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Financial Crises, Persistent Poverty, and the Terrible Simplifiers in Economics: A Turning Point Towards a New '1848 Moment'

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I foresee that within the next ten or twenty years the now fashionable highly abstract analysis of conventional economists will lose out. Though its logical base is weak — it is founded on utterly unrealistic, poorly scrutinised, and rarely even explicitly stated assumptions — its decline will mainly be an outcome of the tremendous changes which, with crushing weight, are falling upon us.

— Gunnar Myrdal, Swedish development economist

Introduction: 'The Terrible Simplifiers' in Irrelevant Economics

The United Nations recently announced that the number of chronically hungry people on the planet has exceeded the billion mark for the first time. It is extremely unlikely that any of them will ever hold a Swiss 1,000 franc banknote (worth more than 900 dollars), but if they did, they would see the portrait of a man who perceived the essence of the explanation as to why extreme poverty and extreme plenty coexist so naturally on this planet, and of the grim fate of the permanently starving — Swiss historian Jacob Burckhardt (1818-1897). Burckhardt, best known as a historian of the Italian Renaissance, coined the term 'the terrible simplifiers' to describe the demagogues who — in his dark vision of what the 20th century would bring — would play central roles in the future (Dru 2001: 230). Events amply fulfilled Burckhardt's predictions of a cataclysmic 20th century, of the rule of terrible simplifiers, men who Burckhardt's colleague at the University of Basel, Friedrich Nietzsche, called power-maniacs (*Gewaltmenschen*), and John Maynard Keynes referred to in 1936 as 'madmen in authority'.

A key common element in persistent world poverty and in the financial and (real) economic crisis is the 'terrible simplification' — a theoretical overshooting into irrelevant abstractions — that has taken place in economic theory after World War II. As unlikely as it may initially sound, I shall endeavour to explain in this paper how — in spite of its apparent sophistication — equilibrium economics became 'mathematized demagoguery' based on an extremely simplistic worldview. Joseph Schumpeter's solution to the late 19th century Methodenstreit ('battle of methods') of economics had pointed in a very different direction, arguing that the profession needed to have theories at different levels of abstraction. According to the problem posed and the question asked, one should be able to enter the edifice of economic theory at a level of abstraction where one was likely to find an answer (Schumpeter 1908). After World War II, economics experienced the opposite development: only very abstract theory survived. In this process, the main causes of uneven development as well as the cause of financial crises were assumed away from the theoretical edifice. The financial crisis appears to have created a turning point. The July 18, 2009 edition of *The*

Economist — normally a weekly that strongly supports mainstream economic theory — portrays the crisis in economic theory on its front cover with a book entitled 'Modern Economic Theory' experiencing a meltdown like an ice-cream abandoned on the beach on a hot summer's day, with the subtitle: 'Where it went wrong — and how the crisis is changing it'.

One element explaining the financial crisis is what Hyman Minsky called 'destabilizing stability': long periods of stability lead to increasing vulnerability. This paper argues that similar mechanisms are at work inside economics: long periods of economic progress in the core countries lead to increasingly abstract and irrelevant economic theories ('terrible simplifications'). This leads to turning points towards more relevant economic theories, referred to as '1848 moments'. The paper further outlines the key variables that need to be re-introduced into economic theory in order to furnish poor countries with the type of productive structures that makes it possible to eliminate poverty.

Reconstructing Relevant Economics

The epigraph of this paper from Nobel Laureate Gunnar Myrdal dates from 1956. This paper argues that Myrdal was only wrong about the timing. The process he describes is happening now, because only now — with the worldwide financial crisis — is it possible to see the basic weaknesses of standard textbook economics as they relate both to the financial crisis and to persistent poverty in the Third World.

In his 1952 book *The Counterrevolution of Science: Studies in the Abuse of Reason*, Austrian economist Friedrich von Hayek (1899-1992) states that 'never will man penetrate deeper into error than when he is continuing on a road which has led him to great success'. Hayek pictures a process of scientific decay that grows out of the excesses that follow from the very success of a particular set of ideas. Twenty-two years later, after having shared the Nobel Prize with the same Gunnar Myrdal, we find Hayek arguing along the same lines. Had he been consulted whether to establish a Nobel Prize in economics, Hayek says in his Nobel dinner speech, 'I should have decidedly advised against it'. Hayek's main argument against awarding a Nobel Prize in economics was that such a prize 'would tend to accentuate the swings of scientific fashion'. Economics differs from other sciences, Hayek notes.

Following Kuhn (1970) the idea of changes in scientific research agendas — of paradigms — became common knowledge. Science occasionally makes radical breaks. But economics is different from the hard sciences in that, through the mechanisms described by Hayek, the paradigm decays by

overshooting into irrelevance (Reinert 2000), the need for correction is perceived and carried out. But, also here economics differs from other sciences. Once it has been understood that the world is not flat, but round, the idea of a flat earth never comes back. In economics however, the paradigmatic overshooting into excesses — as described by Hayek — brings back theoretical elements that have previously been present but were later left out.

The theoretical overshooting, then, is caused by making economics gradually excessively abstract, which at one point necessarily creates a counter-reaction. Economics as a science thus oscillates cyclically over time between very abstract theory, as the theory ruling from the fall of the Berlin Wall until the 2008 financial crisis, and a less abstract one. A key difference between the two types of theories is how they relate to empirical facts. The following quote is typical of the two approaches:

Abstract economic theory:

‘One of the best things with economics is that it is just a way of thinking, factual knowledge is non-existent.’ — Professor Victor Norman, *Dagens Næringsliv*, December 31, 1994, p. 21.

Empirically based economic theory:

‘The root of everything we can call theory is to observe things as they are.’ — Hans-Georg Gadamer, *Lob der Theorie. Reden und Aufsätze*, 1991, p. 43.

These two different approaches to economics are largely incompatible. For reasons that shall be explained later, I refer to the point when the overshooting in level of abstraction — the moment when abstract economic theory yields by necessity to a more empirical theory — as ‘the 1848 moment’.

Algerian-born philosopher Jacques Derrida (1930-2004) contributes to explaining the overshooting phenomenon. Every structure — be it literary, psychological, social, economic, political or religious — that organizes our experience is constituted and maintained through acts of exclusion, Derrida says. We cannot include all possible factors in a theory, but if we exclude too much — if theory gets too abstract and overshoot — what we have left out will come back and haunt us. Abstract structures can become repressive. Derrida insists that what is repressed does not disappear but always returns to unsettle every construction, no matter how secure it seems. Both the financial crisis and persistent poverty in many Third World nations are the result of leaving out of economic theory important empirical phenomena that were not well captured by the increasingly abstract models that became standard textbook economics. And as the theories attempted to include more complicating factors, like increasing returns, we shall see that

this was done in a way that obliterates the structural differences between countries. Complexity was added, but not diversity. As events that cannot happen in theory, only in practice — like financial crises and persistent Third World poverty under a free trade regime — come back haunting the economics profession, the profession is forced to lower its level of abstraction. This happened during the French Revolution, after 1848, after 1929, and is happening again in 2009.

The 2008 financial crisis and the failure to eradicate poverty in the Third World are both results from the kind of overshooting — political and ideological — explained by Hayek. The financial crisis and persistent poverty, I argue, are both the result of a theory that got too abstract and became fascinated with tools and methods that failed to take into account extremely important aspects of economic reality. After the financial crisis everyone says ‘We are all Keynesians now’. Both in the case of the financial crisis and in terms of advice to poor countries in the economic periphery it is time to resurrect the thinking of John Maynard Keynes.

Financial crises make it clear that markets, if left to themselves without regulation, do not produce economic harmony. Harmony is the result of wise regulations. Such crises also open people’s eyes to the fact that the same principle of potential market-made disharmony also applies to the markets for goods and services. Also there economic harmony is a result of wise regulations. After the 1847 financial crisis John Stuart Mill recanted on David Ricardo’s trade theory, and John Maynard Keynes tells us in his own words how he changed his mind about the same free trade theory — which in the meantime had come back in fashion — around the time of the 1929 crisis. Both Mill and Keynes saw that poor countries need an increasing returns sectorⁱⁱ, i.e., an industrial sector, in order to become wealthy.

ⁱⁱ Activities subject to increasing returns are those where production costs fall as the volume of production is increased. These lower costs for established firms form important barriers to entry for newcomers, and produce a type of competition — imperfect competition — that forms the basis for extra income, for a ‘rent’, that is shared between capital (profits), workers (in the form of higher wages), and government (in the form of higher taxable income) in industrial countries. I argue that what we call ‘development’ to a large extent consists in establishing such ‘industrial rents’. Resource-based activities, on the other hand, always have one factor of production (land, ore, etc.) limited by nature, and are therefore subject to diminishing returns. Costs cannot be lowered beyond a certain point because inputs are only available in poorer quality: lower quality land, lower grade ore, etc. The low barriers to entry in the production of raw materials lead to ‘perfect competition’ or ‘commodity competition’, and the shared national rents that can be created in increasing returns activities are impossible to create in a country where only resource-based activities are present. Later in this paper we shall see how the Washington Consensus policies ruined the industrial rents in poor countries, thereby in many cases lowering the real wages by more than 50 per cent (see Reinert 2004, 2007, and 2009a for further discussions). The ‘normal’ case in economic textbooks is ‘perfect competition’ and ‘diminishing returns’. In a sense, the Washington Consensus policies succeeded in making poor countries look more like the ideals of standard textbook economics, but this made these countries much poorer than they would have been with an industrial rent.

A financial crisis in 1847 triggered a dramatic shift in economics — as we shall see both right, left, and centre — starting in 1848. ‘If you went to sleep in 1846 and woke in 1850 you would wake into a different world’ wrote an English university professor in his memoirs (Reeves 2007: 202). This paper argues that we are now facing a very similar situation: an ‘1848 Moment’ when the economy is seen in a new light, less abstract and more based on empirical observations.

1. Economics Abstracting from Production: The Common Element in Financial Crises and Persistent Poverty

What unites the failure to understand that a financial crisis was coming and persistent poverty in the Third World is an economic theory which is pitched at a level of abstraction where *production* is left out; a theory where the world economy is seen as stock markets and freight terminals. In reality markets and trade are merely superficial manifestations of an incredibly complex global system of *production*, and by focusing on the stock exchanges and trade the complexities of the world production system have essentially been left out of economic theory.

The roots of this problem go far back in the history of economic thought, back to when Adam Smith bundled production and trade together as ‘labour hours’. Based on this view, David Ricardo — and especially his later followers — produced a theory of international trade where the world economy is represented by the bartering of labour hours. When laying the foundations for present mainstream textbook economics David Ricardo also forgot to create ‘money’ as a separate category. Placing economic theory at this very high level of abstraction created blind spots on the collective retina of economists, and created an illusion of markets as a harmony-producing machinery.

This illusion of harmony-producing markets has been even more destructive to poor countries in the world periphery than it has been to world financial markets, and huge rescue operations — paralleling those made in the financial markets — should be launched to rebuild the productive sectors in poor countries. The blind spots and the faulty reasoning behind the profession’s misreading of both problems — financial crises and persistent poverty — are closely related. Therefore the same economists (e.g., Keynes) who understand financial crises also tend to understand why mainstream economics fails to be able to correct persistent poverty in the periphery.

Several core failures of current academic economics are common to the financial crises and persistent poverty in the world periphery:

- 1) Not separating the sphere of money, the financial economy (Schumpeter's *Rechenpfennige* or 'accounting units'), from the real world of goods and services (Schumpeter's *Güterwelt*). Not distinguishing between the two spheres of the economy, neoclassical economists (as opposed to traditional continental European economists) were blind to the possibility of a financial crisis. For the same reason, neoclassical development economics attempted to solve the problems of poverty by transferring capital rather than by addressing the problems of the productive sectors in poor countries.
- 2) Not keeping an eye on the nations' productive structure as its economic core, focusing on finance rather than on the impact of finance in the real economy. In normal times the financial sector serves as scaffolding for the real economy. Financial crises begin when the financial sector starts making money in ways that do not help the real economy, when banks enter into loan agreements that are so risky that the borrowers are not even able to pay the interests on the their loans — Ponzi financing (Minsky 1990). Unsustainable financial pyramid schemes fill up the financial markets with 'toxic assets', liquidity is withdrawn, and the financial crisis is a fact.
- 3) Not seeing that a functional capitalism requires investments to be made in potentially profitable ventures, not in Ponzi schemes. From this point of view subprime lending and, to a large extent, lending to the Third World, were both Ponzi schemes: loans made to people and nations that could not reasonably be expected to have a cash-flow that would cover even the interest rates on the loans they were given (Kregel 2004). Here Kregel makes an exceedingly important point: The Myrdalian 'perverse backwashes' — that more funds tend to flow from the poor countries to the rich rather than, as would be expected, the other way around (Myrdal 1956) — can be explained by the same Minsky mechanisms that explain the current financial crisis. The present lack of industrial policies in poor countries makes it impossible to achieve sufficient industrial rents to make investments profitable (see Cimoli, Dosi, and Stiglitz [eds.] 2009).

As already mentioned, the three failures may be tracked back to the economics of David Ricardo and his exceedingly loyal followers. His theory made the blind spots of present economics possible: a) by failing to create money as a separate category apart from 'the economy', and b) by conceiving of world trade as a bargaining of labour hours — where a labour hour in Stone Age technology has the same market value as a labour hour in Silicon Valley — made it impossible to see that some nations specialize according to their comparative advantage in being poor (Reinert 2007).

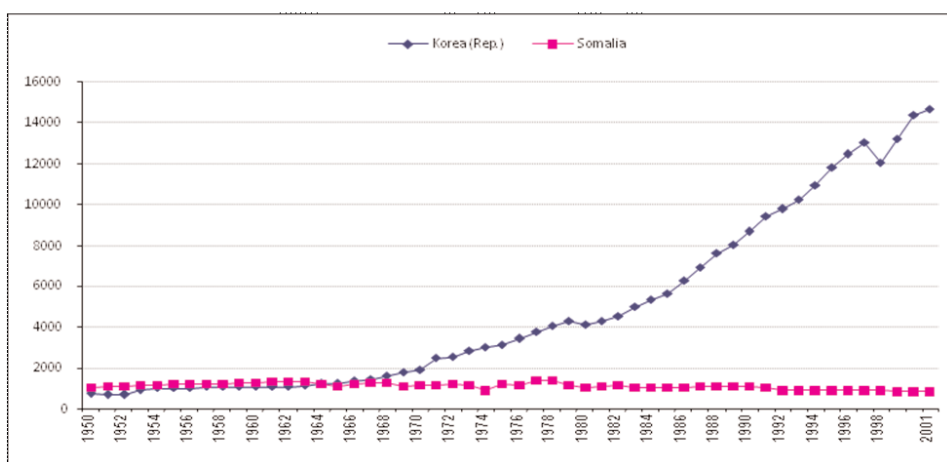
2. The Challenge: Relearning the Art of Creating Middle Income Countries

Until I was 19 years old there was a country called Korea that was poorer than Somalia. Figure 1 shows how Korea at that point started an impressive growth spurt while Somalia, if anything, got gradually poorer. My contention is that this happened because Korea consciously changed its comparative advantage in international trade from products subject to diminishing returns (raw materials) to increasing returns (manufactured goods and advanced services). Korea in this way escaped from the poverty trap explained in Frank Graham's classical 1923 article 'Some Aspects of Protection Further Considered' (see Appendix 1).

One of the largest puzzles in the world economy is why there are so few middle income countries. Why do countries tend to cluster in two convergence groups, developed and 'underdeveloped'? Why is it so difficult to create nations that are half way between Somalia and Korea on Figure 1?

Figure 1: Comparing Economic Development in Somalia and Korea.

Korea (Rep.)-Somalia, GDP per Capita 1950-2001



Source: Reinert, Amaizo & Kattel, 2009.

This paper argues that our inability to create middle income countries is a result of 'theoretical overshooting' in the sense described by Hayek, and that the policy recommendations resulting from this theoretical overshooting have made the creation of new middle income countries virtually impossible. A middle income nation is a nation with an increasing returns (industrial) sector which, for a while, is not yet competitive on world markets. The instant shock opening to free trade called 'globalization' should supposedly

even out world incomes. WTO's first Secretary General, Renato Ruggieri, declared that we should unleash 'the borderless economy's potential to equalise relations between countries and regions'. Instead this process ended up killing the incipient industrial sectors in poor countries, lowering real wages. The belief that the market, if left to itself, is as a harmony-producing mechanism was at the core of the Washington Consensus ideology of the International Monetary Fund (IMF) and the World Bank. By generally assuming full employment in their economic models, the Washington institutions also assumed away the main problem in the world's poorest nations: unemployment and underemployment, i.e. the lack of 'real jobs'. In many parts of the globe, the result has been a shambles.

3. Financial Crises as a Result of Overshooting Success

Since the first international financial crisis in 1720 — simultaneously hitting in Amsterdam, Paris and London — overshooting previous successes has been a key element (*Het Grootte Tafereel* 1720, Cole 1949). An important element in financial crises is financial innovations which, in and by themselves are useful and legitimate, but gradually become a speculative vehicle carrying to extremes which with hindsight prove to be folly (Mackay 1841). Markets tend to perceive that normal economic gravity has ceased to exist due to the new financial innovations. In 1720 the new financial instrument was common stock, in the 2008 crack it was derivatives and securitized debt. Our latest crack was made possible by abolishing previous wise legislation (the 1932 Glass-Steagall Act). Banks stopped performing their traditional role in the economy — evaluating risk that they kept on their balance sheets. The risks that should normally be carried inside the financial institutions themselves were passed on to the system and to society at large (Kregel 2004).

The 1720 crack also represented an overshooting in previously successful colonial ventures. Spain's colonies had produced a funnel of gold and silver. Now France was planning to find the same wealth in a colonial scheme on the Mississippi, and England did the same in the South Seas. These became the famous Mississippi and South Sea Bubbles. Following a strategy that had previously led to success led to disaster.

Carlota Perez (2002) argues that major booms and busts always result from overshooting the real success of fundamental technological breakthroughs on to projects that are obviously no winners. When US Leather wished to be valued as US Steel, and when Parmalat tried to do to milk or ENRON to energy what Bill Gates had done to computing, and the markets are willing to believe the story, the road to fraud is short.

Hyman Minsky's 'destabilizing stability' (Minsky 1990, Kregel 2004) describes how long periods of stability lead to easier credit until a Ponzi scheme — a fraudulent scheme where the borrowers are not even able to cover interest payments (as the subprime loans) — leads to the collapse of the whole financial sector. Previous 'overshooting' theories of financial crises have been produced by Clément Juglar (1819-1905) who, like Minsky, emphasized the oversupply of increasingly risky credit. Mikhail Tugan-Baranovsky (1865-1919) emphasized the role of *overinvestments*, the other side of which becomes *underconsumption*, the angle from which J.A. Hobson (1858-1940) approached the problem. What these theories all have in common is that crises are a result of what Hayek calls 'continuing on a road which has led ... to great success'.

4. Increasing Distance = Increasing Abstraction

As already quoted, Derrida insists that what is excluded, comes back to haunt the theoretical structure. What is now haunting trade theory and the global economy is the repression of the fact that from the point of view of creating economic growth, economic activities are qualitatively very different. At the core of the problem of today's world economic order lies David Ricardo's trade theory which is based on the barter of labour hours that are void of any qualities. This seems to suggest that free trade between African autarchic farmers and Silicon Valley will produce economic harmony or 'factor-price equalization', or, at least, benefit both trading partners, as the WTO director indicates. The risk of nations specializing in being poor is ignored.

In general we can observe that the level of abstraction used in approaching economic issues increases with the distance to the problem. We could call this the *Increasing distance = Increasing Abstraction Theorem*. Questions close to home are solved through common sense 'historical approach', while problems far away from home are solved applying very abstract principles, like Ricardo's hour-bartering trade theory. Most of us intuitively understand that if we put all New York lawyers in one nation and all people making a living washing dishes in New York restaurants in another, we shall have one rich nation of lawyers and a poor nation of dish-washing people. This intuition, however, cannot be translated into standard trade theory because it violates Ricardo's core assumption that labour hours are considered as being qualitatively alike. As Norwegian-American economist Thorstein Veblen put it: 'Education may contaminate the instincts'.

No economists tell their teenage children 'my daughter, you are so skilled in washing dishes that you should specialize in your comparative advantage in washing dishes in restaurants'. Based on common sense economists advice their children based on the assumption that economic activities are

qualitatively different as generators of wealth. When the distance to the issue grows, when it comes to advising Africa, economists' recommendations are based on Ricardian trade theory where there are no qualitative differences between an hour of lawyers' work and an hour of washing dishes. At best there is an implicit assumption that 'capital' can be added and upgrade people washing dishes into making as much money as lawyers. Which of course is not the case.

Paul Krugman made an interesting observation confirming this 'increasing distance = increasing abstraction' theorem. At the time when the United States insisted on Ricardian trade theory and standard textbook economics as the foundation of the world economic order, Krugman complains that US trade policy fails to follow the principles of Ricardian trade theory: 'the view of trade as a quasi-military competition is the conventional wisdom among policy-makers, business leaders, and influential intellectuals.... It is not just that economics have lost control of the discourse; the kind of ideas that are offered in a standard economics textbook do not enter into that discourse at all...' (Krugman quoted in Reder 1999: 6).

Krugman himself falls victim to the *increasing distance = increasing abstraction* theorem. He defends Canadian protectionist policies: 'it seems reasonable to argue that Canada's nationalistic economic policies were the key factor in creating this (industrial) strength' (Krugman 1993: 92). Based on his knowledge of US neighbour Canada, Krugman recognizes the role of infant industry protection, but surprisingly goes out of his way to show that the Canadian case — the only empirical case he uses — is different to that of other periphery nations. I find it very difficult to understand why Krugman does not make recommendations of this kind also to other laggard countries, but seemingly the 'common sense close to home, abstract theories further away' mechanism has been at work.

For this same reason we can observe domestic changes in the hegemonic countries before they are applied in the rest of the world. During the 1991 minimum wage debate in the United States virtually all economists violently opposed tampering with the labour market. The market should determine the wages. When the same debate took place again in 2007, virtually all US economists supported an increase in minimum wages. Paul Samuelson, the father of modern trade theory, withdrew his across the board recommendation of free trade when free trade started causing poverty in the United States (Samuelson 2004). That markets, left to themselves, can increase poverty not only in the United States, but also in the Third World, will soon be generally acknowledged.

A further example of the *increasing distance = increasing abstraction theorem* is the way neo-Schumpeterian economics — placing innovation rather

than equilibrium at the core of economics — has had growing influence in the developed world, e.g., in Europe's *Lisbon Strategy*, but so far has had very little impact on Third World policies.ⁱⁱⁱ After initial ground-work (Nelson and Winter 1982; Dosi et al.1988), the OECD dedicated a whole research program (TEP, Technology and Economy) to this approach in the early 1990s. So far the tendency has been to focus on innovation in rich countries but to leave poor countries with their 'comparative advantage', which may be in activities bereft of any possibilities for innovation (Reinert 2007). A new volume on industrial policy written in a neo-Schumpeterian framework (Cimoli, Dosi and Stiglitz [eds.] 2009) is likely to initiate a phase of innovation-based theories of poverty eradication in the Third World. This line of investigation is bringing back important elements of classical development economics, associated with Albert Hirschman, Ragnar Nurkse, Gunnar Myrdal and others (see Nurkse 2009 and Kattel, Kregel, and Reinert 2009).

It is important to understand, then, that intellectuals may have 'modes' of thought that operate on very different levels of abstraction. Krugman is an interesting example of how different these modes can be. In his piece 'How I work', Krugman, the Nobel Prize winner, says: 'A minor regret is that I have never engaged in really serious empirical work. It's not that I dislike facts or real numbers. Indeed, I find light empirical work in the form of tables, charts, and perhaps a few regressions quite congenial.... Every year I promise to try to do some real empirical work. Next year I really will!' In Harold Innis' terms, this is the Krugman who writes in 'Latin', in this case, science virtually void of categories and experience.

Another very different Paul Krugman exists, however: the one who writes extremely insightful and heavily empirically-based columns in the *New York Times*, founded on a wealth of 'vernacular' knowledge and with strong ethical views. If the 'vernacular' Krugman would just be as well informed and interested in Africa's productive structure as he is in US health care reform, I am convinced the result would be very good. Unfortunately, so far, the empirical and well informed Krugman is reserved for issues regarding the United State: *increasing distance = increasing abstraction and simplicity*. 'Simplify, simplify' is one of the important rules Krugman the Nobel economist has set for himself in 'How I work'. In his *New York Times* columns, he is doing the opposite, and with very good results.

Using the terminology of Francis Bacon (1561-1623), mainstream economics at this time represents 'degenerate learning', rather than 'good and solid knowledge':

ⁱⁱⁱ Reinert (2004) represents an attempt to do so.

Surely, like as many substances in nature which are solid, do putrefy and corrupt into worms; so it is the propriety of good and solid knowledge to putrefy and dissolve into a number of subtle, idle, unwholesome and, as I may term them, vermiculite questions, which have indeed a kind of quickness, and life of spirit, but no soundness of matter, or goodness of quality. This kind of degenerate learning did chiefly reign amongst the schoolmen^{iv} who, having sharp and strong wits, and abundance of leisure, and small variety of reading, but their wits being shut up in the cells of a few authors (chiefly Aristotle their dictator), as their persons were shut up in the cells of monasteries and colleges, and knowing little history, either of nature or time, did, out of no great quantity of matter, and infinite agitation of wit, spin out unto us those laborious webs of learning which are extant in their books. For the wit and mind of man, if it work upon matter, which is the contemplation of the creatures of God, worketh according to the stuff, and is limited thereby: but if it work upon itself, as the spider worketh his web, then it is endless, and brings forth indeed cobwebs of learning, admirable for the fineness of thread and work, but of no substance or profit (quoted in Reinert 2000).

What happens during 1848-moments — such as we are in now — is that the abstract models are increasingly seen as irrelevant, and economic theory returns to be more friendly towards empirical facts. Far away countries start to be treated with the same empirically based knowledge which normally is only used close to home.

5. The Failure of Neoliberalist Development Policy

Until the mid-1970s development economics was based on the notion that a middle-income country is a country with the same type of economic structure — a large manufacturing sector — as that of a rich country. It was understood that for a variety of reasons — among them market size, technological sophistication, relative high price of capital relative to labour, etc. — the industrial sector of a poor country would need a lot of time before it was strong enough to face competition from wealthier countries. This period of ‘infant industry protection’ — as John Stuart Mill called it — is comparable to the many years amazon.com operated its business at great losses. Slowly industrializing a nation represents the same kind of trade-off between present costs and even greater profits (e.g., wages) in the future. In the meantime the poor country would earn its scarce foreign exchange from the export of commodities. For developing countries income from customs duties tended to provide a large share of government income, and

^{iv} The reference is to Scholasticism.

because ports were relatively easy to control even weak governments could secure this revenue (compared to, e.g., introducing a value added tax).

If China and India are separated from the rest of the developing world, the development record over the last 35 years has been very poor in all poor countries with the exception of the rest of Asia. China and India have based their national development on continuing the industrialization policy^v that was started around 1950 (Nayyar 2007). In no way can these countries be counted as showcases of the neo-liberal policies propagated by the Washington Consensus, they are — to the contrary — textbook cases of following the development of Friedrich List (1841) that industrialized Continental Europe and the United States: industrializing and then slowly opening up their borders. China and India may have allowed too little competition for too long, and may have opened up too late, but these are small errors compared to the errors made by the Washington Consensus deindustrialization of so many small countries in the world periphery.

The term *creative destruction*, inspired by the work of Joseph Schumpeter, has grown increasingly popular, and is sometimes used to justify any kind of change. We have previously argued that the term *creative destruction* entered economics via Friedrich Nietzsche and Werner Sombart, and that the eminent Renaissance historian Jacob Burckhardt warned Nietzsche — and us — about the existence of *destructive destruction*: 'There are (or at any rate there seem to be) absolutely destructive forces under whose hoofs no grass grows' (Reinert and Reinert 2006). Destruction and creativity may take place in entirely different parts of the globe, as when the textile mills of Manchester replaced the weavers of Bengal during the First Industrial Revolution. This paper argues that globalization — in the sense of a free trade shock — divided the Third World in two groups: 1) Those — like India and China — that had followed an industrialization policy for more than 50 years — benefitted from opening up to the world market, and 2) In those countries whose industrialization was too weak to survive, the synergies of industrialization were put in reverse, and the economies became *primitivized* (Reinert 2007: Ch 5).

Early economic writers repeated again and again that all wealthy nations had an important thing in common: a large number of different manufacturing industries that were all subject to increasing returns (Reinert 2009a). It had been common knowledge already from the 1400s that a wealthy city was created by a 'common weal', a *ben commune*. The first author to pinpoint increasing returns and a diversified manufacturing sector as being the

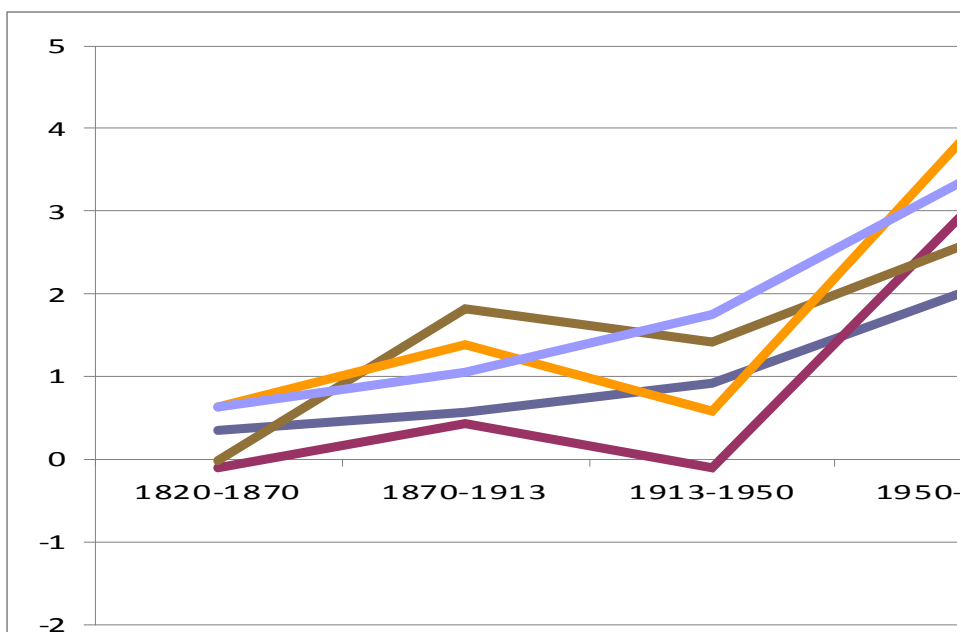
^v I am here referring to their domestic industrialization policy since around 1950, not their specialization in international trade much later.

key to wealth was an Italian economist, Antonio Serra, who in 1613 explained why Venice, virtually void of natural resources, was so rich, while his own country, Naples, rich in natural resources, was so poor. Without increasing returns, no capitalism, a very limited division of labour, and no high wages. In this perspective, colonialism can be seen as a technology policy set up to prevent increasing returns activities from being established in the colonies (Reinert 2007).

Only with Antonio Serra's 1613 treatise it was understood that at the core of the wealth-producing mechanisms was increasing returns in each of these many different activities. Maximizing the division of labour was at the core of any policy of 'good government' (Serra 2009). A large number of activities subject to increasing returns was the key to national wealth, and — most importantly — middle income nations were nations where the same type of activities and the same large division of labour were present, but in a system slightly less efficient than those of the world leaders. A slightly less efficient manufacturing and service nation was much wealthier than the most efficient producer of raw materials (subject to diminishing returns). To make a comparison appealing to the readers' intuition: it is much better to be a mediocre lawyer than to be the world's most efficient cotton-picker. This is the principle upon which all successful industrial policy has been built from Henry VII came to power in England in 1485 until the post WW II Marshall Plan in Europe, and was continued under classical development economics. It was only unlearned with the Washington Consensus. The rest of this section shows the mechanisms with which the Washington Consensus policies *primitivized* the world periphery.

Figure 2 shows how rates of economic development improved and peaked at the height of classical development economics in the mid1970s. Only Asia, with its long tradition of industrial policy, managed to keep up the positive trend. By using GDP data rather than real wages, Figure 2 shows the situation from the best possible angle.

Figure 2. Growth rate of GDP per capita of selected world regions; regional average in selected periods between 1820 and 2001; annual average compound growth rate.



Source: Kattel, Kregel, and Reinert (2009). Original data from Maddison 2003.

Figure 2 shows the dismal performance of neoliberal development policies that came into effect in the mid-1970s when financial crises in the Third World were only solved by forcing poor countries to open up for free trade abruptly. In fact the price paid for being saved by the IMF and the World Bank was deindustrializaion. Detailed case studies show how this process evolved in two countries, Mongolia and Peru (Reinert 2004; Roca and Simabuko 2004).

The dismal results from neo-liberal development policy can be explained as a result of the cumulative effect of a number of vices producing theories at excessive levels of abstraction, and therefore, of irrelevance. The first vice is what Schumpeter referred to as the *Ricardian Vice*, that is, the habit of piling a heavy load of strong policy recommendations upon very shaky assumptions. This problem got reinforced when Milton Friedman in a 1953 book said: 'Truly important and significant hypotheses will be found to have 'assumptions' that are wildly inaccurate , and, in general, the more significant the theory, the more unrealistic the assumptions'.^{vi} Friedman established a negative relationship between science and reality, and helped cre-

^{vi} Friedman, op. cit., p. 14.

ate a profession where unrealistic assumptions added scientific prestige. This we could refer to as the *Friedmanian Vice*. A third vice is what I have dubbed the *Krugmanian Vice*, the production of theoretical models that explain the real world better than Ricardo did — but not applying them to actual economic policy (Reinert 2007). Together these vices combine to create and maintain the blind spots of economic theory that have prevented the profession from seeing both financial crises and persistent poverty.

6. Increasing Returns as the Key to Wealthy Nations

Persistent poverty in the Third World is a result of trade policy overshooting. For more than 500 years it has been recognized that middle income nations have the same type of economic structure as rich nations, but slightly less efficient. Therefore all presently rich countries have been through a period of ‘emulation’ — copying the structure of rich countries — before embarking on a strategy of specializing according to a comparative advantage (Reinert 2007, 2009b).

Economic theory has emphasised ‘capital’ and ‘trade’, seriously neglecting the role of a nation’s productive structure, of technology, of entrepreneurship and of unemployment. The Washington Institutions have got away with models generally assuming full employment when lack of employment has been at the core of the problem of poverty. The more abstract the theoretical model in a social science, the more facts are excluded.

6.5 Billion human beings share this planet. If we assume they are all very different it will be difficult to theorize with any reasonable degree of accuracy. If we assume that they are all alike, we can produce a very abstract and accurate theory. However, if we divide human beings into only two categories, men and women, there are many meaningful things we can say about human society, e.g., as regards procreation. If we add age groups there are even more things we can understand.

The same thing applies to international trade theory. By modeling the global economy as a system wherein nations barter labour hours, David Ricardo implicitly made all economic activities qualitatively alike. He made no effort to discuss that they could be different. If we split human labour into only two different categories — those who work under diminishing returns and those who work under increasing returns — we can to a large extent explain what separates poor countries from rich. Rich countries have a large increasing returns sector, poor nations have a very small one, characteristically below 6 per cent of GDP (Reinert, Kattel, and Amaizo 2009).

Increasing returns means that, as volume of production increases, fixed costs per unit of production fall. If it cost Microsoft 500 million dollars to develop Windows Vista, that would be the cost of the first copy. If two copies were sold, the unit cost would be 250 million dollars. But since copies can be distributed at extremely low costs, fractions of a dollar, on the web, unit price comes down very fast. The fact that the initial investment is so high makes it very difficult to compete with Microsoft. The high initial investment produces high 'barriers to entry' into many industries. The same barriers to entry protect profitability, but can also lead an industry — the airline industry is one example — into periods when all lose money. The high investments also create barriers to exit.

Importantly increasing returns invalidate the core assumption of standard economics: perfect competition. The higher the degree of increasing returns, the larger the barriers to entry and the more imperfect the competition. It is behind these barriers that rich countries have managed to elevate their wage levels. Because of these barriers to entry labour unions, by demanding a larger share of the pie, actually created a larger pie. As long as all manufacturers in the same labour market were subject to the same wage demands, they could all yield to the demands without going bankrupt. Their competitors had to yield to the same demands. Higher wages increased the relative price of labour, which again made mechanization increasingly more profitable. This spiral of increasing wages and increasing productivity due to mechanization — which is induced by the same wage increases — forms the core of the impressive growth of the developed economies since the 1850s. This is the same type of self-reinforcing mechanism described by Serra as regards increasing returns and increased exports from Venice: because increased volumes of production lead to lowered cost and lowered prices, even more customers come, which again lowers prices (and barriers to entry we would add today) even more — cumulatively 'one factor reinforces the other' as Serra says (Serra 2009, Chapter 10).

The existence of increasing returns — of falling costs of production as volume increases — was implicitly recognized in conscious industrial policy as far back as in 1485 (Reinert 2007). As already referred to, in 1923 US economist Frank Graham showed how — under international specialization — nations specializing in increasing returns activities (manufacturing industry) would grow richer while nations specializing in diminishing return activities (raw material) would grow poorer (Appendix I). In other words, some nations would specialize in being rich, while other nations would specialize in being poor.

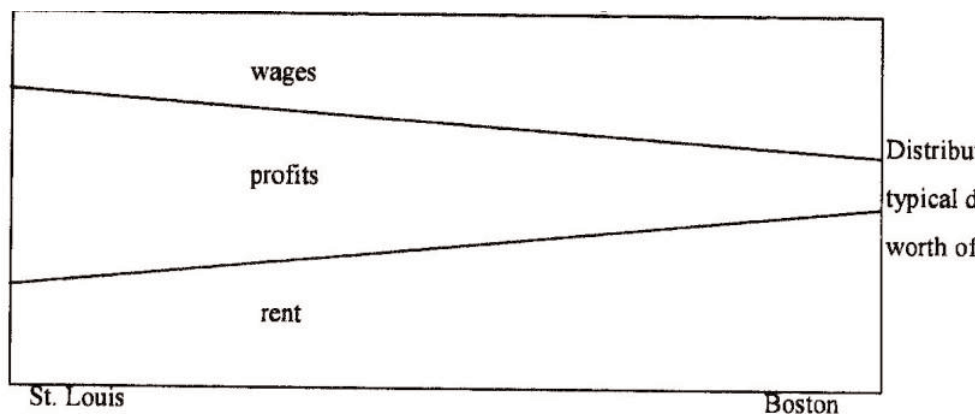
Unfortunately when Paul Krugman, partly inspired by Frank Graham's 1923 article, started 'New Trade Theory' (Krugman 1990) he soon left out the

diminishing returns side of the argument. This contributed seriously to the ‘free trade overshooting’ that we have experienced: for all practical purposes only the good news about scale and trade, increasing returns, were included in New Trade Theory, while the bad news, diminishing returns, were left out.

7. Increasing Returns and Synergies: their Creation and their Destruction

In many ways, the United States can be seen as the prototype successful developmental state. After the US independence, the Continental European understanding of development as synergies between a large number of increasing returns industries was partly transferred from European literature and partly rediscovered by US economists. These economists insisted that the United States, in spite its abundance of natural resources and obvious comparative advantage in agriculture, would grow poor without a manufacturing industry (Hamilton 1791, Raymond 1820, M. Carey 1721). Later, along the same line of reasoning, Henry Carey (1793–1879) insisted that trading too much with Britain would preclude the United States from enjoying the bounties of future technological change. Carey also devised what he called a ‘commodity map’ which illustrates how the presence of a manufacturing sector changes the way income is distributed within a nation. Carey’s map, which could also have been called a ‘development synergy map, is an illustration of the centuries-old observation of the effects of a manufacturing sector. Today the map can be used in explaining the mechanisms by which the Washington Consensus policies created increasing poverty in the world periphery.

Figure 3. Henry Carey’s ‘Commodity Map’ (1858)



(Modified from Carey 1858a, iii, p. 187]

The graph in Figure 3 represents the breakdown of a typical dollar's worth of goods, i.e., a proxy for what we today would call GDP. The height of the graph represents 100 per cent of GDP. Carey shows how different the composition of GDP is in the developed East compared to the undeveloped West of the United States at the time, this graph tells a story of how the composition of GDP would change as one moved gradually from Boston to St. Louis — from right to left in the figure — or vice versa. Economic development — increasing division of labour and manufacturing — is represented by moving east from St. Louis, Missouri towards Boston. Primitivization and de-industrialization are represented by travelling west, from Boston to St. Louis.

The West, St. Louis, thus represents the situation in the undeveloped world periphery today. Here raw materials — e.g., cotton or cattle — are produced; land is abundant and cheap, labour is unskilled and cheap, the tasks are simple, and the division of labour is very limited. Under such conditions, Carey says, profits take up a large share of the GDP.

The East, Boston, represents today's developed world with a large division of labour that has added a lot of value to a raw material base. Here in the East, in contrast to the underdeveloped West, a multitude of workers combine their efforts within a refined social division of labour to work raw materials up into ever more refined products. More skills are required, increasing returns create higher profits and higher barriers to entry. Here wages and rents form a much larger portion of the value of products, while profits shrink to a smaller percentage of GDP.

If a nation over time should travel west from Boston to St. Louis, that means undoing the synergies of development, reversing the critical mass that creates wealth, in a sense travelling from capitalism back in time towards feudalism. This more than 150 year old graph can be used to show how the Washington Consensus policies that started in the late 1970s have produced exactly the same effect as Henry Carey claims a trip from Boston to St. Louis would have done in 1858: wages as a percentage of GDP sank slowly, while rents and profits — the FIRE sector: finance, insurance and real estate — grew correspondingly.

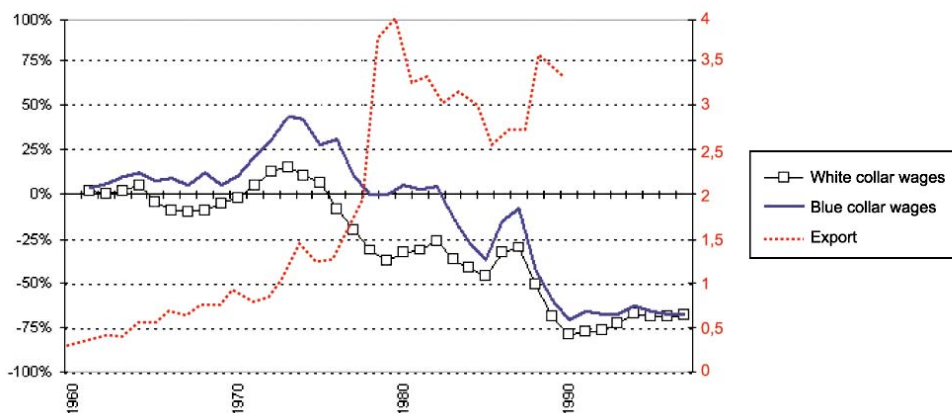
'Market failure' is a term often used when empirical facts fail to behave the way economic theory would predict. In their path-breaking new volume on industrial policy, the editors Cimoli, Dosi, and Stiglitz (2009) emphasize that 'market failure' is not a constructive angle from which one should approach the problem of poverty. In fact, from a Schumpeterian angle, what we generally refer to as 'development' is in fact a 'market failure' compared to the standard neo-classical model assuming perfect competition and diminishing

returns. What all developed countries have in common is a large increasing returns sector that has created huge barriers to entry, imperfect competition, and a 'rent' that has been divided between capitalists (high profits), labour (high wages), and the government sector (larger tax base) (Reinert 2009a). In this section we shall see how the policies of the Washington Institutions lead to the destruction of these industrial rents, and to a huge fall in real wages. The shock therapies of the Washington Institutions — instant free trade and 'structural adjustments' — brought the poor countries whose industrial sectors were not yet competitive on the world market on a permanent trip 'from Boston to St. Louis' in Carey's scheme.

Looking at Carey's mechanisms through the example of Peru, it is possible to observe how, since 1950, waves of industrialization and de-industrialization have been associated with fluctuations of living standards. The standard of living of the population has been inversely related to the weight of primary sector in the total economy. During the period 1950 to 1997, a one percentage point decrease in manufacturing industry as a percentage of GDP led to a fall in white-collar wages by 5.4 per cent, and a fall in blue-collar wages by 7.5 per cent. In reverse, every time manufacturing industry increased by one percentage point in total GDP, white-collar and blue-collar real wages increased by 10.6 and 15.5 per cent respectively (Roca and Simabuko 2004). Going back to Carey's map, we can conclude that every time manufacturing increased as a percentage of GDP, this corresponding to 'moving east' on the Carey map: wages went up. Every time the manufacturing sector shrank, it corresponded to 'moving west' on the Carey map: wages went down.

Figure 4 shows how real wages in Peru peaked in the mid-1970s when the country did everything 'wrong' according to the Washington Consensus. Peruvian industry was kept up by high tariffs and it represented a 'bad' form of protection. Industrialization was 'artificial', but the wages, roads, schools, and hospitals that were created by this industrialization were all real. It is also extremely important to see how exports take off and make the country look very successful while, at the same time, real wages are plummeting. The Washington Consensus shock therapy hit Peru on two fronts simultaneously: de-industrialization plus downsizing the public sector. By killing off the two sectors with strong union power — one private, one public — the whole national wage level collapsed. This was accompanied by a rapid fall in the Terms of Trade (Reinert 2007, Figure 15).

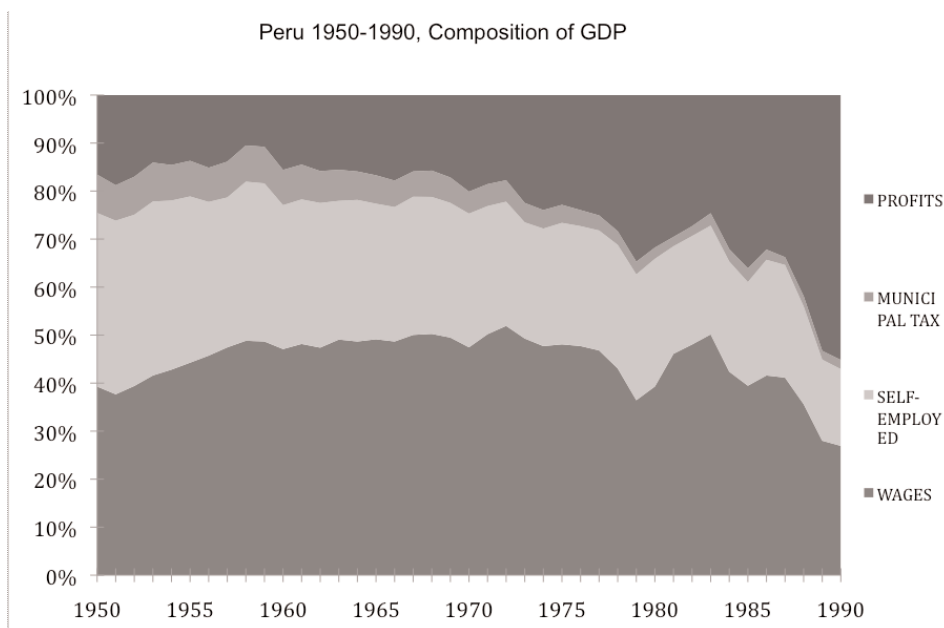
Figure 4. Industrialization, deindustrialization and real wages in Peru



Source: Reinert 2007.

Peruvian wage levels fell much faster than GDP, which can only mean that the composition of Peruvian GDP must have changed dramatically. Figure 5 in fact shows how dramatic this effect was. At the height of the industrial age in Peru, in 1972, wages amounted to 51.2 per cent of GDP and the income of the self-employed to 26.5 per cent, a total of 77.7 per cent of GDP. Figure 5 shows how wages, salaries and the income of the self-employed shrank rapidly as the country prematurely opened up to free trade. In 1990, the last year the Peruvian Central Bank provided a breakdown of GDP in this way, the share of wages in GDP had almost been halved, to 26.5 per cent, and the share of the income of the self-employed had fallen to 15.9 per cent. In total, 'normal people's' share of GDP — wages, salaries and income of the self-employed — had shrunk by 45 per cent, from 77.7% to 42.4% of GDP as a result of Washington Consensus policies from the mid-1970s to 1990. The 'national industrial rent' had been destroyed, with devastating results for real wages that, in real terms, had been more than halved in real terms.

Figure 5. Peru: Deindustrialization and falling wages as a percentage of GDP, 1950-1990



Legend (from top): profits, predial (tax), income of the self-employed, wages

Source: *Banco Central de Reserva del Perú*. This breakdown of GDP by source was not published after 1990.

Abrupt free trade led to rapidly falling real wages and a serious maldistribution of income, a primitivization of the economy back to a more feudal structure, corresponding to a voyage from developed Boston to underdeveloped St. Louis in Henry Carey's model. This shows how the presence of a manufacturing sector changes the structural fibre of an economy, why a poor nation is much better off with a relatively inefficient manufacturing sector than with no manufacturing sector at all. This is the age-old lesson that now has been unlearned.

John Maynard Keynes, then, was not only right about world financial crises, his advice to poor peripheral countries at the time, in the early 1930s, is the same advice we should give poor countries today, adapted to the present technological context. Note also that Keynes, based on the first period of globalization, recommends a certain measure of de-globalization in order to promote peace:

I sympathize, therefore, with those who would minimize, rather than with those who would maximize, economic entanglement among nations. Ideas, knowledge, science, hospitality, travel — these are the things which should of their nature be international. But let goods be homespun whenever it is reasonably and conve-

niently possible, and, above all, let finance be primarily national.^{vii} Yet, at the same time, those who seek to disembarass a country of its entanglements should be very slow and wary. It should not be a matter of tearing up roots but of slowly training a plant to grow in a different direction.

For these strong reasons, therefore, I am inclined to the belief that, after the transition is accomplished, a greater measure of national self-sufficiency and economic isolation among countries than existed in 1914 may tend to serve the cause of peace, rather than otherwise. At any rate, the age of economic internationalism was not particularly successful in avoiding war; and if its friends retort, that the imperfection of its success never gave it a fair chance, it is reasonable to point out that a greater success is scarcely probable in the coming years (Keynes 1933/1972).

In the same 1933 paper Keynes tells us how his view on free trade changed:

I was brought up, like most Englishmen, to respect free trade not only as an economic doctrine which a rational and instructed person could not doubt, but almost as a part of the moral law. I regarded ordinary departures from it as being at the same time an imbecility and an outrage. I thought England's unshakable free trade convictions, maintained for nearly a hundred years, to be both the explanation before man and the justification before Heaven of her economic supremacy. As lately as 1923 I was writing that free trade was based on fundamental 'truths' which, stated with their due qualifications, no one can dispute who is capable of understanding the meaning of the words.

... [M]ainly I attribute my change of outlook to ... my hopes and fears and preoccupations, along with those of many or most, I believe, of this generation throughout the world, being different from what they were. It is a long business to shuffle out of the mental habits of the prewar nineteenth-century world. It is astonishing what a bundle of obsolete habiliments one's mind drags round even after the centre of consciousness has been shifted. But to-day at last, one-third of the way through the twentieth century, we are most of us escaping from the nineteenth; and by the time we reach its mid point, it may be that our habits of mind and what we care about will be as different from nineteenth-century methods and values as each other century's has been from its predecessor's.

It is my conviction that a new generation — particularly in the Third World — soon will come to look at late twentieth century truths in the same way

^{vii} This 'vision' was later elaborated upon by the classical development economists (see Nurkse 2009 and Kattel, Kregel, and Reinert [eds.] 2009).

Keynes looked at those of the nineteenth century: 'It is astonishing what a bundle of obsolete habiliments one's mind drags round even after the centre of consciousness has been shifted'. The *Increasing distance = Increasing Abstraction Theorem* has evidenced the risk that the present financial crisis may create a shift in 'the centre of consciousness' as regards economic practices in the developed world, while the policies towards the Third World may continue to be guided by the same 'obsolete habiliments' inherited from the Washington Consensus principles.

Conclusion: Towards 'an 1848 Moment' when Empirical Knowledge Matters Again

'You don't get dramatic change, or reform, or action unless there is a crisis', US Treasury Secretary Henry Paulson recently said, commenting on the financial crisis.^{viii} In the clear light of hindsight, many economists' handling of the financial crisis show 'financial illiteracy' as one actor remarked.^{ix} The growing list of fragile, failing and failed states (FFFs) testifies to the fact that that poor nations have long been in crisis. However, persistent but completely untruthful rhetoric claiming the relative successes of China and India as a result of free trade — rather than of half a century of heavy-handed industrial policy — has effectively obliterated the miserable economic performance of most of the rest of the poor world.

The financial crisis will bring reform, but the 'developmental illiteracy' that has dominated in parallel to the 'financial illiteracy' also urgently needs addressing. Huge subsidies in the form of cash transfers timely saved the financial cores of capitalism against their own mistakes, now it is time to save the true victims of the market — the world poor — from the same type of mistakes, imposed on them by others. At the core of both problems — financial crisis and persistent poverty — is a mistaken theory claiming that markets are by nature harmony-creating. However, centuries of experience show that 'efficient markets' produce 'spontaneous chaos' just as frequently as they produce 'spontaneous order', and that 'destructive destruction' perhaps is as frequent an outcome as 'creative destruction'. Both in financial markets and in the international markets for goods and services, order and progress are always achieved through wise policies in a perspective that sees the market as a tool rather than as a goal.

We have mentioned the time of the French Revolution and the late 1840s as two periods when the view of the economy as a harmony-making machinery has swiftly shifted to one where markets are potentially a chaos-

^{viii} *New York Times*, December 26, 2008.

^{ix} *Financial Times*, December 24, 2008, p. 1.

producing machinery. 1846 marked the Repeal of the Corn Laws and the peak influence of David Ricardo's economic theory. A deep financial crisis in 1847 marked a turning point, followed in 1848 by revolutions in all large European countries with the exception of England and Russia.

1848 produced three important books that were all critical of the economic order created by Ricardian economics: Karl Marx and Friedrich Engels' *Communist Manifesto*, which was so radical that Marx was forced to flee Germany to England, Bruno Hildebrand's *National Economics in the Present and in the Future*, which was so liberal that Hildebrand had to flee Germany to Switzerland, and John Stuart Mill's *Principles of Political Economy*. From completely different political angles all three books attacked the mainstream of the day for suffering from the same weaknesses of which we accuse today's mainstream. By attempting to make economics into a much more accurate science than it merits, the mainstream has created economic disasters: both financial crisis and peripheral poverty. All three 1848 books understood that national wealth required industrialization, recanting Ricardo's trade theory, the very same theory which presently — in its most simplistic form — forms the basis of the world economic order that locks poor nations into a comparative advantage of being poor. Table 1 illustrates the kind of shift in economic focus that is likely to result from the present '1848 moment' precipitated by the financial crisis.

John Stuart Mill — today celebrated as an important liberal (in the European sense) — admitted that poor nations needed a manufacturing industry and therefore recommended 'infant industry protection'. In a speech to Belgian workers in 1848 Karl Marx was pleased with Ricardo's free trade theory because premature free trade would create poverty and hasten revolution. It is entirely possible that warlords in the world periphery appreciate free trade for the same reason Marx did: premature free trade locks a nation into a pre-capitalistic ('feudal') structure that prevents democracy. A nation without a fine web of increasing returns industries is unlikely to be able to support a democratic system. Enlightenment economists and philosophers were extremely aware of the fact that increasing returns/industrialization and democracy go hand in hand. As Toqueville puts it: 'I do not know if one can cite a single manufacturing and commercial nation, from the Tyrians (Phoenicians) to the Florentines and the English, that has not also been free. Therefore a close tie and a necessary relation exist between those two things: freedom and industry' (quoted in Reinert 2007).

John Stuart Mill not only rediscovered the reasons for 'infant industry protection', he also thoroughly understood that at the core of all widespread poverty lies the curse of diminishing returns:

I apprehend (the elimination of this factor) to be not only an error, but the most serious one, to be found in the whole field of politi-

cal economy. The question is more important and fundamental than any other; it involves the whole subject of the causes of poverty; ... and unless this one matter be thoroughly understood, it is to no purpose proceeding any further in our inquiry (Mill 1848/1987: 176).

Mill also describes the collective wake-up call when an inappropriate type of theory is left behind, what I call the 1848 moment:

It often happens that the universal beliefs of one age of mankind — a belief from which no one *was*, nor without an extraordinary effort of genius and courage *could* at the time be free — becomes to a subsequent age so palpable an absurdity, that the only difficulty then is to imagine how such a thing can ever have appeared credible... It looks like one of the crude fancies of childhood, instantly corrected by a word from any grown person. (Mill 1848/1987: 3).

The one single message in this paper is that the only way to create middle income countries is to create countries with a large division of labour in increasing returns sectors: countries with a manufacturing sector (and today with advanced services). Diversification away from the primary sector and the creation of employment must be given priority before free trade. This has been the basis of all successful developmental practice since the late 1400s and in theory since 1613. At times this principle gets suppressed by excessively abstract economic theories — at the time of the French Revolution, in the 1840s, around 1930, and since the late 1970s — but empirically based theories eventually come back, precipitated by economic crises.

The Marshall Plan following World War II was the most successful development plan in the history of mankind. The 1948 Havana Charter — at the time approved by all members of the United Nations — was based on the principles of John Stuart Mill and of the Marshall Plan. A blueprint for development of peripheral states exists in the Havana Charter, and a key factor is the timing of free trade. Policies that create and nurture increasing returns sectors in poor countries are needed, and the discussion on how and when to turn on and off will be as heated as it has always been. When successfully promoted — as it was in the United States — protection carries the seed of its own destruction: having achieved a certain size and skill level, the protected companies themselves seek out larger markets in order to stay competitive. History does not supply easy formulas, but at least shows us some very important principles that, through the Washington Consensus, have been ignored far too long.

Table 1. The Coming Shift in Economic Focus: Before and after the 1848 Moment

PRE FINANCIAL CRISIS FOCUS	POST FINANCIAL CRISIS FOCUS
Capital	Technology and entrepreneurship
Financial economy	Real economy
International trade	National production
Economic models	Economic facts and their contexts
Distribute capital ('aid') in order to eradicate poverty	Distribute production in order to eradicate poverty
Perfect competition	Poverty eradication needs the high wages and the capital formation that only dynamic imperfect competition creates
Economics strongly ideologically biased. The Cold War polarization maintained: markets are good and the state bad and vice-versa.	Separation of analysis and ideology, 'technocratic' analysis
Economic activities qualitatively alike	Economic activities qualitatively different
Gross national product/capita	Real wages
Economics as a science defined as the use of certain tools	Economists' toolbox extended any approach which is relevant.
The market as an ideological <u>goal</u>	The market as a <u>tool</u> for wealth creation

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Appendix I. Frank Graham's Theory of Uneven Development

Increasing and diminishing returns in international trade: a numerical example

Stage 1: World income and its distribution before trade

Product	Country A			Country B		
	Man-days	Output per man-day	Total	Man-days	Output per man-day	Total
Wheat	200	4	800	200	4	800
Watches	200	4	800	200	3	600

World production: 1,600 wheat + 1,400 watches. In wheat equivalents: 3,200

Country A's income in wheat equivalents: 1,714 wheat

Country B's income in wheat equivalents: 1,486 wheat

Price: 4 wheat = 3.5 watches

Stage 2: World income and its distribution after each country specializes according to its comparative advantage

Product	Country A			Country B		
	Man-days	Output per man-day	Total	Man-days	Output per man-day	Total
Wheat	100	4.5	450	300	3.5	1050
Watches	300	4.5	1350	100	2	200

World production with trade: 1,500 wheat + 1,550 watches. In wheat equivalents: 3,271

Country A's income in wheat equivalents: 1,993 wheat

Country B's income in wheat equivalents: 1,278 wheat

Working Papers in Technology Governance and Economic Dynamics

The Other Canon Foundation, Norway, and the Technology Governance program at Tallinn University of Technology (TUT), Estonia, have launched a new working papers series, entitled "Working Papers in Technology Governance and Economic Dynamics". In the context denoted by the title series, it will publish original research papers, both practical and theoretical, both narrative and analytical, in the area denoted by such concepts as uneven economic growth, techno-economic paradigms, the history and theory of economic policy, innovation strategies, and the public management of innovation, but also generally in the wider fields of industrial policy, development, technology, institutions, finance, public policy, and economic and financial history and theory.

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