

# Introduction

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It is generally not recognized that two Nobel laureates in economics have provided two conflicting theories of what will happen to world income under globalization:

1. Based on the standard assumptions of neo-classical economic theory, US economist Paul Samuelson ‘proved’ mathematically that unhindered international trade will produce ‘factor-price equalization’, that is that the prices paid to the factors of production – capital and labour – will tend to be the same all over the world.
2. Based in an alternative dynamic tradition – which we here label The Other Canon – Swedish economist Gunnar Myrdal was of the opinion that world trade would tend to increase already existing differences in incomes between rich and poor nations.

We would argue that the second approach easily incorporates the main elements of evolutionary or neo-Schumpeterian economics, but with a broader theoretical and historical perspective and with a broader agenda. The aim of this book is to explore the contributions of today’s evolutionary economics to the understanding of the increasing gap in global income inequality, that is to broaden the normal perspective of neo-Schumpeterian economics consciously into the realm of development economics.

The experiences since the early 1990s – since the fall of the Berlin Wall – have shown that in many cases globalization has followed the trend predicted by Myrdal. During the 1990s a large number of nations have experienced falling real wages and falling national income; in many cases real wages have declined both rapidly and considerably. In some of the former communist countries a humanitarian crisis of large proportions is evolving. In most Latin American countries real wages peaked sometime in the late 1970s or early 1980s, and have fallen since then. In several African countries it is no longer possible to talk about a ‘state’ as such; and this problem of ‘failed states’ is growing. Many institutions that used to be handled by the nation-state, like the educational systems, have broken down in these nations, and different areas of what used to be a nation are ruled

over by different warlords. This is a type of political structure that a few years ago was thought of as belonging to a mediaeval past. If there is something called ‘progress’ and ‘modernization’, globalization has – particularly for many small and medium-sized nations – brought with it the opposite: many are experiencing ‘retrogression’ and ‘primitivization’. Poverty and disease increase sharply in Sub-Saharan Africa, and we see a creeping ‘Africanization’ in parts of Latin America.

These developments profoundly challenge the present world economic order and the standard textbook economics on which this order rests. The increasingly globalized economy seems to produce opposite effects of what standard economic theory predicts, a Myrdal effect rather than a Samuelson effect. Instead of a convergence of world income (towards factor-price equalization), we find that a group of rich nations shows a tendency to converge, while another convergence group of poor countries seems to gather at the bottom of the scale. Mainstream logic would point to the opposite effect being the likely outcome: the more backward a nation, the more space will be available to catch up to some imaginary ‘frontier’. In effect, what is actually happening may be something very different. From a Schumpeterian perspective, some nations may specialize in producing continuous flows of innovations that raise their real wages (‘innovation rents’), whereas other nations specialize either in routine economic activities where there is very little or no technological change (*Maquila*-type activities) or, alternatively, where technological change takes the form of process innovations where technical change is taken out in the form of lower prices to the consumers rather than in higher wages to the workers. It is not well known today that this ‘Schumpeterian’ explanation of underdevelopment – that the fruits of innovation and technical change are taken out differently in the First World (higher wages) than in the Third World (lower prices) – was an integral part of the Prebisch–Singer theory of underdevelopment, recorded by Hans Singer, a student of Schumpeter in Bonn.

In response to the growing challenges, the focal points of the Washington Institutions have changed over time, reflecting a growing recognition of the complexities of economic development. The initial phase can be described as ‘get the prices right’, and development will more or less take care of itself. In this phase states and government policies were out, supposedly harmony-creating markets were in. A second phase can be described as ‘get the property rights right’. It was understood that the market needed a legal setting. A third stage of understanding was reached in the latter part of the 1990s when the watchword became ‘get the institutions right’, followed by ‘get the governance right’. Towards the end of the 1990s, evolutionary or neo-Schumpeterian elements were added to this moving target of prescriptions: ‘get the competitiveness right’ and ‘get the innovation system right’.

There is a risk here, however, that these evolutionary elements are introduced on top of what is essentially a neoclassical theory: that a Schumpeterian icing is added to a solidly neoclassical cake.

It is not clear that these consecutive focal points of the Washington Institutions really have brought us any closer to understanding why economic development by its very nature seems to be so unevenly distributed. The risk is that we have not arrived at the root causes, synergies and conditions that make institutions, innovation and good governance viable and possible. We may be continuously pointing to new symptoms rather than to the actual causes of development, because we do not include in our analysis the preconditions that institutions, innovations and good governance need to take root. For example, institutions that took centuries to develop in an industrialized Europe are not likely to be successfully transferred to a feudal mode of production or to a hunting and gathering tribe. Likewise, as far back as in the late 1500s economists like Giovanni Botero were pointing to a diversified artisan and manufacturing base as a precondition both for ‘good rule’ and for the synergetic process that we call economic development to take place. If we accept Botero’s analysis we can also explain why the very existence of both political freedom and generalized welfare was for so many centuries an urban phenomenon. Neither democracy, nor ‘good governance’ or effective ‘national innovation systems’ are likely to appear in a feudal production structure based on agricultural monoculture. This would also give us a hint as to why the process of deindustrialization in the 1990s (Chapters 5 and 6 of this book) – in effect removing the complex synergetic diversity and division of labour of a society – is a phenomenon that runs parallel to the growth of ‘failing states’. In Chapter 1 of this book we attempt to resurrect a type of ‘Renaissance economics’ – The Other Canon – that takes these factors into account.

From this perspective democratic state formation, economic development and functioning innovation systems are probably all dependent on the very same conditions: a large diversity of economic activities subject to increasing returns, being synergetic phenomena built upon the mutual dependency created by finely knit and interlocking networks of divisions of labour. Antonio Serra’s path-breaking theories (1613) in this regard are referred to in Chapter 1 and Chapter 6 of this book. This same perspective – including the city and its diverse activities as the nexus of innovations, growth and liberty – was raised again in the nineteenth century by Friedrich List (quoting Antonio Serra) and others, and formed the basis for the industrialization policies of all nations that followed England in the process of industrialization. As late as in 1945, it was obvious that Western Europe needed to rebuild its industry, even though – compared to the United States – its comparative advantage may not have been in that sector. In the view

of this editor the failure to capture these common preconditions – for economic growth, innovation systems, good governance and democracy – make the sequential new insights of the Washington Institutions merely catchphrases that address symptoms rather than causes. We argue that by widening the evolutionary and neo-Schumpeterian perspectives, a case can be built connecting economic diversity and innovations with the growing problem of failing nation-states.

Two alternative theories based on two different metaphors compete for the attention of today's economists: mainstream economics based on an equilibrium metaphor from physics, and evolutionary economics based on biology, on Darwinian evolution. We argue that both suffer from an important common weakness: both metaphors fail to grasp the synergetic elements of economies and societies, both are in a sense based on methodological individualism. They both also emphasize the mechanics of development; in our view the Darwinian metaphor fails to carry economics sufficiently away from 'matter' towards 'mind'. Renaissance understanding of society was based on the thirteenth-century concept of *il bene commune* or 'the common weal'. This Renaissance understanding of the economy and society was – dating all the way back to Roman legal tradition – based on an entirely different biological metaphor; on the human body as the metaphor for studying society. In the tradition of English historiography this systemic thinking is referred to as the body politic. The idea is clearly visualized in the frontispiece of Thomas Hobbes's *Leviathan* (1651), where Leviathan himself is depicted as consisting, literally, of a huge number of human beings. Understanding society as a body of members and parts, each specialized in different tasks, very clearly brings across the idea of synergies, embeddedness, interdependencies and linkages in human societies and in their economies, and it also makes obvious the role of the human mind and human will as economic factors. These systemic dimensions – which we find largely absent in both mainstream and evolutionary paradigms today – are reflected in The Other Canon approach. We would argue that when the biological metaphor of economics shifted from the body politic to Darwinian (or Lamarckian) evolution, important elements were lost: the role of the human will – the head – and the synergetic elements of the evolution of economies and societies.

The Renaissance discovered the individual and opened up the way for great individual feats in art, science and entrepreneurship. However, the creative role of the individual in this tradition was superimposed on the earlier synergetic view of society and its common weal as expressed by the body metaphor. This created a dualistic view that also opened the way for tensions and required conscious political trade-offs between the interests of society and the interests of the individual. In this tradition of Renaissance civic humanism Italian economist Pietro Verri emphasizes, in

the 1760s, that the private interest of each individual, when it coincides with the public interest, is always the safest guarantor of public happiness. With Adam Smith and his followers the direct connection between individual greed and the public interest tended to be taken for granted, and economics slowly opened up for Margaret Thatcher's famous dictum that 'there is no such thing as society'.

We would argue that the present weak understanding of the process of economic development also has its background in the development of economics since the Second World War. Stated in terms of the circular flow of the economy, focus over the past decades was increasingly put on the monetary side, not on the 'real economy' of goods and services, on what Schumpeter called the *Güterwelt*. The Fordist production system created a long economic boom following the Second World War. In this period a well-developed Keynesian toolbox succeeded in controlling the cyclical ripples in the economy, almost to the extent of creating an illusion of controlling the wave of economic growth itself. In the developed world, economic redistribution and Keynesian economic fine-tuning almost came to take for granted the huge productive and synergetic machinery that was once called industrialism. Only by looking at the Third World was it obvious that this was only an illusion, but 'development economics' as a field of academic research was declared dead by the mainstream sometime in the 1980s.

Already in 1954 – early in the development of the neoclassical synthesis – Swedish institutional economist Johan Åkerman had a perceptive comment on this development of economic science, how economic theory came to lose the very cause of twentieth-century wealth creation: industrialism. Åkerman explains these mechanisms well:

Capitalism, property rights, income distribution came to be considered the essential features, whereas the core contents of industrialism – technological change, mechanisation, mass production and its economic and social consequences – partly were pushed aside. The reasons for this development are probably found in the following three elements: *Firstly*, Ricardian economic theory . . . became a theory of 'natural' relations, established once and for all, between economic concepts (price, interest, capital, etc). *Secondly*, the periodic economic crises are important in this respect because the immediate causes of the crises could be found in the monetary sphere. Technological change, the primary source creating growth and transforming society, disappeared behind the theoretical connections which were made between monetary policy and economic fluctuation. *Thirdly*, and most importantly, Marx and his doctrine could capitalise on the discontent of the industrial proletariat. His teachings gave hope of a natural law which led towards the 'final struggle', when the pyramid of income distribution would be turned on its head, the lower classes should be the powerful and mighty. In this ongoing process the technological change came to be considered only as one of the preconditions for class struggle.

With the growth of evolutionary and neo-Schumpeterian economics in the 1990s, focus was again put on the production side of the economy. Evolutionary economics has been the branch of economics that has delved into the 'black box' of technology and production, into Schumpeter's *Güterwelt* – the world of goods and services. Although essentially equipped with the right focus on production and innovation, evolutionary economics has in our opinion delivered little research into the study of uneven economic growth from the point of view of the Third World. Also the crucial link between innovation and finance, which was so important to Schumpeter himself, has been largely ignored by his followers. The link between technology and wages – which was an important issue both for the German Historical School and the 'old' US institutionalists – has also been peripheral in evolutionary economics. The field has developed more towards the micro level, like the theory of the firm, than towards addressing the big issues that equally open up when one has grabbed the torch of technology and innovations as explaining not only economic growth in general, but also why this process is so uneven.

The Other Canon is an attempt to broaden the evolutionary and neo-Schumpeterian agendas by reintegrating important elements which distinguished the German Historical School – out of which Schumpeter's own theories originate – from English classical economics. Neo-Schumpeterian economics is the happy story of innovations and increasing returns. However, we tend to forget that when the synergies of increasing return activities are destroyed by the precipitous opening up of previously isolated economies – as was the case in so many countries in the 1990s – the gloomy Malthusian mechanisms of diminishing returns are still alive and well. These mechanisms explain why a large percentage of the world population still lives under the spell of David Ricardo's 'dismal science': wages tend to hover around subsistence level. These Myrdalian 'vicious circles' and 'perverse backwashes' are described in Chapter 6 of this book. The Other Canon opens the way for a Schumpeterian economic geography where creative destruction materializes as creation in one nation and utter destruction in another nation, and where the effects of changing techno-economic paradigms are widely different in paradigm-producing countries than in paradigm-using countries. It also opens the way for Schumpeterian development economics that – in the tradition of Hans Singer and the early development economists – recognizes that in some cases the fruits of innovations do not stick with the producing nations, but are given away to the consuming nations, and that some nations are locked into a specialization in activities where not even the innovation powerhouses of the world have managed to create innovations. In our view there is a risk today that the rich Schumpeterian vision boils down to a 'Schumpeterian variable' in main-

stream equilibrium models, as a Schumpeterian icing on the thoroughly neoclassical cake.

The purpose of this book is to collect views and insights from contemporary evolutionary economists, many of them prominent, on the issues of technological change, globalization and uneven economic growth. The complementary perspectives of the book, focused around an evolutionary and Schumpeterian perspective, point to mechanisms that cause economic globalization to increase global economic inequality. This is of course the opposite conclusion of that reached by mainstream economics, but is consistent with the observed trend since the early 1990s. Several of the chapters point to a tendency that some nations may specialize in being innovative and wealthy, while others may specialize in routine activities with little potential for innovation, and stay poor. The book is an outcome of a sequence of conferences held during the last several years in Oslo, Norway and Venice, Italy, attempting to reconstruct and develop an alternative to the neoclassical paradigm. Financial contributions to *The Other Canon* from Norsk Investorforum and the Norwegian Shipowners' Association are thankfully acknowledged. The editor thanks Fernanda and Sophus Reinert for editorial assistance.

On the pages following this introduction, we have attempted to contrast the postulates and assumptions of a full-fledged alternative and evolutionary economic theory – *The Other Canon* – with today's standard theory. Whereas standard economics may relax one or two of its assumptions, later to put them back into the theoretical edifice, *The Other Canon* approach demands that all standard assumptions are relaxed simultaneously. As already mentioned, *The Other Canon* contains many elements both from the German Historical School of economics and from the kind of economics that dominated in the United States during most of the nineteenth century and in the early twentieth century.

In both cases – both in the mid-nineteenth century and in the early twenty-first century in the case of *The Other Canon* – these alternative *Weltanschauungen* were created as a reaction to liberalism, to a type of theory postulating markets as promoters of automatic economic harmony. In both cases the champions of liberalism were the leading world economies, England and the United States respectively. In both cases the proponents of the alternative theories were the laggard nations; in the case of nineteenth-century liberalism the main proponents of the alternative theory were found in Germany and the United States. Contrasting the economic postulates and economic policies promoted by the United States in the past – as a laggard country catching up with England – and the postulates and policies of the same United States today therefore becomes a particularly rewarding exercise in the connection between vested interests and

economic theory. If we go further back in history we find that the same switch in theory – from an Other Canon type theory to liberalism – took place in England with Adam Smith. We would also argue that in both cases the economic harmony born out of liberal theory was already built into the core assumptions of the liberal theoretical edifice itself. A theory that contains no diversity between its actors or activities can hardly be expected to predict any diversity in outcome. Including and understanding diversity is therefore a core element in any theory of uneven development.

The eleven chapters of the book have been organized in four parts that approach the problem of uneven development from different angles. The logic of the sequence is the following. The first two chapters, grouped under the heading ‘Foundations of an Alternative Theoretical Perspective’, discuss the types of economic theory available and what type of theoretical framework is most appropriate in order to analyse why economic development by its very nature has proved to be so unevenly distributed among nations. The second part of the book, ‘The Strategy of Success’, is devoted to a discussion of the very successful economic strategies of two industrial latecomers, Germany and the United States. The third part of the book, ‘The Strategy of Failure’, contains case studies of two countries that have experienced a sharp reduction of real wages during recent decades, Peru and Mongolia. Part IV of the book contains five chapters on ‘Technical Change and the Dynamics of Income Inequality’.

In Chapter 1 Erik Reinert and Arno Daastøl argue that the problem of world income inequality is best understood in a different tradition than that of today’s mainstream economics. They describe the trajectory of an alternative type of economic theory – Renaissance Economics or The Other Canon – whose history is much longer than that of standard textbook economics. A canon of thought can be defined as a selection of authoritative authors who represent a theoretical tradition over time, a concept closely related to what Joseph Schumpeter calls a ‘filiation of thought’. Reinert and Daastøl’s chapter traces the history of this alternative Other Canon of economics, and documents six periods in the history of economic thought when the two canons have been in conflict, in other words six *Methodenstreite*. It is argued that no nation has ever made the difficult transition from poor to rich without a prolonged period of Other Canon economics, of what Werner Sombart called the ‘activistic/idealistic’ rather than the ‘passivistic/materialistic’ tradition of economics.

In Chapter 2 Wolfgang Drechsler discusses two alternative forms of human understanding in the German tradition, and argues for the reintroduction of a qualitative type of understanding in economics. Drechsler argues that this qualitative type of understanding, *verstehen*, is not a complex form of quantitative measuring, but something very different.



This form of qualitative understanding is a key feature of the alternative Other Canon of economics.

Opening Part II of the book, Jürgen Backhaus outlines the view of the German Historical School of Economics, the dominating economic theory in Germany for about a century, on international trade and world income distribution. Backhaus documents the scepticism about free trade before a nation had achieved a comparative advantage outside the primary sectors. In the next chapter, the fourth, Michael Hudson discusses an aspect of US economic history which today is almost completely ignored: the analysis of technology and of systemic competition that formed the foundation of US nineteenth-century trade and industrial policies. During the nineteenth century German and US economists formed a common front against the English tradition of Adam Smith and David Ricardo, in favour of the tradition that we call The Other Canon. Early in the century, the ideas of Americans Daniel Raymond and Mathew Carey were reflected in the work of German (and one-time American citizen) Friedrich List. Later in the nineteenth century, Henry Carey and Eugen Dühring formed another transatlantic economic front, frequently citing each other. This unification of the German–US tradition was much strengthened by the fact that for a very long time there were no graduate courses in economics in the United States. Virtually all US economists at the time received their PhD at German universities, as had all the founders of the American Economic Association.

Part III of the book opens with a case study of failed national policy, that of Peru since 1950. In this Chapter 5 Santiago Roca and Luis Simabuko analyse four cycles of industrialization and deindustrialization in Peru over the last 50 years. In these cycles, when the Peruvian manufacturing industry has gained one percentage point as a percentage of GDP per capita, real wages have risen by more than 10 per cent. The reverse, a relative increase in the primary sector at the expense of manufacturing, has had the opposite effect: one percentage point increase of the primary sector has reduced real wages by more than 5 per cent. We would argue that this reflects the view which was held by the German and US economists who were discussed in Part II of the book: it was a well-established truth that a nation with a relatively inefficient manufacturing sector would be much better off than a nation with no manufacturing sector at all. An inefficient manufacturing sector ought to be made more efficient, it should not be closed down – as it was in the 1990s from Argentina to Mongolia and Zimbabwe. We would argue that by not recognizing the crucial importance of a diversified manufacturing sector to the development of a nation, the Washington Consensus broke with a policy tradition dating back to the 1500s.

Chapter 6 is a second case study on failed economic policies, by Reinert

on the Mongolian economy during the 1990s. This chapter argues that the mechanisms which were set in motion in Mongolia, deindustrialization accompanied by falling productivity in the agricultural sector, are the same type of mechanisms which were created in Germany by the Morgenthau-plan in the period immediately following the Second World War. In 1947 the US government recognized that in a deindustrialized Germany – which was the aim of the Morgenthau Plan – there were 25 million people too many. An immediate reversal of the Morgenthau Plan and the creation of a plan to reindustrialize Germany – the Marshall Plan – was the result. It is argued that a similar turnaround is needed today for a large part of the Third World.

Part IV opens with an overview of long-term technological development by Carlota Perez, in Chapter 7. Perez presents a qualitative understanding of technological change and business cycles that is very much in the production-based – rather than barter-based – Other Canon tradition of economics. Carlota Perez shows us that historically, technological revolutions pass through predictable phases, and that understanding these phases is crucial to the understanding of both business cycles and uneven development. New technological paradigms – quantum jumps in potential productivity – open the way for a great potential to increase general wealth. However, Perez emphasizes, the ability of the institutional and sociopolitical framework to take advantage of this potential will determine both the speed and the extent of its successful introduction.

In Chapter 8 Chris Freeman discusses the relationships between technical change, economic growth and income distribution. The impact of technical change is discussed as it affects both the level of unemployment and the level of earnings of those who are employed. It is argued that the Kuznets effect – a widening of income inequalities in the early stages of growth, later to be followed by a narrowing of inequalities – is in fact a phenomenon that is closely related to the stages of the techno-economic paradigms. The reaction towards a policy of narrowing inequalities has been a product of political revulsions against the hardships created under growing inequality. This counter-reaction against growing inequalities is exemplified in the United States by the Homestead Act of the 1830s, antitrust legislation and other reforms in the 1890s, and the New Deal in the 1930s and 1940s. Freeman points to the challenge of creating new ways of thinking and new policies in order to reverse the present trends towards increasing inequalities, a challenge which exists both within nations and between nations.

In Chapter 9 Dieter Ernst and Bengt-Åke Lundvall discuss the challenges facing developing countries during the present process of globalization, focusing on the dual face of knowledge in the learning economy. By

comparing and contrasting tacit and codified types of learning, as exemplified by Japanese and American business practices respectively, Ernst and Lundvall discuss the different roles these symbiotic forms of knowledge have in the process of economic development. Challenging the standard view of globalization as the great equalizer, they show how the increased intensity of creative destruction in the production and implementation of new knowledge may give birth to a vicious circle where developing countries, lacking the necessary technological and institutional infrastructure, fall further and further behind. National policies must therefore intervene where the invisible hand fails to generate the desired result, as ‘there is no way to reduce poverty other than to place learning and knowledge creation at the centre of development strategy’. National Innovation Systems – associated with Chris Freeman, Richard Nelson and Bengt-Åke Lundvall – is an important approach that opens the way for reintroducing the crucially important synergetic elements of economic development.

In Chapter 10 David Audretsch argues that differences in income distribution are likely to grow with increasing globalization. In a world where costs for transportation and diffusion are relatively low, while wage differentials between geographic areas are large, the author argues that routine economic activities will tend to be transferred out of high-cost locations to lower-cost locations. This will leave the presently wealthy nations specializing in search activities, in R&D. Audretsch revisits recent contributions to the rediscovered field of economic geography, and argues that economic diversity of a region is the driving force producing knowledge spillovers and innovation. Using Gunnar Myrdal’s terminology, we could add that diversity is the starting point for cumulative causation of the positive kind, a precondition for innovations under increasing returns and Schumpeterian competition.

The editor would like to add here that Audretsch’s chapter vindicates the view of the early Italian economists Giovanni Botero (Botero 1588) and Antonio Serra (Serra 1613) about the importance of diversity. In this tradition the diversity of economic activities – the degree of the division of labour – was the key to understanding why some cities, those with a strong artisan and manufacturing base, were wealthy, while purely administrative centres and farming areas tended to be poor. Antonio Serra developed this argument into a theory of uneven development that is discussed in Reinert’s Chapters 1 and 6 of this book. Audretsch’s chapter also indirectly revives the old debate in development economics about the problems of monoculture in development economics: the lack of a diversified economic base is a serious obstacle to innovations and consequently to economic development.

In Chapter 11 Ådne Cappelen presents thoughts on the continued relevance of the Kuznets curve for understanding convergence and divergence

of income at local, national and global levels. Cappelen shows that European countries have alternated between diverging and converging trends of economic growth even in cases where structural symmetries seem to satisfy the assumptions of neoclassical growth models. Beyond the European theatre, it is clear that the long-term global picture is one of absolute divergence in GDP per capita. Convergence is thus clearly not a stable process, but erratic and heavily dependent on factors exogenous to neoclassical doctrine. The questions raised by Cappelen are important for policy-makers and economists alike, and he specifically calls for a comparative analysis of regional and individual income distribution for use in domestic policy.

Taken together, the chapters of this book also raise the issue of a 'minimum efficient size' of nations. Most of the many nations that have grown poorer during the last decade have been relatively small states. In the nineteenth century Friedrich List warned against small states – against what he called *Kleinstaaterei* – and argued for successive trade liberation in larger and larger units, until global free trade could be reached when all nations had achieved a solid manufacturing base. Not only have the apparent success stories of globalization, China and India, followed a conscious pro-manufacturing policy for more than 50 years, they are also the most populous countries of the planet. Seen through our perspective and that of List, many regions – Latin America among them – probably graduated too early into global free trade without having consolidated their regional trading system (under the Latin American Free Trade Association or the Andean Pact). Whereas small developed nations like Finland and Ireland have been spectacularly successful in industries that are 'born global', the smaller states in the periphery seemingly still retain the problems identified by List and require the regional integration among equals that List himself recommended.

Rapid technological change of the nineteenth century created what came to be called 'the social question' in Europe, growing economic inequality and increasing misery in the middle of a technological revolution. Among the most miserable were the 'home workers', specializing in the non-mechanized routine economic activities that had not become part of the industrial factory. Audretsch's chapter in this book points to a similar effect today: some nations may specialize in routine activities where the scope for innovation is minimal. This is a phenomenon we in previous publications have called 'Schumpeterian underdevelopment'.

'Creative destruction' is an important term in Schumpeterian economics, a term that entered economics via Friedrich Nietzsche and Werner Sombart. As Schumpeter, Nietzsche himself saw this process as a positive one. The eminent Renaissance historian Jacob Burckhardt – Nietzsche's

friend and colleague at the University of Basel – was however of a different opinion. In his view absolutely destructive forces also existed, ‘under whose hoofs no grass grows’. This is a perspective that presently seems most relevant in many poor countries that are cut off from any progress, increasingly falling behind into the category of ‘failed states’. A theoretical vacuum surrounds their problems, but the situation really requires urgent policy measures. We find it is important that evolutionary economic geography highlights the fact that 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. The fact that the labour market is not globalized, in our increasingly globalized world economy, in our view seriously exasperates this problem, sometimes with very serious consequences, as in the case of Mongolia (Chapter 6).

As Chris Freeman and Carlota Perez both point out in their respective chapters in this volume, any improvement in the trend towards greater equality – a Kuznets effect where inequality diminishes – is a result of conscious economic policies and institutional change. The old ‘social question’ was only solved by creating institutions that, one by one, became building blocks of a system that produced generalized welfare: minimum wage, health and safety standards, health insurance, unemployment benefits and so on. These institutions were above all constructs of the German *Verein für Sozialpolitik* – the Association for Social Policy – working from 1872 to 1932, which received the political backing of Chancellor Bismarck at an important point. Their institutional innovations created the most important blueprints for solving ‘the social question’ across Europe. We are now faced with a new and global version of ‘the social question’, but this time the distributional problems are more between nations than inside nations. Not only are we faced with the challenge of developing economic theories that explain the increasing gap between rich nations and a large number of poor nations, we also need someone playing the role of Bismarck – picking up and acting on the new theories – on the international political level.

At the core of the increasing misery of many nations lies, in our view, the loss of what for centuries – until the mid-1980s – was accepted common sense: a poor nation would be much better off with an inefficient manufacturing sector than without any manufacturing sector at all. History has shown that the synergies and the division of labour arising out of the increasing return sectors – manufacturing and advanced services – are the core mechanisms behind economic growth, innovation systems, good governance and democracy. Inefficient manufacturing sectors are to be made efficient in a regional setting, not to be closed in a process that throws the nation back into a raw material monoculture devoid of any diversity, increasing returns or synergies, as it occurred in the 1990s. As happened at

the end of the first wave of globalization, about 100 years ago, this means that we again shall have to revise our attitude towards instant free trade, although being the long-term goal, as always being the optimal solution also in the short run.

## APPENDIX: TWO DIFFERENT WAYS OF UNDERSTANDING THE ECONOMIC WORLD AND THE WEALTH AND POVERTY OF NATIONS.\*

Starting point for the standard canon	Starting point for 'The Other Canon'
Equilibrium under perfect information and perfect foresight	Learning and decision-making under uncertainty (Schumpeter, Keynes, Shackle)
Methodological individualism	Methodological holism <i>and</i> methodological individualism
High level of abstraction	Level of abstraction chosen according to problem to be resolved
Man's wit and will absent	Moving force: <i>Geist- und Willenskapital</i> : Man's wit and will, entrepreneurship
Not able to handle novelty as an endogenous phenomenon	Novelty as a central moving force
Moving force: 'capital <i>per se</i> propels the capitalist engine'	Moving force: new knowledge which creates a demand for capital to be provided from the financial sector
Metaphors from the realm of physics	Metaphors (carefully) from the realm of biology
Mode of understanding: mechanistic (' <i>begreifen</i> ')	Mode of understanding: qualitative (' <i>verstehen</i> '), a type of understanding irreducible only to numbers and symbols
Matter	<i>Geist</i> precedes matter
Focused on Man the Consumer. A. Smith: 'Men are animals which have learned to barter'	Focused on Man the Innovator and Producer. A. Lincoln: 'Men are animals which not only work, but innovate'
Focused on static/comparative static	Focused on change
Not cumulative/history absent	Cumulative causations/'history matters'/backwash effects (Myrdal, Kaldor, Schumpeter, German Historical School)

Increasing returns to scale and its absence a non-essential feature	Increasing returns and its absence essential to explaining differences in income between firms, regions and nations (Kaldor)
Very precise ('would rather be accurately wrong than approximately correct')	Aiming at relevance over precision, recognizes the trade-off between relevance and precision as a core issue in the profession
'Perfect competition' (commodity competition/price competition) as an ideal situation: a goal for society	Innovation- and knowledge-driven Schumpeterian competition as both engine of progress and ideal situation. With perfect competition, with equilibrium and no innovation, capital becomes worthless (Schumpeter, Hayek)
The market as a mechanism for setting prices	The market also as an arena for rivalry and as a mechanism selecting between different products and different solutions (Schumpeter, Nelson and Winter)
Equality assumption I: no diversity	Diversity as a key factor (Schumpeter, Shackle)
Equality assumption II: all economic activities are alike and of equal quality as carriers of economic growth and welfare	Growth and welfare are activity-specific – different economic activities present widely different potentials for absorbing new knowledge
Both theory and policy recommendations tend to be independent of context ('one medicine cures all')	Both theory and policy recommendations highly context dependent
The economy largely independent from society	The economy as firmly embedded in society
Technology as a free good, as 'manna from heaven'	Knowledge and technology are produced, have cost and are protected. This production is based on incentives of the system, including law, institutions and policies
Equilibrating forces at the core of the system and of the theory	Cumulative forces are more important than equilibrating ones, and should therefore be at the core of the system



Economics as <i>Harmonielehre</i> : the economy as a self-regulating system seeking equilibrium and harmony	Economics as an inherently unstable and conflict-rich discipline. Achieving stability is based on Man's policy measures (Carey, Polanyi, Weber, Keynes)
Postulates the representative firm	No 'representative firm'. All firms are unique (Penrose)
Static optimum. Perfect rationality	Dynamic optimization under uncertainty. Bounded rationality
No distinction made between real economy and financial economy	Conflicts between real economy and financial economy are normal and must be regulated (Minsky, Keynes)
Saving caused by refraining from consumption and a cause of growth	Saving largely results from profits (Schumpeter) and saving <i>per se</i> is not useful or desirable for growth (Keynes)

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*Note:* \*Authors: Leonardo Burlamaqui, Ha-Joon Chang, Michael Chu, Peter Evans, Jan Kregel and Erik Reinert.

