USA: Benjamin Franklin. Taming predatory instincts (Veblen) and the *Gordon Gekko* gene as a necessary foundation for capitalism and the basis for Rule of Law and for aligning the vested interests of the individual with the interests of society at large. Transparency and book-keeping (*partita doppia*, Luca Pacioli).
4. *Individualism balanced with an understanding of a ben commune* (Veblen's *parental bent*). "The Golden Rule". Standards. In contrast to feudalism, where money was made clinging to inherited property rights, a Schumpeterian dynamic was introduced in which the only way to continue making money was to innovate ("this is how fast you have to run here in order to stand still", as one of the characters in "*Alice in Wonderland*" explains). Frequent financial crises killed idle capital.
5. *Huge Diversity of States and Approaches / Balance of countervailing powers* (Montesquieu, Galbraith). Florence: Composition of la *signoria* (never more than one banker). John Najemy: Anti-

Magnate. Venice: anti-corruption policies, "circulation of elites" and of public offices, Doge as one not seeking power.

6. *Anti-feudal & pro-manufacturing policies* gave rise to increasing returns and a large division of labour which made the growth of cities and generalized welfare possible (Giovanni Botero 1588 as early theorist). Anti-speculation / anti-feudal. Spain 1520s: "War of the Comuneros": the wrong guys won.

9. Conclusion. Jean Monnet's own metaphor as the EU being like the Kon-Tiki raft.

People who came to see me in Luxembourg were intrigued to see on my desk the photograph of a strange raft. It was the Kon-Tiki, whose adventure had thrilled the whole world, and which for me was a symbol of our own. 'Those young men,' I explained to my visitors, 'chose their course, and then they set out. They knew that they could not turn back. Whatever the difficulties, they had only one option – to go on. We too are heading for our objective, the United States of Europe; and for us too there is no going back'.

Jean Monnet, *Memoirs*, London, Collins, 1978, p. 524.

This report has emphasized the importance of the basic metaphor which underlies the socio-economic narrative as glue – as a social contract – which at any time holds the European Community together. I have argued that the European Union – especially after the 1989 Fall of the Berlin Wall and the 1992 Maastricht Treaty – gradually left the Marshall Plan Narrative which had dominated the post WW II period and took on the underlying logic of neo-classical economics, a kind of economics based on a notion of equilibrium – essentially of a situation where nothing happens – taken from the physics science of the 1880s, a metaphor which the physics profession itself discarded in the early 1930s. As I see it using metaphors from dead matter – physics – as the sole metaphor for a living society will not function well. If you want to explain a butterfly to someone who has never seen it, starting the explanation by referring to a stone or other dead matter is not a good idea.

An additional problem with neo-classical economic theory is that there is no room for society – Gemeinschaft/Community – in the theoretical edifice. Theory is solely based on individuals. Most people are not aware that when Margaret Thatcher uttered her perhaps too-often quoted phrase "there is no such thing as society", she was essentially only restating one of the core assumptions of neo-classical economics.

Compared to neo-classical economics the above metaphor and symbol chosen by the father of the European Project, Jean Monnet, for his project is a very different and very dynamic one. Essentially Monnet says that

with Europe as with the Kon-Tiki raft “there is no turning back”. Clearly there were moments in EU history where decisions were made without the full consequences of these decisions having been evaluated. I recall e.g. the uncertainties around the handling of Value Added Tax across the single market. But the decision had been made and – as with the raft – there was only one way ahead. Monnet’s Kon-Tiki metaphor and the mentality which has driven the European project brings to mind the words of Spanish poet Antonio Machado *Caminante, no hay camino, se hace camino al andar / Traveler, there is no path. A path is made by walking*. This approach appears as charmingly romantic, but also irresponsible when we – as we do – have centuries of human experience that could show us that better roads than the one presently travelled by the European Union are indeed possible.

A noble goal + improvisations served Europe well over a long time, but – as I see it – no longer. The present policy challenges what is basic economic gravity on too many accounts. Probably the most destructive one is that what has functioned as the basic rule for successful capitalism since the Enlightenment has been broken; i.e. lining up the private and public interests so that private money is made in a way that increases the size of the publicly available pie⁶⁹. Now – i.e. in the case of Greece – the financial sector is making huge profits by actually *shrinking* the Greek economy.

Jean Monnet’ use of the Kon-Tiki raft as a symbol and metaphor for the EU is interesting and telling for the man and his European project. In 1947 – the year the Marshall Plan was announced – five Norwegians and a Swede crossed the Pacific Ocean from Peru to Polynesia on a raft made from balsa wood. Their leader, Thor Heyerdahl, wanted to prove that prehistoric migration from South America to Polynesia was possible.

It is certainly true as Monnet writes that the Kon-Tiki adventure had thrilled the whole world. Heyerdahl’s book was translated into almost 70 languages, and the documentary movie won an Oscar in 1951. The story of the adventurers struck a cord in post WW Europe, and indeed both Heyerdahl himself and some of the other Norwegians had been active in the wartime resistance. The peaceful adventure was an antidote to the

⁶⁹ As Milanese economist Pietro Verri put it in 1771: ‘Because the private interest of each individual, *when it coincides with the public interests*, is always the safest guarantor of public happiness’ (italics added). By excluding society and ‘public interest’ as a unit of analysis, neo-classical economic theory has effectively removed the part of sentence we have put in italics. “Greed is good if it results in greater production” has been converted into “all greed is good”. For a discussion of this, see Reinert, Erik S. ‘Civilizing capitalism: *good* and *bad* greed from the Enlightenment to Thorstein Veblen (1857-1929)’, *real-world economics review*, issue no. 63, 25 March 2013, pp. 57-72, <http://www.paecon.net/PAERreview/issue63/reinert63.pdf>

horrors of war,⁷⁰ what the two had in common was the element of considerable risk.

In his foreword to Monnet's memoirs Roy Jenkins, President of the European Commission and the time of publication, says "One of his mottos has been: If you wish to get your way at a difficult meeting, always be ready with a text; allow it to be amended, let the corners be rounded off, but preserve the core."⁷¹ As with the men on the raft, the art of improvisation was a necessary one for Monnet. He seems to have been a master of high level improvisation also in his private life. At the age of 41 he fell in love with a 22-year-old Italian painter Silvia Giannini, who had recently married an employee of Monnet. Since divorce wasn't allowed in most European countries, Silvia and Jean Monnet met in Moscow. In order to obtain a divorce for Silvia, Monnet arranged for her to obtain Soviet citizenship, and she immediately divorced her husband and married Jean Monnet. When Silvia's husband tried to get custody over her child, Silvia took refuge with the child in the Soviet consulate in Shanghai, where they were living at the time. This, one must say, are acts of improvisation by a very resourceful person.

Another similarity between Monnet's European project and the Kon-Tiki expedition was an extreme optimism, which for the men on the raft bordered on recklessness. The sailors on the Kon-Tiki raft did not have much knowledge on how to steer the raft. They essentially just followed the currents. The vessel had been built based on drawings from the chronicles of the first Spaniards who arrived in Peru after the conquest. The drawings had shown five solid planks unevenly distributed as keels to the raft. Their purpose was not completely clear, but they were dutifully put in place. "Not till we were far out on the ocean did we discover the Incas' simple and ingenious way of steering a raft"⁷² By raising and lowering the centerboards the course of the raft could be changed without the use of the primitive steering oar.

The Kon-Tiki men learned navigation as they sailed. The EU did the opposite: the Marshall-Plan Narrative which had started out the process – the understanding of the role of manufacturing industry and increasing returns which was still there in the 1988 Cecchini Report – disappeared during the triumphalist end-of-history narrative that followed the 1989 Fall of the Berlin Wall. Maastricht 1992 was too close to 1989, and it shows in the treaty: basically the only worry was inflation. What followed was neoclas-

⁷⁰ Andersson, Axel, *A Hero for the Atomic Age: Thor Heyerdahl and The Kon-Tiki Expedition*. Witney: Peter Lang, 2010.

⁷¹ p. 12

⁷² Heyerdahl, Thor, *Kon-Tiki, Across the Pacific by Raft*, New York, PermaBook/Pocket Books, 1956, p. 82.

sical economics with all its deficiencies – not seeing the qualitative differences between economic activities, not seeing that the wrong kind financial greed can actually shrink the economic pie, and not separating the financial sector from the real economy as the most important ones – and added to that a shallow innovation-based narrative, what I in 2003 called “a thin Schumpeterian icing on a solid neoclassical economic cake”.

After 101 days at sea, the Kon-Tiki was virtually destroyed on the reefs of the island of Raroia. Miraculously no one was killed. If we hang on to Monnet’s use of Kon-Tiki as a symbol for the European project, the periphery of the EU is approaching its own reefs of Raroia. Letting the peripheral countries in need be allowed to default on debt which in reality is unpayable, and letting them out of the Euro straightjacket would no doubt lessen the impact of the reefs and allow these countries to go on without having their economies devastated.

Monnet’s strategy long served well, but now the core is no longer healthy. As I see it, the intuitive mostly well-meaning gut feeling of “more integration” is not going to do the job. It is likely that if Monnet himself had been here, he would have seen that this strategy is in danger of becoming a new version of Chamberlain’s vain “Peace in Our time”: wishful thinking void of any understanding of the potent forces at work. The post-WW II goal of symmetrical economic dependence was abandoned in favour of what is degenerating into a colonial-like asymmetrical dependency inside the Union. The republican ideal of freedom as the absence of arbitrary power, from the point of view of e.g. Greece, has today degenerated at best into democracy as the “dictatorship of the majority”, at worst into a plutocracy where the states with the highest surplus on their balance of payments (the countries which should have been forced to revalue, e.g. Germany and the Netherlands) are getting richer at the expense of the countries that should have been allowed to devalue. Keynes idea from Bretton Woods of taxing the nations with high surpluses towards the rest of the world is one that could be resurrected in Europe.

Not until now has the EU project ever been close to a zero-sum game. Financial capitalism is at the helm at the expense of production capitalism, and while the European Central Bank is printing debt – what is on the asset side in the balance sheets in the financial sector is on the liability side in the real economy – policies of austerity choke the demand side of the real economy. By not allowing the country to utilize one of the oldest institutions of capitalism – bankruptcy and default – the Greek economy appears to experience the economic version of what in medicine would be to bleed to death. One would wish economists had an equivalent of the Hippocratic Oath. In the end Kant’s noble ideals of perpetual

peace, reflected as they are in the EU philosophy, are – for perfectly rational reasons – degenerating into what his colleague Fichte called *Fremdenhass* – extreme xenophobia – as the result of an unbalanced and asymmetrical economic integration. At the same time the diversity that Fichte saw as being so useful is lost. The common interest – the *Gemeinschaft* – that held the European Community together is lost in fights over zero-sum games and over a pie which is shrinking for the majority. That the pie is deliberately shrunk through austerity in the real economy, instead of allowing default in the financial economy, testifies to the degree to which this loss of *community* in Europe is self-inflicted.

The richness of Europe has always been its diversity, in climates, in cultures, in languages, in ideas, in food. Early on in European history the physical proximity of very diverse ecological areas and niches was key to its growth and development.⁷³ As we have quoted Fichte earlier in this document, the diversity of ideas – the emulation between a multitude of states with different ideas, laws, and rules – was a key to Europe’s successful development. On the other hand, the single centralized government and the lack of diversity in Imperial China clearly contributed to the fall of that Empire⁷⁴. The European Union today seems to strive to emulate Imperial China just before it collapsed.

The present EU narrative – like neo-classical economics on which the project now builds – is a typical 20th century narrative where the goal is standardization rather than diversity, where the spirit of the time between Henry Ford (1909) and the cloned sheep Dolly (1996) dominates the imagination. This philosophy rules standardized cucumbers to standardized currency and research programmes. This narrative is passé. A more fitting image and symbol for our days would be the enormous diversity of nature as an ideal to strive for. The Marshall Plan’s alternative to distributing funds or to force masses of people to move – to move 25 million people out of Germany in 1947 – was to redistribute production and create a diversified economic base in every country. That strategy is still available. In contrast to balsa rafts helplessly drifting with the currents, in terms of discarding dysfunctional theories and narratives **there is** indeed a turning back. Two starting points would be a) to resurrect bankruptcy of sovereign states and b) free the European Union periphery from the retrogressive effects of the Euro.

⁷³ For an explanation of the role of climatic diversity for the growth of civilizations, see Cunliffe, Barry, *Europe between the Oceans 9000 BC-AD 1000*, New Haven: Yale University Press, 2008, and Diamond, Jared, *Guns, Germs, and Steel: The Fates of Human Societies*, New York: Norton, 1999, and John Murra 1976.

⁷⁴ See, as already quoted, Reinert, Erik & Ting Xu, ‘Declining Diversity and Declining Societies: China, the West, and the Future of the Global Economy’, *The Uno Newsletter*, Vol. II, No. 13, Working Paper Series 2-13-2, 25 December 2013, Musashi University, Tokyo.

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