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Proximate, intermediate and ultimate causality: Theories and experiences of growth and development

Adam Szirmai

Working Paper Series on Institutions and Economic Growth: IPD WP01

This working paper is part of the research programme on 'Institutions, Governance and Long-term Economic Growth', a partnership between the French Development Agency (AFD) and the Maastricht Graduate School of Governance (Maastricht University – UNU-Merit). The research builds on the Institutional Profiles Database IPD, jointly developed by AFD and the French Ministry of the Economy since 2001.

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AFD-MGSoG/UNU-Merit Working Paper Series on
« Institutions, Governance and Long term Growth »

In 2010, the French Development Agency (AFD) initiated a partnership with the Maastricht Graduate School of Governance (Maastricht University - UNU-Merit) with a view to exploring the conceptual and econometric relationships between institutions and long-term growth. As a development bank with a long-term lending horizon, AFD is particularly interested in better understanding the determinants of countries' long term economic, social, and political trajectory.

AFD has thus developed a programme on "Institutions, Governance, and Long-term Growth" dealing with the five following dimensions:

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(ii) Testing the econometric relationship between institutional measures and long term growth;
(iii) Exploring through a series of country case studies the historical relationship between processes of economic accumulation, forms of political organisation, and social cohesion;
(iv) Discussing conceptual frameworks for making sense of the interaction between political, social and economic forces in the process of development;
(v) Developing methodologies for political economy analyses.

The MGSoG/UNU-Merit team is involved in the five dimensions with a particular focus on the first two. Its primary objective is to explore the Institutional Profiles Database jointly developed by AFD and the French Ministry of the Economy since 2001. Institutional Profiles Database is unique by its scope (about 350 elementary questions pertaining to all institutional dimensions covering 148 countries in 2012), its entirely free access, and its ambition to incorporate the most recent theoretical advances in the field of political economy.

The present series intends to convey the results of our ongoing research, and in so doing to reflect the wealth of issues that can be fruitfully addressed from an "institutionalist" perspective. We hope that readers will find these papers stimulating and useful to develop their own understanding and research.

Nicolas Meisel (AFD)
Adam Szirmai (MGSoG/UNU-Merit)

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Proximate, Intermediate and Ultimate Causality: Theories and Experiences of Growth and Development

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UNU-MERIT/Maastricht Graduate School of Governance

Paper for the AFD/MGSoG research programme

Institutions and Economic Growth

30-01-2012

Proximate, Intermediate and Ultimate Causality: Theories and Experiences of Growth and Development

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Abstract

For a better understanding of development, we are interested in why in the long run some countries or societies forge ahead, while others stagnate or fall behind. We are especially interested in the conditions under which growth and catch- up can be realised in developing countries. In section 1 of this paper, we develop a framework of proximate, intermediate and ultimate sources of growth and development which serves to structure the analysis and measurement of economic development. Sections 2 to 6 offer a review of classical and modern theories of development and stagnation, in the context of the framework of proximate and ultimate causality developed in section 1. Special attention is paid to the interactions between institutions and growth in different theoretical traditions. Section 7 presents empirical time series on long-run economic trends in a sample of 31 developing countries representing 80 percent of the population of the developing world. These series focus on proximate causality and on socio-economic outcomes and highlight some of the key issues discussed in the theoretical overview in sections 2-6.

JEL: O10, O43, N1O

Keywords: Theories of Economic Development, Economic Growth, Proximate Causality, Intermediate Causality, Ultimate Causality

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1 Introduction

The key challenge to our theoretical and empirical understanding of development is to understand why some developing countries experience accelerated growth, catch-up and socio-economic development while others become mired in stagnation. This paper opens with a discussion of proximate, intermediate and ultimate causality in section 2 and develops a framework for the discussion and comparison of a variety of theoretical approaches. The paper is ~~part~~ one of a series of papers written in the context of a joint research programme of the Agence Française de Developpement and the Maastricht Graduate School of Governance on *Institutions and Growth*. It serves to place the discussion of institutions into the broader perspective of more general theoretical perspectives on growth and development. Following North (1990), institutions are seen as the humanly devised constraints that structure human interaction, and provide the rules for their behaviour.

The first part of the paper deals with theories of development, the second part with a discussion of empirical trends. Though a wide range of theories and authors is discussed in the paper, every overview is necessarily partial, incomplete and selective. Selection criteria include a focus on patterns of long-run growth and development, making a contribution to the debates about the forces driving growth and development at proximate, intermediate and ultimate level of analysis and making a contribution to the debate about the relative importance of internal and external factors as drivers of long-run growth. We discuss both classical and modern theories of growth and development, highlighting continuities and discontinuities in thinking about development. For a detailed discussion of the most recent research concerning the role of institutions in long-run economic developed the reader is referred to a second paper emerging from the AFD/Governance research programme, namely *Institutions and Long Run Economic Performance* (Bluhm and Szirmai, 2012). That paper makes use of the framework of proximate and ultimate causality developed in the present paper.

The paper is structured as follows. Sections 3 to 7 discuss classical and modern theories of growth and development, using the framework of proximate, intermediate and ultimate causality developed in section 2. Section 8 presents empirical data on long-run trends in development, covering the period 1950-present and sometimes even going back to 1870. The empirical data refer to a selection of economic indicators for a sample of 31 large developing countries. Trends in developing countries are compared with those in the advanced

economies. The empirical data throw light on some of the key questions raised in the theoretical debates discussed in the sections 3-7.[1] Section 9 concludes.

2 The framework of Proximate, intermediate and ultimate causality

Let us start with the question of what are the immediate or proximate sources of economic growth. In simplified form, these are summarised in Box 1.

[1] This paper is a substantially revised, expanded and updated version of chapter 3 of my book *Dynamics of Socio-economic development* (2005).

Box 1 Sources of Growth of GDP

1. Discovery and exploitation of riches and natural resources

Discovery of natural resources - gas, coal, oil, gold, minerals and so forth - can promote growth. However, such growth will not be sustainable unless the revenues from windfall discoveries are transformed into more durable sources of growth.

2. Effort

Working harder, increasing hours worked per year, increasing labour market participation, greater effort and discipline.

3. *Saving and accumulating capital*

Being sober and abstaining from current consumption in order to save; investing these savings in order to accumulate capital goods, which increase the productivity of labour

4. Investing in *Education and Human Capital*

Abstaining from current consumption in order to invest in education, training and health in order to improve the productivity of labour

5. *Theft*

Appropriating resources from other societies and using these to accumulate capital. If resources are appropriated, but not reinvested they will have the same non-sustainable effects as windfall discoveries

6. *Efficiency*

Becoming more efficient and effective in the use of capital, labour, land, intermediate inputs and the ways in which these can be combined in production. Efficiency includes: choosing the right combinations of capital and labour, specialising on what a country is good at producing in production and international trade, shifting resources from less productive to more productive sectors of the economy and better utilisation of capacity.

7 *Structural change*

Shifting resources to new sectors which are more dynamic than the existing ones and which have positive effects on the whole economy. This goes beyond the static efficiency effects mentioned under point 6. It involves identifying future opportunities and developing the capabilities to realise these opportunities.

8. Economies of scale

Increasing the scale of production to profit from economies of scale. Producing on a larger scale creates opportunities for cost reduction. Related concepts are economies of scope and agglomeration effects. Economies of scope refer to the cost reductions which are achieved by producing a wider range of related products. Agglomeration effects refer to advantages of concentrating production in large urban centres. In some sectors of the economy, economies of scale are more important than in others.

9. *Technological change*

Developing or acquiring new knowledge about how to produce valued goods and services and applying such knowledge in production.

The factors in Box 1 can be represented in the form of a basic production function, which relates output to the so-called *proximate sources of growth* (Denison, 1967; Maddison, 1987; 1988):

$$O = F(K, L, R)^{e} + A + P$$

In this equation *O* refers to output. *K*, *L* and *R* refer to the primary factors of production capital, labour and natural resources. The exponent e refers to the efficiency with which the primary factors are used to transform intermediate inputs into final goods and services. The concept of efficiency as used here refers to everything that increases output per unit of primary input. It includes a number of important elements mentioned under points 6-9 of Box 1 such as economies of scale, efficient allocation of the factors of production within sectors (*appropriate choice of technology*), efficient allocation between less productive and more productive economic sectors (*structural change*), reallocation of resources towards more dynamic sectors (*structural change*), efficient allocation between countries (*specialisation and comparative advantage, search for dynamic comparative advantage*), utilisation of capacity and, last but not least, disembodied technological change.[2] The term *A* denotes net income from capital investments [3]and labour abroad (net factor income) and *P* refers to colonial plunder and expropriation (negative) or voluntary transfers and development aid (positive).[4] Economic historians have made efforts to quantify and measure them. Economists have modelled the relationships between inputs and outputs in a great variety of production functions.

Once we have quantified the proximate sources of growth, we can subsequently explore their links with the wider economic and social sources of growth and development. For instance, one can explore the social, historical and institutional roots of high rates of savings which result in rapid growth of the capital stock in Asia. Or one can explore the policies which accelerate or slow down technological advance. In the following, we make a distinction between *intermediate sources of growth and development* and *ultimate sources of growth and development*.

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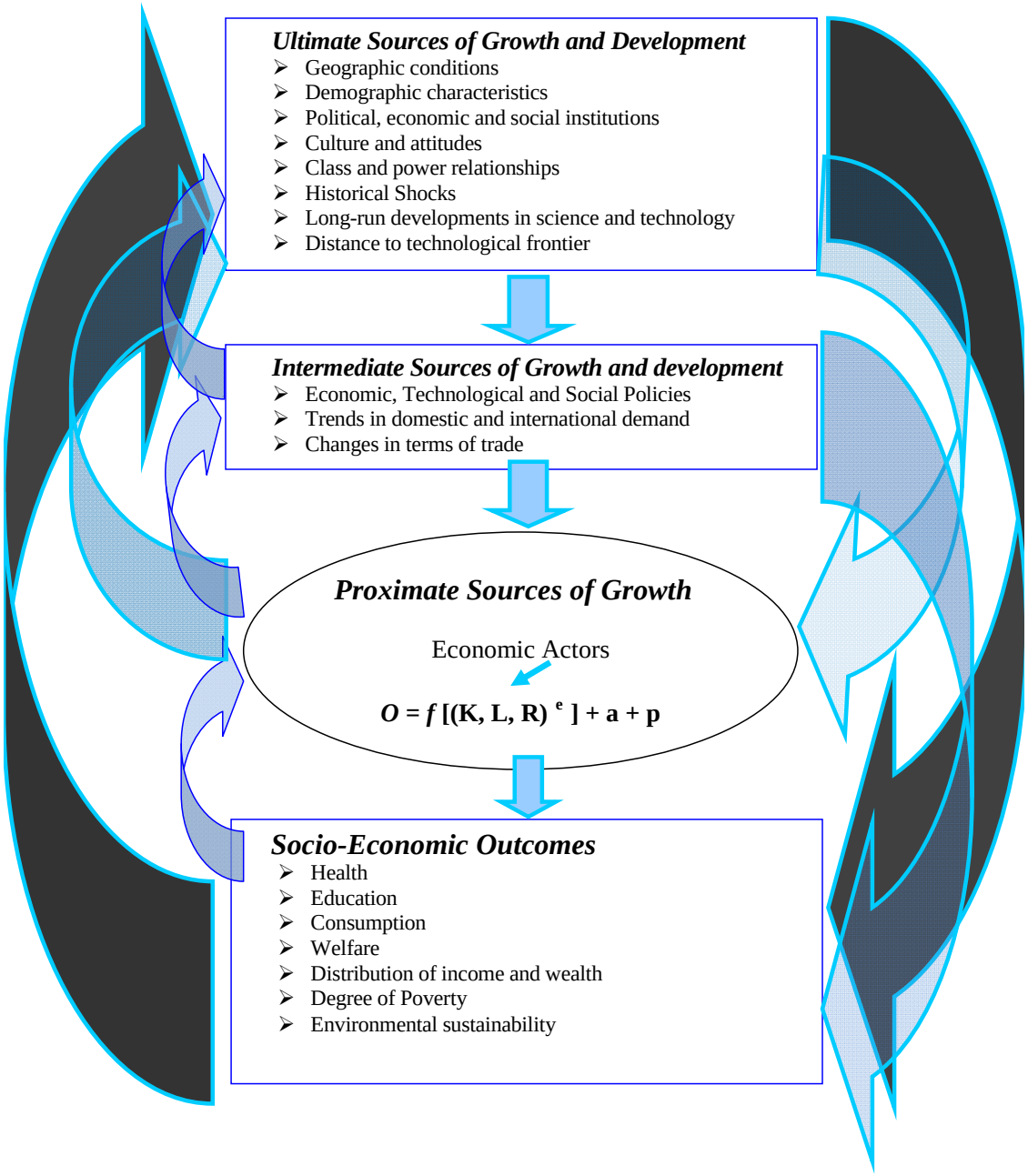
[2] Advances in technological knowledge can be embodied in capital goods which reflect the latest stages of technological knowledge or in workers who have been exposed to up to date knowledge through education and training. Disembodied technological change refers to changes in the state of our knowledge which cannot be measured through changes in the quality of capital and labour.

[3] Net income from capital investments includes the net balance of interest, dividend and profits from inward and outward financial investments and loans.

[4] When net factor payments from abroad are included, economists speak of national income (e.g. GNP), when they are excluded they speak of domestic income (e.g. GDP). When we are interested in productive capacity as such, domestic product is the more relevant concept. When we are interested in standards of living and the the resources available to a country, national income is more appropriate.

Figure 1: Proximate, intermediate and ultimate sources of growth and development



The framework of proximate and ultimate sources of growth has been developed by authors such as Angus Maddison (1988), Moses Abramovitz (1986, 1989) and more recently by Dani Rodrik (2003). It is very useful for the systematic and comprehensive analysis of economic development. Figure 1 provides a further elaboration of this framework (Szirmai, 2012). Four levels are distinguished: ultimate sources of growth and development, intermediate sources of growth and development, proximate sources of economic growth and socio-economic outcomes.

Proximate sources refer to directly measurable sources of output growth. These have already been summarised in Box 1. One of the most important sources of growth is disembodied technological change. This refers to advances in our technological knowledge concerning products and production processes. It involves the development of new production processes, new types of machinery, new forms of organisation, use of new inputs, new products and services, new ways of distributing products and services, and new knowledge that can be transferred through education. It also involves a variety of knowledge spillovers between economic actors and between countries. With regard to technological change, it is important to distinguish between change at the frontiers of knowledge in the lead economies and diffusion and absorption of technology in the follower countries. The latter is of vital importance for developing countries (see Szirmai 2005, chapter 4).

It is long known (Abramovitz, 1989; Nelson, 1996; Rodrik, 2003, Nelson and Pack, 1999) that one should be careful in giving the sources of growth equation too strong a causal interpretation. As Rodrik notes for instance, capital accumulation and efficiency in the use of resources are themselves *endogenous*. Causality may well run backwards from growth to accumulation and productivity (Rodrik, 2003, p. 4). These circular relationships are indicated by the feedback arrows in figure 1. Nevertheless, the proximate sources of growth formulation is indispensable for a systematic empirical examination of the sources of growth and development.

A new element in figure 1 is that the proximate sources of growth also include the behaviour of the economic actors (firms, entrepreneurs, households) that are responsible for the changes in the immediate sources of growth, such as saving and capital accumulation, investment in human capital, investment in research and development, efficiency improvements, inventions and innovations, and entering new economic sectors. Economic actors provide the link between the macro-economic analysis of the production function and the burgeoning micro-economic and sociological literature on firm-level analysis, household

surveys, entrepreneurship and innovation studies (Szirmai, Naudé and Goedhuys, 2011). Rather than making assumptions about utility maximising behaviour of a representative actor, the introduction of a plurality of actors allows us the different behaviours of economic actors in economic micro-research. It also allows us to examine the relationships between proximate sources of growth such as capital accumulation and ultimate sources such as culture and institutions. Culture and institutions provide incentives and mindsets for saving, investment and entrepreneurial behaviour by economic actors, which can result in accumulation of capital or technological advance.[5]

Intermediate sources of growth and development include three types of factors: 1. trends in domestic and international demand 2. economic policies, social policies and technology policies and 3 changes in the terms of trade. Adding demand and terms of trade as intermediate sources of growth is an attempt to respond to the criticism that the sources of growth framework is an exclusively supply side approach. Taking patterns of demand into account is important for the understanding of the path-dependent nature of processes of economic development. Thus when world demand or domestic demand are growing rapidly, when a country's market shares are expanding or its terms of trade are improving, this will encourage economic actors to accumulate human and physical capital which results in further growth and competitiveness.

Policies include economic policies such as trade policies (e.g. openness), macroeconomic policies, interventions and subsidies to stimulate innovation and technological advance. They also include a wide range of social policies in the area of social protection and welfare, which affect the distribution of the outcomes of economic development.

Interpreting national and international socio-economic policies as intermediate factors emphasizes that policy is in turn influenced and constrained by more ultimate factors such as economic interests, institutions and power structures. This is increasingly being rediscovered in recent research in political economy and institutional economics (e.g. Acemoglu et al. 2001; Acemoglu and Robinson, 2006; Shleifer and Vishny, 1993; Shleifer et al. 2004; North et al, 2009). This research takes policy itself as an endogenous variable, to be explained by more ultimate factors such as the balance of power between classes or between elites and masses.

[5] Incentives are also determined by other factors such as policies and opportunities.

Underlying both the proximate and intermediate sources, there are more basic social factors, which we call the *ultimate sources of growth and development.* These include external shocks, geographic conditions, long-run trends in scientific and technological knowledge, demographic conditions and trends, economic, political and social institutions, historical developments, culture, social attitudes and capabilities, changes in the class structure and the relationships between social groups and developments in the international economic and political order and international balance of power.

We make a distinction between institutions, which typically regulate specific spheres of human interaction and the more general concept of culture which captures a broader set of values, norms and cognitions that characterise societies. Institutions are supported by culture, but are specifically oriented to specific spheres of interaction. Cultural elements can buttress institutions, but are not identical to them.

We also distinguish between class and power relationships. Changes in underlying class relationships such as polarisation or the emergence of middle classes are driven by changes in modes of production and technological changes and have important effects on institutions and institutional change. Class relationships have been disregarded in the recent literature on institutions (see Bluhm and Szirmai, 2012). Power relations refer to the underlying power bases of different social groups. Changes in the balance of power will have effects on the evolution of institutions.

The ultimate sources of growth and development are summarised in Box 2.

Box 2 Ultimate Sources of growth and development

1. Geographic location, climate and natural resources. Geographic location and climate determine the challenges which the people in a country have to face: rich versus poor soils, landlocked versus seaboard location, extreme versus moderate climate, availability of natural resources, disease environment.
2. Demographic conditions and trends. These include the size of population, population density, the rate of population growth and the age structure of the population.
3. The history of political centralisation, state formation and external domination
4. Historical shocks: wars, economic crises, natural disasters
5. The dynamics of class relationships and the balance of power between elites and the mass of the population.
6. Culture and values: The evolution of culturally and religiously sanctioned cognitions, beliefs, values and attitudes affecting economic behaviour (attitudes towards work and effort, saving and risk, entrepreneurship, science, technology and innovation, rent seeking).
7. Evolution of institutions which provide incentives for economic behaviour. These include
    a. Political institutions for conflict management and the maintenance of law and order.
    b. Economic institutions such as private property rights, public ownership of the means of production, intellectual property rights, joint stock companies and corporate governance institutions, central planning institutions, banking institutions and other institutions for financial intermediation, and inheritance institutions affecting the intergenerational transfer of wealth
    c. Labour market institutions
    d. Institutions regulating social protection
8. Developments in the international order such as changing international trade regimes or migration flows.
9. Long-run developments in science and technology, which determine the limits and possibilities of technological advance in economic production
10. The distance to the technological frontier, which influences the catch-up potential of a country.
11. Absorptive capacities and the evolution of technological and social capabilities. These determine the extent to which a country and its firms can benefit from international knowledge flows.

In recent years institutions have received special attention as one of the potential key sources of long-run growth (Bluhm and Szirmai, 2012). The framework of proximate and ultimate causality helps us understand the role of institutions and put them into perspective. Following North (1990), institutions are the humanly devised constraints that structure human interaction, and provide the rules of the game. To an important extent, institutions determine the scope and degrees of freedom for policy making. Together with policies and culture, institutions provide the incentives which guide the behaviour of economic actors. As such institutions are clearly part of ultimate causality.

But institutions as humanly devised constraints are themselves shaped by other ultimate factors, such as history, geographic conditions, long-run development of knowledge, class and power relationships. An analysis which focuses on the role of institutions alone, neglecting other elements of ultimate causality, will inevitably be incomplete.

The final element of the framework consists of ***socio-economic outcomes***. Socio-economic outcomes include health, education, literacy, levels of consumption, number of people living in poverty, the distribution of income and resources, decent employment opportunities and environmental sustainability. Outcomes are what ultimately matters in development. If a country has rapid growth but no improvement in the living conditions of its people, we cannot speak of development. However, in contrast to much of modern development discourse, the framework of proximate and ultimate causality does emphasise the crucial importance of increases in productive capacity.[6] Improvements in social outcomes are not possible without long-run increases in productive capacity, as indicated by growth in GDP per capita. Economic growth is one of the essential preconditions for improvements in social outcomes. There can be no expansion of a health care system or an educational system or a system of social protection without a sustained increase in productive capacity.[7] Improving the living conditions of the poor, while moving towards more sustainable systems of production also requires advances in productive capacity.

But, on the other hand the degree to which productive capacity is transformed into desired social outcomes depends not only on the pattern of growth but also on the nature of social and economic policy (intermediate causality) and the incentives provided by the institutional framework and initial levels of socio-economic inequality (ultimate causality). In figure 1 Socio-economic outcomes are not only influenced by an arrow running from the proximate sources of growth to outcomes, but also by arrows connecting ultimate conditions and intermediate policies with socio-economic outcomes.

The use of the terms “ultimate, intermediate and proximate” is not meant to imply a linear model of causality. Causality is circular at all levels, as indicated by the feedback arrows in figure 1. For instance, improved health and education (social outcomes) result in higher quality of labour inputs (proximate causality), but also in the longer run in changes in

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[6] A recent example of the modern discourse is the report of the Sarkozy commission on economic performance and progress (Stiglitz, Sen and, Fitoussi, 2009).

[7] The growth equation can easily be transformed into a productivity equation, by dividing inputs and outputs by labour input. We then get GDP per capita as dependent variable and the amount of capital per worker, the amount of education per worker and natural resources per worker as inputs. As long as GDP is growing more rapidly than population, GDP per capita (our measure of productive capacity) will increase.

absorptive capacity (ultimate causality). Changes in the distribution of income and wealth (social outcomes) change the incentives for economic actors in the growth equation. Growth of per capita incomes affects demographic and epidemiological transitions (see Szirmai, 2005, chapters 5 and 6). In the long run even cultural values and institutions are shaped and reshaped in the course of economic development (Harrison, 1985; Harrison and Huntington, 2000).[8]

The difference between the more ultimate and more proximate sources of causality lies mainly in the ease of quantification and the time span of the chains of causality. It also provides a research strategy, which starts with the measurable economic factors and then goes beyond them to broader social and historical determinants. It also provides a framework for multidisciplinary analysis of socio-economic development.

It is important to emphasise that figure 1 is a framework for the analysis of development not a theory of development as such. There is no monocausal model of development, where one crucial variable always explains development. There is no checklist of factors which have to be ticked off to explain development (Hirschman, 1988; Szirmai, 2012; Von Tunzelmann, 1995). In different historical periods, different configurations of factors operate and there is a great variety of development paths. On the other hand, one can learn much from a systematic analysis of the factors that play a role in development and their interactions. At the minimum one can say that a common element of successful development involves positive feedback loops whereby initial success creates conditions for further success and rapid economic growth removes obstacles to further growth and development in a virtuous cycle (Myrdal, 1957, 1968).

The following five sections of the present paper discusses theories of economic growth and development, which involve ultimate, intermediate and proximate factors.

3 Classical thinking about growth, development and stagnation

Since the eighteenth century, classical economists and sociologists have concerned themselves with the mystery of breakthrough and economic growth in the capitalist West. Their work is primarily concerned with the ultimate sources of growth and development. Many of their ideas still play a prominent role in topical discussions of problems of development. Without doing justice to the complexities in the thought of the classical authors,

[8] Ester Boserup has argued that even the seemingly ultimate factor of 'natural' environment has been shaped by the impact of human interventions in socio-economic development.

we shall briefly touch upon a number of important themes in classical thought, which have retained their relevance for present day discussions.

3.1 Adam Smith

In *The Wealth of Nations* (1776), Adam Smith (1723-90) ranked countries according to their economic performance. The most modern and prosperous country was the Republic of the United Netherlands, followed by England, France, North-America, Scotland, China, with Bengal coming in the last place. Smith was interested in how differences between countries had come about and how knowledge about the causes of prosperity could help England improve its relative standing *vis à vis* the Netherlands. Smith attacked traditional obstacles to free trade and free competition, such as guilds and royal monopolies. The more individuals were left free to pursue their own interests, the more the invisible hand of the market would promote collective welfare. In addition, Smith emphasised the importance of the division of labour in the production process, the increase of worker skills owing to the dividing up of tasks, and specialisation and economies of scale. The division of labour within firms and the increase in the scale of production associated with specialisation, trade and expanding markets would lead to dramatic increases in productivity. Of the classical authors, Smith is by far the most institutionalist. He analyses market institutions which provide the foundations for the functioning of the invisible hand, in his view aligning private interests with social welfare. He compares the backward institutional characteristics of Great Britain with those of the perceived technological leader, the Dutch republic.

3.2 The classical economists Ricardo, Malthus and Mill

The classical economists David Ricardo (1792-1823), Thomas Malthus (1766-1834) and John Stuart Mill (1806-73) shared Smith's preference for free markets and *laissez faire* policies.[9] The government should intervene as little as possible in the economic process. One might say that the classical economists offered an *institutional explanation* of economic growth. People have an innate tendency to engage in exchange and trade. If social institutions give free play to such tendencies, individual self-interest will stimulate efforts, which contribute to economic growth and increasing prosperity for all.

Compared to Smith, the classical economists placed more emphasis on capital accumulation, the importance of the stock of capital goods used in the production process and

[9] See Ricardo (1821); Malthus (1798): Mill (1848)

on the importance of international trade. Ricardo formulated his famous *law of comparative advantage*. This law states that all countries entering into international trade will profit from such trade if they concentrate on the production of those products in which they are relatively most efficient. This law is still the keystone of modern arguments for liberalisation of international trade and an international division of labour in production. Comparative advantage enters our framework as one of the proximate sources of growth.

There are also some pessimistic elements present in the work of the classical authors. Malthus was afraid that food production would not be able to keep up with population growth. In the long run this would result in starvation and widespread famine, which would serve as a check to further population growth. Malthusianism has become the general term for all modern pessimistic perspectives emphasizing the limits to economic growth.

Ricardo feared that economic development would stagnate in the long run. As more and more people work in agriculture owing to population growth, less and less fertile soils are taken into production and diminishing returns set in. When the marginal product in agriculture declines, food will become scarce and prices will go up, in turn exerting an upward pressure on wages in industry. Rising food prices are translated into higher wage costs. In due time increasing wages cut into profits and thus into future investment. The engine of economic growth grinds to a halt. Ricardo's theory is a predecessor of modern *two-sector model*s, which analyse the relationships between agriculture and industry in economic development (Fei and Ranis, 1964; Lewis, 1954). Ricardo was in favour of abolishing tariffs on food imports, to keep food prices from rising. This would postpone the slowdown of growth.

Compared to Smith, the work of Ricardo is closer to proximate causality, analysing why accumulation will eventually slow down and how opening up to trade will result in specialisation according to comparative advantage. But implicit in the work of all classical economists is the view of the free market as a basically beneficial institution, which will promote long-run growth in the case of Smith or at least delay stagnation in the case of Ricardo.

3.3 Friedrich List

Ricardo, Malthus and Mill all lived and wrote at a time when the dominant power in the world economy, England, started considering the advantages of international free trade. These authors were convinced of the advantages of free trade compared to mercantilist policies. Friedrich List (1789-1846), German by birth and founder of the 'historical school' in economics was less enthusiastic about the blessings of free trade. According to him, it was the dominant powers which primarily profited from free trade. Latecomers to economic

development such as the German states in the 19th century were hindered in their development by competition from economically advanced countries. List argued for tariff protection of newly founded German industries against murderous international competition. This so-called *infant industry argument* would play an important role in the development strategies of developing countries in the twentieth century. He also saw an important role for public measures in promoting and supporting industrialisation.

List identified stages of development through which all countries in the temperate climatic zone will pass: 1. Pastoral life, 2. Agricultural societies, 3 Agriculture combined with manufactures and 4 a final stage where agriculture, manufactures and commerce are combined. List was convinced that active government intervention was necessary to build up an industrial sector in late-developing economies and to further the structural transformation of agrarian into agrarian/industrial societies. He explicitly discusses the role of intermediate factors, namely trade policies and industrial policies. All successful catch up economies in the twentieth century have followed List's policy prescriptions.

The emphasis on policy puts List in the camp of intermediate causality. Policies will help transform an agricultural into an industrial economy. These policies function against the background of a perspective of historical stages of development, with changes in both institutions and economic structures. Only when a country reaches the threshold of industrialisation, does policy become important.

3.4 Classical sociologists: Spencer, Tönnies and Durkheim

Like the classical economists, the classical sociologists also focused on the major developmental trends associated with the rise of modern capitalist societies.[10] The classical economists' preference for free markets was mirrored in the Social Darwinism of Spencer (1820-1903) and his followers. Applying metaphors from biological evolutionism to social evolution, Herbert Spencer argued that societies evolve, adapting to changing environmental conditions.[11] Social evolution is seen as a process of increasing size, differentiation and complexity, but also increasing interaction and integration of differentiated functions. Social regularities emerge as the unanticipated consequences of individual actions and choices. Industrial societies represent later stages of social evolution; militant hierarchical societies

[10] The modern division of labour between the social sciences only emerged in the course of the nineteenth century. Many early authors including Adam Smith combined sociological and economic perspectives in their work.

[11] Spencer actually formulated his theories well before Darwin published the *Origin of Species* in 1859.

represent earlier states. Markets and market exchange emerge as part of the process of social differentiation. Market competition is seen as promoting the survival of the fittest - i.e. the most efficient - firms and thus contributes to further social change and increasing welfare. Governments should abstain from intervening in the markets. Social Darwinism can have some rather crude social implications such as rejection of all welfare systems, minimum wage regulations and imputations of evolutionary superiority of dominant civilisations or ethnic groups. But the analytic elements of variety and selection environments resurface in modern evolutionary economic theories of development (Nelson and Winter, 1982). In this perspective institutions and institutional change are clearly endogenous. It is the survival of the fittest that drives long-run change, characterised by increasing size, differentiation and increasing complexity. Institutional regularities emerge as the outcomes of these processes.

While the economists primarily focused on the sources and dynamics of growth, many of the classical sociologists focused on the changes in social relationships that accompanied economic growth. Ferdinand Tönnies (1855-1936) highlighted the change from more communal social patterns (*Gemeinschaft*) to more individualistic, specialised and impersonal relationships (*Gesellschaft*). Among others, these involved the decline of extended families and communities and the rise of nuclear families which interacted with other nuclear families through markets. While communal relationships based on family, kinship, clan and local community are multistranded and complex, Gesellschaft-type relationships are single-stranded, rational and anonymous. People are bound together by contractual relationships focusing on well-defined exchanges. These polarities will later surface in so-called modernisation theories of development and in many comparisons between ‘developing’ and ‘more developed’ societies. Using our terminology, Tönnies develops a set of hypotheses about changes in the institutions governing human behaviour in different spheres of activity. The concept of Gesellschaft resurfaces in the modern work on the formalisation of relationships (North et. Al 2009), though most researchers are no longer conscious of this.

One of the greatest of the classical sociologists, Émile Durkheim (1858-1917) analysed the potentially negative social effects of such social transformations in the course of development. In his early work he distinguished between more communal societies characterised by *mechanical solidarity* (well-integrated local communities rather isolated from each other) and modern societies characterised by *organic solidarity* (extended networks of interdependence and exchange between individuals performing specialised actions). In his later works he pointed to the erosion of common norms (*anomie*) and the rise of divorce rates and suicides in highly individualistic modern societies. The discussions about the disruptive

social effects of global economic transformations are still central to all modern debates about development. Durkheim does not really present a theory of why societies change in certain directions. He is concerned with analysing the negative consequences of economic and social changes for individuals.

3.5 Karl Marx

Karl Marx (1818-83) focused on the dynamic role of capitalism as an explanation of economic developments in the West. Just like List and other representatives of the historical school of economics, Marx postulated a unilinear theory of stages of development, in which every society sooner or later passes through the same stages. His stages of development were: primitive original communism, slavery, feudalism, capitalism and socialism, each characterised by a different mode of production and by typical conflicts between the dominant classes, who own the means of production and the subordinate classes who do not. Each stage was characterised by internal contradictions between the development of the production forces (the production technology) and the social relations of production (class relationships, the social organisation of production). These internal contradictions were the ultimate drivers of socio-economic change and development.

Each subsequent stage represented a higher level in the development process. In the West the contradictions within feudalism had for the first time led to the overthrow of a feudal economic system based on ownership of land and its replacement by a capitalist economic system based on the ownership of capital goods. Sooner or later societies in other parts of the world would inevitably go through the same transition. Such stage theories were the foundation of the negative attitude of many twentieth-century Marxist regimes towards agriculture, which was seen as representing an outmoded stage of development.

In Marxist theories, class contradictions - conflicts of interest between social groups that own the predominant means of production and social groups that do not - play a central role in the explanation of social dynamics. Under capitalism, competition between the owners of the means of production provides the incentive for accumulation of capital and technological progress. But it also results in an ever-increasing exploitation of the newly created industrial working classes by the capitalist classes.

Marx agreed with the classical economists that capitalism had led to a revolutionary increase in productive capacity. The capitalist system was seen as a dynamic and successful system promoting both capital accumulation and technological change. Productive potential was liberated from the shackles of feudalism. In due course, however, these liberating

tendencies of capitalism were superseded by repressive tendencies. The capitalist system, in the grip of competitive forces and conjunctural fluctuations, was no longer able to make an efficient use of the newly unchained productive capacities. Competition led to increasing exploitation of workers. Impoverishment of workers led to decreasing purchasing power of the working class. The economic result was overproduction, declining profit margins and ever-deepening economic crises. The social result was pauperisation and increasing revolutionary class consciousness. In the long run, the increased polarisation between the capitalist class and the working class would inevitably lead to revolution and the collapse of capitalism. Marx predicted these revolutions would take place in the most advanced capitalist societies.

According to Marx, the essence of capitalism is production for profit and reinvestment, rather than production for the satisfaction of human needs. Competition forces entrepreneurs to invest continuously in more and qualitatively better means of production. Thus, just as in classical economic thought, accumulation of capital has a central place in Marxist theory. However, in contrast to the classical economists, Marx did not see capital accumulation and economic growth as an harmonious process leading to increased collective welfare.

Economic development is characterised by continuous exploitation, appropriation of surpluses for the purposes of reinvestment, and social conflict. Competing entrepreneurs can only make a profit by paying their workers no more than a subsistence wage, which barely keeps them alive. One of the Marxist ideas, which continues to have considerable relevance for modern thinking about economic development, is the relationship between appropriation of economic surplus by certain social groups – capitalists, governments - and the process of reinvestment, accumulation of capital and economic growth. Successful economic development in the second half of the twentieth century was invariably associated in its earlier phase with the ruthless exploitation of cheap labour.

In the Marxist approach, the key driving forces are located in the material substructure of society. The driving forces are technological change which revolutionises economic and social relationships, class conflict and economic competition. Institutions, like culture and politics are part of the social superstructures which reflects and reinforces dominant class interests. Institutional change depends ultimately on changes in the class structure. This valuable insight has almost completely disappeared from the modern debates on institutions (see Bluhm and Szirmai, 2012).

3.6 Theories of Imperialism

Marxist stage theory predicted that socialist revolutions would only take place in the most advanced capitalist countries. These predictions have failed to come true, creating a crisis in Marxist theory. When Communist revolutions materialised, they invariably took place in agrarian societies, with low levels of industrial development, such as Tsarist Russia, China, Vietnam, Cambodia or Cuba. A later generation of theorists (Hilferding 1877-1943; Hobson 1858-1940; Lenin, 1870-1924; Luxemburg 1870-1919) tried to explain the absence of the predicted revolutions in advanced countries with various theories of imperialism. Such theories state that the Western world succeeded in transferring its internal contradictions and conflicts to the world economy and the developing countries. In the process of imperialist expansion in the second half of the nineteenth century, these countries were colonised and exploited.

Theories of imperialism come in many guises. Some theories explained imperialist expansion by pointing to the lack of investment opportunities in the advanced countries and the search for new investment possibilities in the colonies. Other theories pointed to factors such as the safeguarding of the flow of raw materials as inputs for industrial development or the search for new markets for industrial products which could no longer be sold in saturated home markets because of overproduction. Theories of imperialism were drawn up at a time when the Western expansion in the world was at its apex. Without exception, these theories stressed the negative effects of imperialism on the development chances of the poor countries.

Nowadays, the empirical evidence for economic explanations of imperialism is considered to be weak (Chirot, 1977; Fieldhouse, 1973; see also Schumpeter, 1976). Nevertheless, these theories have been a source of inspiration for twentieth-century theorists of underdevelopment.

Like classical Marxism, most theories of imperialism are theories of class conflict, with the difference that class conflicts are now analysed on a global scale rather than within societies. This means that institutions can be interpreted as dependent factors, driven by underlying changes in economic relationships.

3.7 Max Weber and Joseph Schumpeter

To conclude this short excursion through the history of ideas, we will briefly discuss some ideas of two important post-Marxist scholars Max Weber and Joseph Schumpeter. Both of these authors follow Marx in his emphasis on the importance of class conflict, and the

analysis of the dynamics of capitalism. But they also offer fundamental criticisms of the Marxian legacy.

While Marx saw the profit motive as the essential characteristic of the capitalist system, Max Weber (1864-1920) emphasised the principle of rational calculation of means and ends. According to Weber, the development of capitalism was part of a wider long-run social trend of rationalisation and bureaucratisation in Western societies. The profit motive is common to all times; it cannot differentiate capitalism from other economic systems. New in capitalism is the rational organisation of production for the purposes of sustained profitability, making use of systematic accounting methods. The emergence of markets is also part of the long-run rationalisation trend. Production for the market stimulates businesslike rational thinking about means and ends and the calculation of financial costs and benefits, irrespective of the personal relationships involved in the transactions. The rise of bureaucracy was seen by Weber as the rise of a radically new and highly efficient form of organisation, systematically harnessing human capabilities to organisational goals. Not only government bureaucracies, but also big capitalist firms successfully made use of efficient, impersonal bureaucratic forms of organisation. This idea has had a major impact on modern scholarship. For instance, the economic historian David Landes (1969, 1998) sees the high value placed on rational manipulation of physical and social environment as one of the distinguishing characteristics of European economic development.

Weber explicitly posed the question why capitalism had broken through in Western Europe, rather than elsewhere in the world. Marx saw developments in the economic sphere of society, the ‘substructure’, as determining developments in culture, religion, politics and law (the ‘superstructure’). In contradiction to this, Weber sought the explanation of the rise of capitalism in religious influences. He noted that the first capitalist countries were predominantly Protestant. His famous hypothesis - known as the Weber thesis - states that the Protestant ethic favoured economic development. The combination of diligent and disciplined work in one’s professional ‘calling’ and religiously motivated sobriety in consumption promoted high levels of savings and the accumulation of capital (see Szirmai, 2005, Chapter 9). According to Weber, the Protestant ethic was the factor that distinguished the Western world from other regions where the breakthrough of capitalism did not take place. Thus the Protestant ethic is the determining factor in the rise of capitalism and process of economic growth in the West (Weber, 1905). Though the Weber thesis has since been heavily criticised for its simple one-directional causality, Weber’s emphasis on the attitudinal foundations of economic performance remains of lasting importance.

A third difference with the Marxist tradition lies in the greater importance of the political sphere. According to Marx, developments in the political sphere (part of the superstructure of society) are determined by developments in the economic sphere (the substructure). According to Weber, economic development presupposes the rise of highly centralised state apparatuses, which are able to maintain internal peace and order in a country. Without internal peace, centralisation and standardisation of rules and regulations, markets will never be able to function. If trade is unpredictable, if there are all sorts of capricious local rules, taxes and tithes and if the safety of trade is not guaranteed, a rational assessment of the costs and benefits of long term investments is impossible. Thus, the formation of stable centralised states precedes the rise of capitalism. In line with the Weberian tradition, state formation is seen as one of the ultimate sources of growth and development in figure 1.

Reinterpreting Weber in the context of the debate about institutions, one might say that Weber saw institutional change – formalisation and rationalisation of social relations – as one of the driving forces, along with cultural and attitudinal changes (religion). Another important advance is his emphasis on the establishment of a monopoly of violence as a condition for economic growth and development. This is also an area where institutionalisation of power relations is of central importance. North, Wallis and Weingast have a major, though only partly acknowledged debt to the Weberian tradition. It would be wrong however to argue that Weber saw institutional change as the ultimate sources of development. He also has a Marxian perspective on class and class conflict which interacts with the political and institutional changes discussed above.

While Weber focused on the origins of the capitalist breakthrough, Schumpeter (1883-1950) was primarily interested in twentieth-century capitalism. From Marx he derived the idea of capitalism as an economic system, riven by deep class conflicts. This system was both destructive and extremely dynamic. However, in contradiction to Marx, Schumpeter did not believe capitalism would be destroyed by its own inefficiencies. In the middle of the Great Depression of the 1930s, Schumpeter correctly predicted a golden age of more than fifty years of economic growth in the Western World, (Schumpeter, 1943).

According to Schumpeter, capitalism is characterised by a ‘gale of creative destruction’. Old production techniques are continuously becoming obsolescent and are being replaced by new ones. Schumpeter emphasises the importance of technological progress. Long cycles of economic growth were driven by major technological breakthroughs such as textile spinning and weaving, steam power (1780-1842), railways (1842-97) and chemicals, electrical power and automobiles (1898-1930s). The hero of technological progress is the entrepreneur who

realises ‘new combinations’: new forms of organisation, new production techniques, new products, new markets, new sources of raw materials (Schumpeter, 1912). Capitalism as a system gives free reign to the entrepreneur and thus creates incentives for an ample supply of entrepreneurship.

In the long run, Schumpeter thought capitalism would be undermined by its successes rather than its failures. The process of innovation would become routinised. The role of the creative entrepreneur would be taken over by staff departments and research laboratories of large monopolistic enterprises. Gradually and unnoticeably the system would be transformed into something akin to a socialist planning system, through the planning and managerial procedures of the very large capitalist firms. At the same time, the uncertainties involved in the process of creative destruction and the disappearance of feudal classes which acted as a political buffer would undermine political support for capitalist institutions.

On the basis of Schumpeter’s later work two forms of Schumpeterian competition can be identified: Schumpeter Mark 1, where small innovative entrepreneurial firms dominate and Schumpeter Mark II where giant corporations have taken over the innovative function and engage in oligopolistic competition (Schumpeter, 1943). The respective roles of small and medium sized enterprises and giant corporations in innovation and growth are debated to this day.

It is not clear whether Schumpeter would consider the present-day Western mixed economies as capitalist or socialist. But the question whether developing countries have a sufficient supply of entrepreneurship is one of the classical questions, which keep cropping up in post-war theorising on development. A related question is whether developing countries provide a sufficiently stimulating atmosphere for the emergence of entrepreneurial and innovative behaviour (Naudé, 2010; Szirmai et al. 2011).

In the analysis of Schumpeter the three driving forces are class conflict, technological change and entrepreneurship. Institutions, in my view, do not play a very prominent role in his analysis. What is interesting however is the change in the institutionalisation of innovation, from Schumpeter Mark I to Schumpeter mark II with its giant corporations and institutionalised research laboratories.

4 Internal and external approaches in Post-War Development Theory

The classical authors were primarily concerned with explanations of the economic breakthrough and growth of the presently prosperous Western countries. Without exception they emphasise the importance of the rise of capitalist institutions, markets and property rights

in explaining growth. The post-war discussion of development focuses more on the reasons why the poorer countries could not keep up with the richer ones.

In modern development theory a distinction can be made between internal approaches and external approaches to economic development. Both the internal and the external approaches start with the empirical observation that economy and society in developing countries are characterised by *dualism*. The term refers to the existence side by side of a modern and a traditional sector. The modern sector is technologically developed, commercialised and is located in and around urban centres. The traditional sector is characterised by traditional technologies, low productivity, production for own consumption and is predominantly rural. Dualist structures in developing countries came into being at the end of the nineteenth century, when these countries were drawn into international trade. Capitalist enclaves emerged within non-capitalist economic systems.

The main problem of dualism is the economic and social gap between the modern and the traditional sector. The modern sector is oriented to the outside world, rather than to domestic society. There are few linkages between the modern sector and the rest of the economy and society. Thus, a developing country as a whole does not profit much from technological and economic development in the modern sector. Also, a traditional hinterland can form an obstacle to the further development of a modern sector which is relatively small in size.

Internal approaches emphasise the factors within a society which promote or hinder development. Thus, one of the founding fathers of development economics, J.H. Boeke, explained the lack of development of the traditional sector in Indonesia by pointing to the characteristics of oriental man and oriental culture, in which individual economic incentives were not operative. Needs were limited; social needs dominated individual needs (Boeke, 1961). The continuation of a traditional economy alongside the modern enclave was thus explained by internal cultural and institutional characteristics. Internalist approaches thus give pride of place to institutional and cultural characteristics as the ultimate sources of growth or stagnation.

External approaches try to explain the situation in developing countries by reference to negative influences from the advanced economies. Dualistic structures are created by external economic and political penetration and exploitation. These external influences also maintain the dualistic structures. In these perspectives the international balance of economic and political power is the driving factor. Institutional characteristics and obstacles to developed are determined by or even imposed by external forces. The external and internal perspectives will be discussed in more detail in the following sections. Internal and external perspectives

can be distinguished at all levels of causality, proximate, intermediate and ultimate, but the emphasis in the following debates tends to be on the more ultimate levels of causality.

5 Explanations of economic backwardness

Internal approaches to the problems of development draw our attention to unfavourable circumstances and factors within a society, which form an obstacle for development. These obstacles explain *economic backwardness*. In the pessimistic perspective of Boeke there was but little chance of overcoming the internal obstacles to development. However, most representatives of internal approaches are more optimistic than Boeke. Modernisation theorists of the 1950s and 1960s believed that a long-run process of modernisation has set in, in which all societies gradually move from traditionality in the direction of modernity. Dualism exists because modernisation has taken place in one part of society, but not yet in society as a whole. The key words are ‘not yet’. Less developed countries have a ‘lag’ compared to more developed countries, just as the less developed traditional sectors lag behind the modern sectors. Once the internal cultural and institutional barriers to development are overcome, the laggards can start overtaking the leaders.

5.1 Rostow’s theory of the stages of economic growth

One of the most well-known representatives of modernisation theory is W. W. Rostow. In *Stages of Economic Growth* (1960) he sketched a stage theory of growth in which each society sooner or later passes through the same five stages: traditional society, preconditions to take-off, take-off, drive to maturity and mass consumption society. In this development process some countries take the lead, others lag behind. Just as in Marxist theory, however, the path of development is the same for all societies. All trains stop at the same stations.

In *traditional societies* (Stage 1) fatalistic patterns of thought predominate, in which people feel at the mercy of external forces of nature, higher powers or political rulers. The production technology is static.

In *the precondition stage* (Stage 2), the stability of the traditional society is undermined, usually as a result of external threats or challenges. In this stage the idea emerges that people can improve their living conditions or those of their children by their own efforts. A beginning is made with the translation of the insights of modern science into production technologies.

In the economic sphere, the conditions for industrialisation are created in this period. The most important condition is an increase in productivity in one of the non-industrial sectors

such as agriculture or mining. This creates a surplus above subsistence, which is potentially available for investment in the industrial sector. Especially in agriculture, such an increase in productivity is of the greatest importance. Productivity growth in agriculture frees labour for employment in the industrial sector and fulfils the food requirements of a growing population. Increased earnings in the agrarian sector provide a market for industrial goods, while financial surpluses from agriculture can be invested in industry.

In the precondition stage, investments are realised in infrastructure (railways, canals, roads, energy supply, harbours and so forth), which are a prerequisite for industrialisation. In the social-political sphere, the pre-condition stage is characterised by the emergence of modernising elites, which deliberately strive for development and industrialisation. Socially, the horizon of expectations expands.

The crucial stage is the *take-off stage* (Stage 3). The analogy is that of an aeroplane which gains sufficient speed on the runway to take-off into flight. In the take-off stage the structure of the economy changes very drastically in a short period of ten to twenty years, after which sustained growth can set in. In the take-off stage the level of investment needs to be increased substantially to boost growth. Echoing earlier publications by Lewis (1950; 1954), Rostow writes that investment should increase from less than 5 per cent to more than 10 per cent of net national income.

In the take-off stage, investment should be directed towards industrial sectors, with the strongest linkages with the rest of the economy. In the past the role of 'leading sector' has been played by the textile industry, the military industry, the railway industry and the chemical industry. The current development literature identifies the ICT sector as the leading sector in the modern world (Fagerberg 2000). Other characteristics of the take-off stage are a sufficient supply of entrepreneurship and a sufficient supply of loanable funds, which can be channelled into the industrial sector, either voluntarily or involuntarily.

In the subsequent '*drive to maturity*' stage, new production techniques spread from the leading sectors to the rest of the economy. In the last stage, mass-consumption society, which looks suspiciously like Rostow's North American society, the whole population benefits from the increased opportunities for consumption.

Parallel with Rostow's primarily economically oriented theories, the 1950s and 1960s witness the rise of various sociological theories of modernisation (Hagen, 1962; Hoselitz, 1960; Inkeles, 1969; Inkeles and Smith, 1974; Lerner, 1958; Moore, 1963). These theories take up themes from classical sociology and chart the social changes which accompany economic growth, including: urbanisation, the transition from extended family structures to

nuclear families, increasing division of labour and occupational specialisation, rationalisation in attitudes, increasing social mobility, the transition from ascription to achievement as the determining principle of social stratification,[12] increasing levels of schooling and individualisation. Like Rostovian theory and classical stage theories, modernisation theories usually conceive of development as a unilineal path from a traditional to a modern society. Some sociological modernisation theories focus on the social disruption accompanying rapid technological and economic change. These theories hark back to the classical Durkheimian tradition in sociology, which analyses the increasing normlessness (*anomie*) of modern social life (Durkheim, 1897).

An important policy recommendation deriving from Rostovian analysis, is the requirement of large-scale investment in industry in the take-off stage. Foreign investment, loans and development aid can help compensate for the shortfalls in domestic savings and foreign currency requirements, compared to investment needs. Development aid, training and education can also help surmount the traditional obstacles to growth and contribute to the realisation of the preconditions for take-off. From the economic perspective, Rostow was a representative of the intellectual climate of the 1950s and 1960s focusing on capital as the missing link in development, the need for a massive investment efforts and the mobilisation of savings.

Similar ideas have been formulated by the early development economists Rosenstein-Rodan (1943) and Nurkse (1953), who called for big push in investment to escape from vicious circles of poverty (see Szirmai, 2005, chapter 9). These theories have had a major influence on the development policies and strategies of the period.

Rostow's theory of stages of development has been severely criticised in the course of time, just like modernisation theory in general. Nevertheless, it is striking how many traces of his theory can be found in the work of later authors. A recent example of Rostovian unilinear thinking is the dichotomy between limited access orders and open access orders made by Douglass North and his co-authors (North et al. 2009).

Rostov provides a mix of ultimate, intermediate and proximate causality. The transition from traditional societies to the pre-conditions phase is basically an institutional change. The need for a big push to achieve take-off is clearly a policy intervention in the intermediate

[12] In an ascriptive society a person's position in the social hierarchy is determined at birth by the position of his or her parents and does not depend on effort, talent or performance.

sphere. His analysis of the required rates of capital accumulation and the identification of leading sectors takes one into the proximate causality of growth.

5.2 Kuznets's preconditions for industrialisation

According to Kuznets (1965) it is not possible to distinguish Rostow's stages of growth empirically. The changes in investment and growth rates are more gradual than the dramatic term 'take-off' suggests. The concept of traditional society does not do justice to the great diversity of social and economic circumstances in pre-capitalist societies. Finally, Kuznets, along with many authors, has serious objections to the unilinear concept of development, the idea that every society follows one and the same path of development. It makes a big difference, for instance, whether a country is an early or a late industrialiser, whether industrialisation takes place in a large country with a large domestic market, a small country with a small domestic market, a resource-rich or a resource-poor country (e.g. Chenery *et al.*, 1986). Also, there is nothing inevitable about stages of development. Countries can move backward as well as forward (Kuznets, 1965).

Nevertheless, there are also some important similarities between Kuznets and Rostow. Like Rostow, Kuznets emphasises the importance of industrialisation in development. *Changes in the structure of production* are among the main characteristics of modern economic development.[13] Furthermore, Kuznets identifies conditions for industrialisation, which are similar to those mentioned by Rostow: productivity increases in other sectors such as mining, agriculture or transport, sufficient supply of labour, capital and entrepreneurship and sufficient effective demand for industrial products.

According to Kuznets (1955) industrialisation and urbanisation in developing countries are accompanied by increasing income inequality. This is caused by two factors. First, urban/industrial incomes are higher than rural incomes. Second, urban income inequality is higher than rural income inequality. At later stages of economic development, the income distribution becomes more equal as a result of demographic factors, democratisation and the rise of trade unions and political pressure groups. This is referred to as the *inverted U-curve hypothesis*, which is still being hotly debated in current international comparative research. There seems to be agreement about increases in inequality when growth accelerates in poor countries. But, recent findings indicate that there is no automatic tendency for inequality to

[13] The importance of structural change is also emphasised by authors such as Lewis (1950) and Fei and Ranis (1964).

decline at higher levels of national income per capita. On the contrary, income inequality in most of the advanced economies has been increasing since around 1980 (see Atkinson et al., 2010).

Kuznet's major contributions to the study of growth are empirical ones, rather than theoretical. He does not explicitly have a theory of institutions, but his analysis of the preconditions for industrialisation clearly has some institutional implications.

5.3 Neoclassical theories of growth

Neoclassical economic theories of growth analyse the relationships between the growth of inputs (capital, land, labour, technology) and growth of output, in the form of mathematical models of growth.[14] Compared to the theories discussed so far the neoclassical economic theory of growth as formulated by Solow (1956; 1957) focuses primarily on the proximate sources of growth. It has little or nothing to say about the more fundamental social mechanisms and institutions underlying accumulation of capital, technical change and growth.

The Solow model makes use of the so-called Cobb-Douglas function, which takes the form

$$O = AK^{\alpha}L^{1-\alpha}.$$

Output is a function of the stock of capital and the amount of labour, with α and 1-α representing the elasticity of output to capital and labour and *A* reflecting the state of knowledge (technology). This draws our attention to the contribution to growth of the accumulation of factors of production and of changes in the quality of factors of production. Changes in K are determined by investment decisions, changes in L by labour market decisions of households and firms. Solow and his contemporaries found that accumulation of physical capital (K) and labour (L) accounted for less than 50 per cent of growth. The rest was due to technological advance (A) which was an exogenous factor in the model.

The Solow model emphasises the importance of an efficient allocation of factors of production in processes of economic development. Capital and labour can be substituted for each other. If labour is cheap and abundant, as in many developing countries, than efficient allocation implies a choice for labour-intensive forms of production. Free markets and perfect competition are the mechanisms which make for such efficient allocation.

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[14] For accessible introductory expositions see Jones (1998) and Ray (1998).

The Solow model of growth assumes profit-maximising behaviour on the part of economic actors. Firms will continue to use more and more capital and labour in production, as long as the marginal costs of these factors of production are less than their marginal returns. Under competitive conditions and perfect information, this will result in equalisation of marginal costs and marginal returns. The model assumes constant returns to scale, implying for instance, that if the amount of both capital and labour is doubled, output will also double. If one factor of production is held constant, while the other increases, the marginal returns to the increasing factor will diminish. The model assumes that the growth of labour depends on population growth and is thus given. The growth of the capital stock is determined by the savings rate. The share of savings in national income is assumed constant.

Now as the savings are used to accumulate more and more capital per worker, labour productivity will go up. But as the marginal returns to capital are declining because of diminishing returns, the rate of increase in labour productivity will decline and productivity growth in the long run will become zero. Then per capita income growth will come to a stop as the economy reaches its steady state. In the steady state output grows at the same rate as population and the level of per capita income is fixed.

The only factor which counterbalances diminishing returns is technological change, the rate of which is determined outside the model (i.e. exogenously) and is not explained. Technological change shifts the production function upwards. In the long run, therefore, the growth rate of labour productivity depends on technological change. Technological knowledge is assumed to be freely available to all countries in the world economy. Therefore, assuming perfect information and in absence of institutions blocking the diffusion of technology, all countries are assumed to have the same rate of technological change.

As developing countries have less capital per worker than rich countries, the marginal productivity of capital should be higher and labour productivity growth will therefore be more rapid than in rich countries. In the long run, per capita incomes in rich and poor countries will tend to converge. This is referred to as the hypothesis of *unconditional convergence*. This tendency towards convergence in the neoclassical theory is strengthened by the assumption that capital moves freely across the world economy. If returns are higher in developing countries, capital will move there, making for convergence. Technology is also conceived of as a public good, which is available to all economies. Therefore in the long run rich and poor countries should converge in per capita incomes and in growth rates and their steady state growth rate of per capita income should be determined by the rate of technological change.

Neoclassical theory does not focus explicitly on developing countries. Implicitly, however it predicts that, if markets function smoothly and the factors of production can move freely across the world economy, sooner or later rich and poor countries will converge and developing countries will catch up.

As discussed in Szirmai (2005, chapter 1 and 2), there is no empirical support for unconditional convergence between rich and poor countries in the world economy. On the contrary, world income differentials have been increasing. Within the framework of neoclassical growth theory, the absence of unconditional convergence can be explained by differences in savings rates. If savings propensities differ and population growth rates are similar, then the theory states that countries will tend to converge to the same growth rate, but not to the same long-run per capita incomes. Per capita incomes in groups of countries with similar initial savings rates will still tend to converge, countries with lower incomes growing more rapidly than countries with higher initial incomes within a given group. But, countries with different initial savings rates do not have to converge to the same income levels.

A further extension of the notion of conditional convergence is that of convergence clubs. Convergence clubs are countries that have similar initial conditions not only in terms of savings but also in levels of education, technological capabilities and absorptive capacities. The *conditional convergence hypothesis* states that countries within a convergence club will tend to converge to common growth rates and income levels, but the steady state growth rates of the different convergence clubs may be very different. Thus convergence within groups can coexist with divergence in the whole world economy. In cross-country regression analyses a wide range of initial conditions have been taken into account, including savings rates, population growth rates, initial levels of capital per worker, educational levels and political variables (see among others Barro, 1991; Barro and Sala-i-Martin, 1995; Baumol *et al*., 1989; Mankiw *et al.*, 1992).

5.4 Growth accounting

Parallel with the rise of neoclassical growth theory, there is the rise of the growth accounting tradition, pioneered by authors such as Abramovitz (1989a), Denison (1967), Jorgenson (1995), Maddison (1970, 1987) and Kendrick (1961). Growth accounting focuses on the empirical measurement and quantification of the contributions of different proximate sources of growth, taking the neoclassical production function framework as an initial point of departure. It asks questions such as: how much of growth is explained by capital accumulation, how much by education, how much by efficiency, how much by technological

change? Step by step growth accountants try increase the percentage of growth explained by the various proximate sources. Thus, capital is 'augmented' by taking quality change of capital goods into account and labour is augmented by adjusting labour input for its human capital (health, education).

While growth theory is oriented towards formal modelling, growth accounting has a much stronger empirical orientation. It is more eclectic in its theoretical orientation. Measurement of the proximate sources of growth and their contribution allows one to link up these sources with institutional and historical analysis.

Growth accounting makes a distinction between the growth of inputs (increase in the quantity and quality of capital and labour) and the growth of output per unit of input (see Maddison, 1987). Like the Solow model, growth accounting shows that a considerable part of growth cannot be accounted for by increases in the amount of inputs of capital and labour, even after these have been adjusted for increases in quality and education. Growth accounting goes on to explain the growth of output per unit of input (or total factor productivity) by various factors, for example structural shifts from low productivity sectors such as agriculture to high productivity sectors such as manufacturing, economies of scale and technological change. An important part of growth can only be explained by technological advance, which is the interpretation of the residual part of growth which cannot be accounted for by other factors. One of the important debates in the nineties is whether rapid growth in some Asian economies is primarily owing to technological change and rapid increases in total factor productivity (World Bank, 1993), or rather as argued by Young (1995) whether it is primarily due to enormous efforts to accumulate more capital and improve education. The focus of both neoclassical theory and growth accounting on the accumulation of capital, education and technological change places these approaches squarely within the internal tradition in the analysis of backwardness. The main emphasis is on modelling and/or quantifying the proximate sources of growth.

5.5 New growth theory

A new version of neo-classical growth theory emerged in the mid-eighties. One of the main criticisms of older neoclassical growth models is that technological change was conceived of as 'exogenous'. The rate of technological change itself was not explained. It came as manna from heaven. New growth theory tries to explain technological change as a result of human efforts. Economic actors not only invest in physical and human capital. They also invest in

knowledge. New growth theories pay special attention to investments in knowledge, R&D technology and schooling.

New growth theories try to endogenise[15] technological change in two ways (Lucas, 1988; Romer, 1986; 1990; for an overview see Fagerberg, 1994). In the first place it is assumed that technological change (changes in the stock of knowledge about production) is automatically associated with investment in capital goods and education, through a process of learning by doing. Investment in capital and education creates technological advance, which counteracts the diminishing returns to scale of the older neo-classical growth model.

In the second place, one can conceive of investment in a separate sector producing technology and knowledge through investments in research and development and knowledge. These technologies become available for all firms engaged in production of goods and services, not only for the firms that initially developed the technology. Knowledge spills over from one firm to another. Thus, the production of goods and services through the application of increasing amounts of knowledge and technology in production is subject to increasing returns to scale owing to the positive external effects of knowledge in production (spillover effects).

The greater the level of initial investment in knowledge and human capital in a country, the greater the spillovers and the higher the returns to further investment. Advanced economies will profit more from investment in technology than developing countries. Firms in developing economies are less well prepared to profit from spillovers. Thus, new growth theory offers an explanation of the divergence in economic performance between rich and poor countries in the world economy. Countries with a head start in accumulation of physical capital, human capital and knowledge will tend to forge ahead. Countries which are backward will tend to stagnate further. The only limit to unrestricted growth in advanced economies is that the production of knowledge at some point is subject to decreasing returns (in other words technological advance becomes ever more difficult).

One of the reasons for the emergence of new growth theories was that older neo-classical theories predicted convergence between rich and poor countries. In reality, rich and poor countries diverged rather than converged. New growth theory provides an explanation for global divergence.

Like neo-classical growth theory, new growth theory primarily focuses on the proximate sources of growth in the context of the production function. But as time went by, neo-classical

[15] Endogenise, i.e. explain something within a model instead of taking it as exogenous, or given outside the model.

growth models were gradually expanded to include institutional variables as in the cross country regression analysis tradition sparked off by the work of Barro (1991).

In spite of global divergence, some developing countries have had spectacular success in catching up. Countries starting at very low levels can leap upwards on the world income ladder in the course of one or two generations. New growth theory has great difficulties in accommodating the occurrence of catch up. Such processes are better explained theories of the advantages of backwardness and by evolutionary economics (see section 7.2).

Though the ideas contained in new growth theory are stimulating, the empirical verification of these models has run into difficulties (Pack, 1994). It turns out to be almost impossible to discard one model in favour of another, on the basis of statistical tests. Even at a theoretical level, Solow, one of the founding fathers of neoclassical growth theory, has pointed out that neoclassical growth theory can also accommodate divergence (Solow, 1991). He argues that the availability of modern technology does not automatically mean that technological diffusion to less developed economies will indeed take place. In the absence of institutional changes, these economies may simply be unable to assimilate new technologies. This brings the argument back to more ultimate institutional and structural factors.

5.6 North and Thomas: efficient institutions

One of the less satisfactory aspects of modern theories of backwardness discussed so far, is how the transition from a traditional to a modern economy takes place. This transition is the central theme of a beautiful study by two economic historians, Douglass C. North and Robert P. Thomas. In *The Rise of the Western World* (1973) they focus on the emergence of efficient institutions. Efficient institutions are defined as institutions which motivate self-interested individuals to act in ways which contribute to collective welfare. Among the efficient institutions discussed by North and Thomas are well-defined property rights, which guarantee that individuals will profit from the fruits of their own exertions. Only under such conditions will individuals be willing to make risky investments in future productive capacity. Protection of intellectual property (patent rights) is one of the conditions for a continuous stream of innovations (p. 154). The institution of the joint stock company diminishes the risks of large-scale investments for individuals. Land reforms – such as the enclosure movements in Great

Britain in the fifteenth sixteenth centuries - that create well-defined individual rights to land motivated farmers to invest in increased land productivity.

Efficient institutions do not emerge automatically. The rise of efficient institutions depends on the costs and benefits involved in the creation and maintenance of such institutions for different individuals and groups. When population density increased in Europe at the end of the middle ages, this facilitated the development of interregional trade. Production for the market and the money economy become viable alternatives to the traditionally determined exchange relationships of feudal economic systems. Previously these traditional institutional arrangements had been more efficient, because the *transaction costs* of market exchanges were too high.

Governments were able to guarantee property rights at lower costs per person than private groups, because the costs could be distributed over larger numbers of people. Also, government intervention avoided the problems of *free ridership*. Therefore the development of individual property rights went hand in hand with the increasing importance of state apparatuses in societies. Not all governments, however, promoted more efficient institutions. In Northwest Europe they did, in Spain and Portugal they did not and this explained the divergence in economic development of the two regions. In the Iberian Peninsula, government policy was shaped by social classes, whose interests lay in the preservation of inefficient institutions. The influence of governments on the development of institutions in its turn was influenced by the power relationships between different classes in society. Thus North and Thomas succeed in an ingenious fashion in combining the neoclassical economic analysis of institutional changes in terms of costs and benefits with the historical study of the power relationships between classes and interest groups. This analysis is a brilliant example of the interplay of ultimate and intermediate causation in economic development.

In later publications North (1990; 1993) warns us that efficient institutions do not automatically supplant less efficient institutions. When a society has embarked on a certain institutional path, later developments depend on choices made earlier on in the development process. Such *path dependence* is one of the explanations for the increasing divergence of richer and poor societies in the world economy.

5.7 Myrdal: institutional reforms

As a last representative of the internal approach to development we now discuss Gunnar Myrdal. Even more than Kuznets, Myrdal (1968) emphasises that simple unilinear development schemes are misleading. They do not take into account the important differences in institutional structures in different countries, regions and historical periods. They can give rise to fundamentally mistaken policy recommendations. Myrdal attaches considerable importance to differences in initial conditions. The initial conditions in developing countries - climate, demography, technology, position in the international economic order - are so different from those of the currently rich countries, that copying earlier development experiences of Western countries is not a viable option. His approach to initial conditions is much more historical than the a-historical formulations of neoclassical theorists. He pays more attention to ultimate causality, but pays a price in terms of weaker quantification of the proximate sources of growth.

In formulations which predate the literature on path dependence, Myrdal formulated the principle of interlocking interdependencies within a process of cumulative causation (1957). This principle states that in the absence of major social, political or policy changes, initial differences in levels of performance tend to increase.

In spite of his criticisms of Rostow and his recognition of the importance of international power relationships, Myrdal should nevertheless be considered as a representative of the internal approach to development. This is because he considers domestic reforms in developing countries among the most important preconditions for development. One of Myrdal's intellectual contributions is the thesis that extreme social inequality is a powerful obstacle to economic development in poor countries. The unequal distribution of rights to land and large landownership hinders the modernisation of agriculture. Poverty and hunger undermine the productivity of workers and peasants. Wealthy unproductive elites consume more than they invest. Both the content and the accessibility of education are geared to the requirements of elites rather than the real developmental needs of societies. Finally, inefficient and ineffective state bureaucracies and widespread corruption (for which Myrdal coined the term *soft state*) form a serious obstacle to all developmental efforts. Without drastic internal reforms, therefore, development will stagnate. According to Myrdal, redistribution of income and productive assets and equalisation of social and political power is an important aspect of such reforms.

5.8 Rodrik: Identifying the binding constraints to growth

In the context of a discussion of policy reform and institutional reform, Dani Rodrik (2006) has made a very important distinction between initiating growth and maintaining growth. He criticises what he calls 'institutional fundamentalism', the notion that economic development is only possible if a wholesale catalogue of institutional reforms put forward by international organisations such as the World Bank and the IMF under the heading of good governance, is adopted. This catalogue includes accountability and elimination of corruption, rule of law, well-defined private property rights, protection of intellectual property rights, tax reform, getting rid of excessive government intervention, liberalisation of domestic markets, liberalisation of trade regimes and capital markets. In a statistical analysis of growth accelerations, Hausmann, Pritchett and Rodrik (2005) show that there have been many growth accelerations in developing countries since 1950 which have not been preceded by comprehensive reforms.[16] Examples include India where growth accelerated before major reforms were implemented and China. In China, private property rights are ill-defined, the boundaries between state and private ownership are murky and intellectual property rights are not well-protected. This does not prevent the economy growing at breakneck speed (Qian, 2003).

The factors that initiate growth may not be the same as those important for maintaining growth. In order to initiate growth, one needs to identify the most binding constraints faced by a specific country. These will differ from country to country, so that policy reforms which are successful in one setting may completely backfire in another. Hausmann, Velasco and Rodrik have developed a growth diagnostic framework, which helps us in identifying the most binding constraints facing a specific country.[17] At the first level they distinguish countries hampered by too high a cost of financing domestic investment and countries with low return to domestic private investment. At the second level, the high cost of financing investment can be caused by bad international finance (too high country risk and unattractive investment conditions) or bad local finance (when domestic capital markets function badly). A low private return to investment can be caused by a variety of factors including high risk of

[16] Growth accelerations are defined as an increase in an economy's per capita GDP growth of 2 percentage points or more (relative to the previous five years) that is sustained over at least eight years. There have been 83 such growth accelerations between the mid fifties and 1992 (Hausmann et al. 2005).

[17] There are some interesting parallels here with the important early work by Hirschman (1958) on unbalanced growth. Hirschman argues for an investment strategy which focuses on the most dense linkages in an input output framework. Investing in activities with the strongest linkages will create a series of dynamic imbalances which will call forth entrepreneurial talent and set in motion process of growth and development.

expropriation, excessive taxation, lack of human capital, large externalities and too low productivity. One cause of low productivity is a weak physical infrastructural.

Each of these constraints call for different policy responses. For instance, it is no use providing additional foreign finance if low returns to private investment are the main problem. Policy reforms should start by targeting the most binding constraints, rather than aiming at a total overhaul of policy which is likely to fail. If the binding constraints can be identified and appropriate targeted reforms can be put in place, growth accelerations can take hold. But, there are no standard recipes for kick-starting growth. This explains why so many of the cross-country regressions with growth rates as dependent variables and policy or institutional variables as explanatory variables give inconclusive results.

Once growth is underway, the question becomes how to maintain rapid growth in the longer run. Here more fundamental institutional changes, which may not have been a binding constraint for kick-starting growth, become more important. One might say that growth buys time for more comprehensive and deeper institutional reforms, which can sustain growth and development over longer periods of time, beyond the initial growth acceleration. In absence of deeper reforms, an emerging economy for instance remains vulnerable to external shocks, which may put a country off an accelerating growth path and put it on a stagnating trajectory (cf. Bluhm et al., 2012). Examples of such external shocks are major wars such as World War I and II, financial crises such as the Asian crisis of 1997 or the debt crisis of 1982. Examples of rapidly growing countries being negatively affected by external shocks include Indonesia in 1997 and Ireland since 2007.

The distinction between kick-starting growth and maintaining growth explains the paradoxical finding that there is hardly any statistical correlation between growth rates and institutional characteristics, while there are highly significant correlations between levels of per capita incomes and institutional characteristics. (De Crombrugghe et al. 2010; Meisel and Ould-Aoudia, 2008; Rodrik, 2006).[18] The latter correlations suggest that in the very long run there are strong associations between institutions and economic growth in the long run. In one of his papers, Rodrik concludes that in the long run, institutions trump all other factors (Rodrik et al. 2004). However, clear causal links between specific institutional features and the mechanisms of growth are still hypothetical and debated (see i.a.Bluhm and Szirmai, 2012).

[18] Meisel and Ould-Aoudia (2008) suggest that there may be links between economic growth and institutional characterististics that are not part of the good governance agenda.

6 Explanations of underdevelopment

In spite of all their differences of opinion, theorists of backwardness are primarily searching for the internal characteristics of societies - geographic conditions, institutional characteristics, initial conditions, culturally shaped attitudes, policy regimes - that form obstacles to development and for the internal factors and policies that promote development. This is not to say that these theorists are blind to the outside world. Rather they are convinced that it depends primarily on internal characteristics, institutions and policies how a country will respond to external threats, challenges and opportunities.

Proponents of the external perspective on development believe that developments in different countries and regions are mutually interrelated in the context of the international economic and political order. The possibilities for development in poor countries depend first and foremost on their relationships with rich countries. These relationships are sometimes conceived of as advantageous; thus the theory of comparative advantage states, for instance, that developing countries profit from entering into international trade. The possibility of taking over technology from advanced countries also belongs to the advantages of international relationships.

A prominent group of development theorists argues, however, that relationships between rich and poor countries are intrinsically detrimental to the developmental prospects of the economically and politically weaker parties. The most extreme version of such perspectives is *underdevelopment or dependency theory*.

The choice for the term *underdevelopment* implies that the low level of development in developing countries is the result of active negative influences from outside. One cannot speak of backwardness, because poor countries do not have the chance to follow the same path of development as the currently prosperous countries. Prosperity in the rich countries is even based on past and present exploitation of the developing countries. Poverty in developing countries is the result of such exploitation. The underdevelopment of the non-Western world is thus the other side of the coin of economic development in the West. The internal obstacles to development are seen as the product of negative interaction with advanced countries in the world economy. Economic historians such as Bairoch (1975, 1981) and Pomeranz (2000) are also associated with the underdevelopment perspective. They argue that levels of per capita income in western and non-western countries were largely similar

prior to the industrial revolution. The spectacular forging ahead of western countries was closely associated with the stagnation and underdevelopment of the non-western world. [19]

The term *dependence* implies that development in poor countries is subordinated to development in affluent countries. A summary of the characteristics of dependent development, derived from Colman and Nixson (1985) is presented in
Box 33.

Box 3: Characteristics of dependent development

1. *Importance of export of primary commodities.* The exports of a dependent economy consist in large part of primary products. The export sector, consisting of mines and plantations, is an enclave within the economy. All its products are exported abroad. Capital equipment is imported from abroad. The infrastructure of a dependent economy is completely oriented towards the interests of the export sector. There are few backward and forward linkages between the export sector and local producers and buyers.
2. *Dependence on imports of manufactured goods*. Most industrial products are imported from the affluent countries. Western-oriented elites consume imported products on a large scale.
3. *Dependence on imports of intermediate goods, capital goods and technology.* Even if a dependent economy succeeds in building up its own consumer goods industry via import substitution, it remains dependent on the advanced countries for imports of intermediate goods, capital goods and technology.
4. The modern sector of the economy is dominated by foreign firms and transnational companies.
5. Surpluses are repatriated abroad, either through direct transfer of profits or through mechanisms of unequal exchange and transfer pricing.
6. Dependence is not limited to the economic sphere. There are also cultural, psychological and political relations of dependence with the advanced nations.

It is clear that from the perspective of underdevelopment the dualistic structure of the economy in developing countries was not only the consequence of Western penetration in the past. It is also maintained by the relationships with the rich Western countries in the present. Dependence does not end with political decolonisation. In the postcolonial period, economic development is still determined by neocolonial influences from abroad. The only chance to realise goals such as development, growth and industrialisation is to withdraw from the global network of dependency relations characterising the capitalist international economic order and to seek alternative paths of development.

[19] Most of the recent empirical evidence does not support the assertion that per capita GDP was approximately the same in the western and non-western world. There was already a substantial gap prior to the industrial revolution, resulting from centuries of gradual accumulation in Western Europe (Maddison, 2007; Broadberry and Gupta 2006; Landes, 1998)

Within the underdevelopment theory one can distinguish two partly overlapping theoretical traditions:

1. Neo-Marxist theories of underdevelopment.
2. Structuralism and theories of unequal exchange.

6.1 Neo-Marxist theories of underdevelopment

In their criticisms of capitalist relations of exploitation, neo-Marxist theories of underdevelopment build on the Marxist tradition and theories of imperialism. They analyse class relationships within developing countries in the context of class conflicts in the global economy.

However, classical Marxism was a typical stage theory in which capitalism was considered to be a higher stage than the preceding feudal stage. Therefore, in classical Marxism, Western capitalist penetration in developing countries was considered as a progressive force on the way to the highest stage which would succeed capitalism, namely socialism. This aspect of classical Marxism is rejected by neo-Marxist thinkers. One of the first theorists of underdevelopment, Paul Baran, argues that capitalism in developing economies functions differently from capitalism in the advanced countries. In the advanced countries, capitalism generates an economic surplus which is appropriated by the capitalist class and subsequently reinvested (Baran, 1957). This process of reinvestment promotes economic growth and dynamism. In poor countries, the economic surplus is transferred to rich countries by monopolistic firms or is squandered away in luxurious consumption by wasteful elites. There is a lack of dynamic investment incentives which can fuel domestic economic growth. The absence of a stream of investments and reinvestments in the domestic economy makes for economic stagnation. Only those investments, which benefit the rich countries are realised. Thus whatever development there is, is dependent development.

Capitalist penetration in developing countries thus leads to a distorted form of capitalism: dependent capitalism. Domestic handicraft production is undermined by competition from imported products. Economic surpluses are transferred to rich countries. Simultaneously, a wealthy domestic ‘comprador class’ is created, which is involved in import and export trade and the interests of which are closely aligned with the interests of the rich capitalist countries. According to Dos Santos (1970) dependence does not only refer to the external economic relations of a country. The class relations within a country are also determined and reinforced by the external dependency relationships. Therefore a country cannot simply withdraw from relations of dependency. This also requires dramatic changes in internal relationships between

groups and classes. Domestic reforms, however, can bring about confrontations with rich countries, whose interests are threatened by reform. Latin American history offers many examples of such confrontations.

One of the most developed versions of underdevelopment theory has been put forward by André Gunder Frank (1969; 1971; 1998). Frank analyses a chain of exploitative relationships running from the centre of the world economy to the rural sector in developing economies. He makes a distinction between rich countries at the core or *centre* of the world economy and poor countries at the *periphery*. In between are countries of the semi-periphery. The centre appropriates surplus from the semi-periphery and the peripheral countries. The semi-periphery exploits the periphery. Within dependent peripheral economies, dominant elites emerge, whose interests coincide with those of the centre countries. These elites within the modern sector of the economy exploit the peripheral sectors in their own countries. The last link in the chain of exploitation is at the level of the rural sector, where landowners, whose interests coincide with those of the urban elites, exploit small peasants and landless rural labourers.

The emphasis on relationships of exploitation within developing countries makes the centre-periphery theory into a theory of regional inequality as well. It offers an alternative explanation of the dualistic structure of developing economies, discussed in section 4. From this perspective, the traditional sector is not a lagging sector which has yet to catch up with the modern sector. It comes into being as a result of exploitation by the centre. The so-called traditional sector is artificially maintained as a source of cheap labour, foodstuffs and other products required by the modern sector.

The more a poor country is integrated into the capitalist world economy, the more it becomes underdeveloped. An autonomous process of industrialisation is only possible in periods in which the economic ties with the centre are loosened or in which the rich countries are in economic crisis.

Among the most valuable aspects of Frank's thought is his criticism of the treatment of 'traditional society' in theories of modernisation (Frank, 1969; 1971). Like classical Marxism, modernisation theories conceive of traditional feudal societies as a stage preceding modern economic development. Feudal societies contain various cultural and institutional obstacles to development, which have to be overcome for development to take place. Dualistic structures are explained by the fact that these traditional obstacles and barriers have not yet been transcended in some parts of the economy and society. Frank gives many interesting counterexamples from Latin American history which show that the traditional society, which

is called feudal, is in reality the product of Western and capitalist penetration. The Spaniards and Portuguese newly introduced forms of large landownership and serfdom which had not existed before. Even the population mix is a product of Western penetration. For instance, almost the whole population of Surinam was imported by the Dutch from Africa and Asia to work on capitalist plantations as slaves or bonded labourers. If one rereads Rostow, after reading Frank, Rostow's use of the term 'traditional society' which precedes higher stages makes a very a-historical impression. The main value of theories of underdevelopment is that they show how 'internal' characteristics and institutions of developing countries have been deeply influenced and shaped by past and present external forces such as colonialism, imperialism, the Cold War and international economic trends and relationships.

The conclusion of neo-Marxists such as Baran and Frank is that the bourgeoisie in developing countries cannot play the same dynamic role it played in the earlier development of the presently affluent countries. They argue that socialist revolutions are a necessary condition for development and that developing countries should extricate themselves from international trade and the international division of labour. Similar arguments are advanced by modern exponents of the anti-globalisation movement of the late 1990s.

Underdevelopment theory focuses on the economic and political balance of power between countries as the ultimate determinant of development or stagnation. Institutions have a very important role to play, but they are completely endogenous. Dominant powers impose institutions on dependent countries and regions, which subsequently act as internal obstacles to their development.

A recent version of underdevelopment theory is found in the work of Acemoglu and Robinson (2001, 2006). These authors relate settler mortality to the kind of institutions they implanted in colonies of settlement. The higher the mortality rates, the more extractive the institutions will be. These extractive institutions persist to the present. Using mortality rates as a proxy for institutional characteristics the authors find strong correlations between institutional quality and levels of per capita income (see for an extended discussion Bluhm and Szirmai, 2012). There are quite strong similarities between the approach of Acemoglu et al. and dependency theory, but there are no references to the dependency literature in their work.

6.2 Structuralism and theories of unequal exchange

Theories of unequal exchange have been formulated both by neo-Marxists such as Samir Amin and Arghiri Emmanuel and by non-Marxist theorists such as Raul Prebisch and Hans

Singer (Hunt, 1989; chapters 5-7; Prebisch, 1950). Theories of unequal exchange reject the orthodox economic proposition that differences in factor endowments in different regions result in mutually advantageous patterns of international trade based on comparative advantage. According to orthodox views, free trade and specialisation in those lines of production in which a country is relatively most efficient will increase all countries' welfare. In the long run free movements of factors of production will also result in a gradual equalisation of returns to the factors of production in rich and poor countries. Theories of unequal exchange, however, state that participation of developing countries in the international division of labour is detrimental to their chances of economic development. Only the rich countries profit from international trade.

These theories emphasise the structural characteristics of the economies of developing countries which hinder the operation of free-market incentives in the domestic economy and comparative advantage in international trade. Therefore these theories are often called *structuralist theories*.

Various arguments are put forward by theorists of unequal exchange to explain why developing countries are at a disadvantage in international trade. In the first place, many developing countries have a comparative advantage in primary products (agricultural products and raw materials). The income elasticity of world demand for these products is low. This means that as per capita incomes in the world economy go up, the demand for primary products will lag behind. (For instance, as people become more prosperous they will buy more manufactured goods and services. But there are limits to how much more bread they can consume). Prices of primary exports will therefore not keep up with prices of industrial exports for which world demand is much more buoyant. In the second place, high wage levels in the affluent countries stimulate investments in capital and technological development so as to increase labour productivity. In poor countries, the abundance of cheap labour will limit technological advance. The technological gap between rich and poor countries will tend to increase. In the third place, orthodox neo-classical economic theory does not take into account the fact that most investment in developing countries is in foreign hands. Therefore investment behaviour is determined by foreign rather than by national interests. In the fourth place, Prebisch and Singer state that both well-organised trade unions and monopolistic corporations in the rich countries prevent productivity gains in these countries from being passed on to consumers in poor countries in the form of lower export prices. The absence of such institutions in developing countries means that productivity gains in these countries are

passed on to consumers in rich countries. For all these reasons the terms of trade between export and import prices of developing countries show a structural decline over time.

An influential version of the theory of the declining terms of trade was formulated by Nobel Prize laureate Arthur Lewis (1954; 1978). He argues that disguised unemployment in the traditional sector of the economy makes for a large flow of cheap labour towards the export sector. This flow of cheap labour has a depressing effect on the export prices of agrarian products from developing countries and the incomes of agrarian workers. In the mining sector high productivity and low wages make for large profits. As mines are mostly foreign owned, the profits will flow out of the country, which therefore benefits but little from mining exports. According to Lewis, international trade offers poor countries an opportunity to stay poor, as incomes earned in export production remain low. Only if productivity in the traditional food- producing sector goes up, will the unlimited supply of extremely cheap labour with its depressing effects on wages and export prices, come to an end.

Non-Marxist structuralists draw less radical conclusions than the Marxists with regard to the need for domestic political and economic changes. However, following the classical prescriptions of Friedrich List, they do argue for a development strategy which would make developing countries less dependent on international trade (Sunkel, 1993; Urquidi, 1993). To achieve this, they have to build up and protect a domestic industrial sector which can replace imports of industrial goods by domestic production. This strategy, known as the *import substitution strategy*, has been applied with a certain measure of success in Latin American countries between the 1930s and 1960s, and elsewhere in Africa and Asia. After the 1960s this strategy ran out of steam. Asian countries which made an earlier switch towards export orientation performed much better than African and Latin American countries which continued inward-looking import substitution policies.

Structuralists believe that free-market policies will not work in developing countries due to a variety of structural constraints. These include: the absence of an adequate transport and communications infrastructure; the underdevelopment of the financial system; the limited extent of the market; the lack of market information; the lack of free choice for subordinate classes; and the monopolistic structure of the economy. Both Marxists and Structuralists are in favour of government planning and a leading role of the state in the development process. It is the state that has to break through the structural constraints to development. This recommendation is a corollary of their critique of the workings of capitalism and the free market. Finally, structuralists are among those calling for regulation of international trade and

the creation of a new international economic order (NIEO), in which developing countries would have better chances.

In the 1960s and 1970s there was a widespread surge of interest in a new, more regulated international order. This completely disappeared from the agenda in the 1980s and 1990s, when resurgent economic liberalism challenged the tenets of national and international planning and regulation. In rather inchoate form the call for a new international order is now re-emerging at the beginning of the new millennium in the political and academic criticisms of globalisation. The modern critics of globalisation point to financial instability and loss of national independence as negative consequences of participation in the global world economy. In recent years, there have also been carefully argued academic criticisms of unfettered globalisation, including the well-known study by H.J. Chang entitled *Kicking Away the Ladder* (Chang, 2002, also 2003).

Compared to underdevelopment theory with its central emphasis on power and institutions, theories of unequal exchange and structuralism have less to say about institutions in particular. The analysis is couched more in economic terms of income elasticities, rigidity or flexibility of wages which are more at the proximate or intermediate level. It is true that structuralist constraints also include institutional constraints to the functioning of markets, but these constraints are not framed in an institutionalist terminology.

6.3 Underdevelopment theories: an evaluation

Theories of underdevelopment have been primarily formulated with reference to the development experiences of Latin America. In the history of this subcontinent colonial and neo-colonial exploitation by Spaniards, Portuguese, English, Dutch, Americans and others have played an important role. The artificial creation by Iberian colonists of large landholdings and plantations on the one hand and a poor rural population of landless labourers, serfs and very small farmers on the other hand is prominent in history. The slave trade and the import of bonded labourers have changed the total population profile. After the achievement of independence in the early nineteenth century, foreign interests continued to play an important role. Military interventions by the English and later by the Americans occurred frequently and have continued to do so till late in the twentieth century. The dualist development of the economy went hand in hand with extreme income inequality. Thus, rapid economic growth could coexist with continued widespread poverty.

Theories of underdevelopment have undoubtedly increased our insight into the negative aspects of Western penetration in the world. They form a valuable counterweight to the often

a-historic blueprints of modernisation theorists or the bland prescriptions of market enthusiasts. One of the important insights deriving from the underdevelopment tradition is that Western influences can give rise to institutions and constellations of interest groups, which form serious obstacles to development in subsequent historical periods. Theories of underdevelopment also help us understand how rapid capitalist growth in Latin America can sometimes coexist with continued poverty of large masses of the population.

Nevertheless, underdevelopment theories also have a number of important shortcomings. The most basic shortcoming is the deterministic nature of many of their propositions. From the perspective of underdevelopment theory it is hard to understand how and why former colonies such as the United States, Canada, Australia or New Zealand have achieved such economic success. Neither do the experiences of dynamic capitalist developments in South Korea, Taiwan, Singapore, Thailand, Hong Kong, Malaysia, Indonesia, China, India and other newly industrialising countries fit the underdevelopment mould.

Many of the empirical propositions of underdevelopment theory are unfounded. For instance, as we shall see in paragraph 8.5, it is simply not true that there is always a net outflow of capital from poor to rich countries. Also, empirical data do not invariably support a law of declining terms of trade for developing countries. Sometimes the terms of trade deteriorate, sometimes they improve. Finally, the proposition that the economic breakthrough in the West should primarily be explained by colonial exploitation and plunder is not supported by empirical historical research, which emphasises the importance of centuries of internal pre-capitalist accumulation and gradual increases in productivity.

In the present economic situation, underdevelopment theory has little to offer in the way of policy recommendations. Socialist central planning of industrial development is increasingly considered a highly inefficient development strategy. There is indeed a renewed debate about the role of industrial and technology policy in Asian economic growth, which some authors refer to as neostructuralist (Sunkel, 1993, see also Cimoli et al, 2009). But, this debate focuses on how developing countries can profit from participation in the international division of labour rather than how they can extricate themselves from international trade. The disadvantages of extreme import substitution and the related neglect of agriculture are now widely recognised (see Szirmai, 2005, chapters 9 and 13). The advantages of participation in international trade are underlined by the positive development experiences of those developing countries which have shown the strongest export orientation.

Thus, though underdevelopment theory has contributed to our understanding of historical development processes, it has less to offer for the formulation of adequate development strategies in the present.

7 Combining internal and external influences

The sharp analytic distinction between external and internal explanations does not do full justice to the nuances of the different theories. For instance neo-classical growth theories do make assumptions about – benign – external influences such as free access to international technology flows, the flow of capital to capital scarce countries and international trade. Structuralist theories also pay attention to internal characteristics. The distinction makes sense in that it focuses on the prime sources of growth and stagnation emphasised in different theories. In some theories external and internal influences are explicitly combined. Here we discuss two such theories namely the theory of the advantages of backwardness and evolutionary growth theory.

7.1 Advantages of technological backwardness

The economic historian Alexander Gerschenkron formulated his theories about the advantages of backwardness on the basis of the rapid growth and catch up of the latecomer countries Russia and Japan since the last quarter of the nineteenth century (Gerschenkron, 1962). These countries were able to profit from copying and taking over technologies developed elsewhere, without bearing the full cost of their development. Their technological backwardness created a potential for accelerated growth.

To some extent, Gerschenkron makes assumptions similar to those of Solow, namely that international technology and knowledge are freely available. However, as a historian, he pays much more attention to the conditions under which certain countries can profit from diffusion of technology. Diffusion is certainly not automatic as in the Solow model. It depends on changes in the social structure and modernisation of society and calls for a greater role of governments and large financial institutions in mobilising resources.

Like Rostow, Alexander Gerschenkron emphasises the importance of overcoming internal institutional obstacles to industrialisation for a country to embark on growth and catch up. For nineteenth-century Russia, such obstacles included serfdom and the absence of a disciplined, reliable and stable supply of industrial labour.

When industrialisation takes off and absorptive capacities are sufficiently developed in late-developing economies, growth happens in leaps or in rapid spurts, concentrated in certain leading sectors of economy (Gerschenkron, 1962).

In two respects Gerschenkron disagrees with Rostow. In the first place there are important differences between the patterns of industrialisation in different countries and in different historical periods (see also Kuznets, 1965 . There is no uniform, unilinear sequence of stages of development. In early processes of industrialisation in the UK in the eighteenth century, self-financing by firms was the most important source of investable funds. In the economic development of Germany in the nineteenth century, banks and financial institutions played a far more important role than earlier in England and France. In late nineteenth century Russia, only the government was able to mobilise sufficient amounts of financial capital for massive investment in industry and infrastructure. As time went by, technological change required investment on an ever larger scale. This explains why the role of banks, financial institutions and governments becomes more and more important in late industrialisation. Increasing scale also explains the explosive nature of industrialisation processes. For industrialisation to succeed in late industrialisation, very many changes in the economy have to take place simultaneously, in a short period of time. If changes are only partial or limited, the required scale of investment will not be attained and the process of industrialisation will stagnate.[20]

In the second place, Gerschenkron argues that the economic development of a country can only be understood in a context of international technology transfer. In this respect Gerschenkronian theory transcends the limits of internal perspectives. It combines both internal characteristics and policies and interactions with the technologically advanced countries in the world economic order. In Gerschenkron's theory, latecomers in economic development have the opportunity to take over technological know-how from economically advanced countries, without having to bear the burden of the costs of research and development of new technologies. Developing countries can choose from a huge arsenal of new production techniques, which were not available previously. Thus if the economy and the society are able to absorb new technologies, latecomers in development can experience much faster economic growth than early developers, because they profit from the *advantages of backwardnes*s.

[20] This notion is not incomparable to the Rostovian notion of take-off, but Gerschenkron differs from Rostow in not making use of a unilinear stage theory.

Gerschenkron's theories bear some interesting resemblances to earlier writings of Thorstein Veblen on the rise of imperial Germany (1915) and the theories of the Dutch Marxist historian Jan Romein (1937). Romein and Veblen called attention to potential dangers and disadvantages of technological leadership. Lead countries may have invested too heavily in given technologies and their surrounding infrastructure and may be unable to move to new generations of technology. In modern theorising this is referred to as "*technological lock in*". The loss of technological leadership of the UK since the end of the nineteenth century is explained in these terms. The combination of the advantages of backwardness and the penalties of leadership can result in rapid catch up. However, Gerschenkron does not suggest any tendency to global convergence. Rather, he highlights the possibilities of rapid catch up in individual developing countries. In the post-war period this reflected in the experiences of Asian countries such as Japan, South Korea, Taiwan, Hong Kong, Singapore, and currently India and China.

Abramovitz (1989) has further developed the notion of advantages of backwardness. The capacity of developing countries to profit from technologies developed in the advanced economies depends on the social capabilities of a developing country and the congruence between technologies developed in the lead countries and conditions in the follower countries. Social capability refers to the use a country can make of advanced technology and its capacity to acquire it in the first place. Social capability depends on the technical competence of a country's people, indicated among others by levels of general education and the share of population with training in technical subjects. It also is influenced by the degree of experience of managers with large-scale production, the availability of financial institutions and supporting services and so forth. Once certain threshold levels of capabilities have been achieved, backward countries can grow very rapidly as they take over technology from elsewhere. But if they fail to achieve these threshold levels, gaps will tend to widen. Absorptive capacity is one of the very important ultimate sources of growth.

In recent years Mike Hobday has provided a further elaboration of the Gerschenkronian framework in a series of publications focusing on the successful development of East Asian economies. Different countries have followed different kinds of policies. For instance, Taiwan nurtured small and medium-sized enterprises while South Korean development was based on large scale conglomerates, the *Chaebols*. A common characteristic of East Asian development is close cooperation and interaction between government and the private sector, economic growth driven by manufactured exports and a focus on learning and technological upgrading. These policies have resulted in rapid catch up (Hobday, 1995, 2000, 2012). Another interesting

elaboration of Gerschenkron is provided in the work of Acemoglu et al., (2006). These authors argue that the role of both firms the state will be different depending on the distance to the technological frontier. The further a country is removed from the frontier, the less important are innovative activities and the more important an investment based strategy will be. For this investment based strategy government interventions are required. Thus the role of government will be also different depending on the distance to the frontier.

Geschenkronian analysis general focuses on ultimate causality. One of the key forces of catch up is the distance to the – ever changing – technological frontier. Institutions figure in Gerschenkronian analysis, because a breakthrough from traditional institutions hindering economic development is required, before a country can embark on catch up. But, the key factor in all catch up theories is absorptive capacity, which has closer associations, I would argue, with the concept of human capital than with that of specific institutional arrangements.

7.2 Evolutionary theories of economic change

Evolutionary theories of economic change refer to a relatively recent strand of theories building on the Schumpeterian tradition. Like Schumpeter, evolutionary theories focus on the central role of technological change and innovation in growth and development (Dosi, 1988; Freeman and Soete, 1997; Nelson and Winter, 1982; Verspagen, 1993; 2001). Investment in new technology is associated with major uncertainties and risks. These uncertainties and risks are not easily dealt with in the neo-classical approaches which assume perfect information, rational profit maximisation and movements towards equilibria and steady states.[21]

Evolutionary theory rejects the notion of rational choice underlying neo-classical theory. Economic agents have to deal with imperfect information. They have to search for information and their decisions are made on the basis of rules of thumb. Evolutionary theory starts with the twin notions of heterogeneity of economic agents and selection environments. Heterogeneity implies that, faced with uncertainties, different economic actors will use different decision rules and different search strategies and will arrive at different decisions. In other words, there is no representative actor as in neo-classical theory. Given the selection environment, some choices of some firms turn out to be successful and they and their decision rules are subsequently reinforced. The collective outcomes of these choices and selection processes can put an economy onto a dynamic growth path, which distinguishes it from other

[21] Note, however, that modern neo-classical theory increasingly takes imperfect information and information asymmetries into account. In this sense, the difference between competing strands of theory are less pronounced than they seem at first sight.

economies. This is referred to as path dependence (David, 1975), where relatively small initial differences can be greatly reinforced in the long run, as in Myrdal's cumulative causation.

Thus, like new growth theory, evolutionary theory is well equipped to deal with divergence of economic performance in the world economy. But evolutionary theory also incorporates the Gerschenkronian notions of international flows of technology and knowledge from advanced economies to less advanced economies and the associated advantages of technological backwardness. Also, in evolutionary economics, disequilibrium reigns rather than equilibrium. New technological developments, shocks and changes in the environment can make past successful paths irrelevant, and can open new opportunities for dynamic growth for low-income economies which did not exist before. Thus, evolutionary theory can also accommodate processes of catch-up.

Like new growth theory, evolutionary theory endogenises technological change by focusing on investment in and creation of knowledge. It suggests that there are increasing returns to investment in technology. But whether or not this leads to increased divergence depends on whether the advanced countries appropriate all the returns to new technology or whether technology diffuses or spills over to developing countries. This depends on the one hand on how intellectual property rights are protected (the international property rights regime). On the other hand, it depends on the internal technological capabilities and absorptive capacities in developing countries – capabilities to identify, select, absorb and adapt technologies.

Developing countries with strong technological capabilities are better placed to profit from the Gerschenkronian advantages of backwardness. But, when technological capabilities are weak and the technology gap separating advanced from developing economies is too wide, then there are insufficient possibilities for diffusion and international spillovers and countries will fall further behind. The concept of technological capabilities emphasises that technology is not freely available, but requires major creative efforts and costs to acquire and master.[22]

Evolutionary theories of growth try to combine the contradictory forces of increasing returns in lead countries and the advantages of technological backwardness. New technologies are primarily developed in the advanced economies and specifically in the lead countries amongst the advanced economies. But technologies can diffuse from lead countries to

[22] The tacit nature of much technological knowledge is one of the factors which impedes the effortless adoption of technology by developing countries.

follower countries and to developing economies. Evolutionary theory, like Gerschenkronian theory, incorporates both internal and external factors and forces.

The outcome of the race between technological advance and the international diffusion of technology is not given in advance. Whether countries catch up or fall behind depends on the balance between the generation of new technology and increasing returns in lead countries, and diffusion of technology and spillovers to follower countries on the other (Verspagen, 1993). However, the larger the technology gap between leader and follower, the more difficult technology diffusion will become. Beyond some threshold levels, income gaps will tend to increase and countries will fall behind. Developments in sub-Saharan Africa between 1973 and 2000 are an illustration of this tendency (see also James, 2002). But when the gap is not too large and absorptive capacities are highly developed, very rapid catch up can take place, as is evidenced by the East, South East and South Asian experiences of recent decades.

Evolutionary theorising is well suited to an endogenous historical approach to the evolution of institutions. Technological change and disequilibrium creates the conditions for changes of rules and strategies, while the selection environment contributes to the evolution of new rules and institutions. The important concept of path dependence indicates that once institutions have crystallised they have an important degree of permanence, until they are subject to new major shocks.

8 Empirical study of development experiences

In the following sections we discuss empirical data on long-run economic development in poor countries. We show how such empirical data are of relevance for some of the theoretical questions raised in the first half of this paper. The data primarily derive from Angus Maddison's publications, *The World Economy: A Millennial Perspective* (2001) and *Monitoring the World Economy* (1995), his database Statistics on World Population, GDP and per Capita GDP, 1-2008 AD (2010), supplemented by information from a variety of other sources specified in the table source notes and a statistical annex in the list of references.

Much of the literature on development and development studies is based on examples, case studies or metaphors. It is our conviction that the systematic empirical study of long-term trends in economic and social indicators and systematic comparisons of such trends can contribute to a less ideological and more analytical approach to the emotionally highly charged field of development studies and to a strengthening of its empirical foundations.

The data in this section refer to a sample of 31 developing countries. Nevertheless the 4.5 billion inhabitants of these 31 countries represent 80 percent of total developing country

population in 2009. This means that developments in the selected countries do represent changes in the economic circumstances of a large portion of world population.

The choice of countries is primarily determined by the quality and availability of empirical data and by the size of the countries. The sample contains 13 Asian countries, 7 Latin American countries and 10 African countries. For African countries the data can usually not be traced back as far as those for other countries. In many tables developing countries are compared with 16 advanced countries.[23]

8.1 Growth of income per capita: can developing countries escape stagnation?

Table 1 presents data on the average growth rates of gross domestic product per capita since 1870. This table shows us that average income per head in developing countries has been increasing ever since the late nineteenth century. This effectively contradicts the myth that growth of per capita income in developing countries is impossible owing to vicious circles of poverty. Several developing countries show considerable economic dynamism. The increase in production per head has been realised in spite of very rapid population growth, particularly since 1950.

[23] The 16 advanced economies are Australia, Austria, Belgium, Canada,Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Sweden, Switzerland, U.K. and U.S.A. Germany refers to united Germany. Since 2000, South Korea and Taiwan have become high-income economies. In all subsequent tables they will be included in the advanced country averages for the periods after 2000. They can no longer be considered as developing countries. South Korea and Taiwan are included in the Asian and developing country averages for the earlier periods.

Table 1:
Growth of GDP per capita, 1870-2009, annual average compound growth rates (%)

	1870-1913	1900-1913	1913-1950	1950-1973	1973-2009 [e]
Bangladesh	0.5	0.9	-0.4	-0.4	2.5
China	0.1	0.1	-1.3	2.8	6.6
India a	0.5	0.9	-0.3	1.4	3.6
Indonesia	1.0	1.7	-0.2	2.7	3.3
Iran	0.8		1.5	5.2	0.6
Malaysia			1.5	2.2	4.1
Pakistan	0.6	0.9	-0.4	1.7	2.8
Philippines	1.1	3.0	0.2	2.7	1.2
South Korea	0.9	0.8	-0.05	5.3	5.4
Sri Lanka	0.9	-0.3	0.04	0.8	3.5
Taiwan	0.7	1.4	0.6	5.9	5.1
Thailand	0.8	0.3	-0.1	3.7	4.3
Turkey	0.9		0.8	3.4	2.2
Argentina	2.5	2.5	0.7	2.1	0.8
Brazil	0.3	1.4	2.0	3.7	1.4
Chile	1.7	1.5	0.9	1.4	2.7
Colombia		1.9	1.5	2.1	1.9
Mexico	2.2	1.8	0.8	3.2	1.3
Peru		3.2	2.2	2.4	0.7
Venezuela	1.6	2.3	5.3	1.5	-0.04
Congo, Dem. Rep.				1.6	-3.3
Cote d'Ivoire				2.6	-1.3
Egypt	0.8	-0.02	0.02	1.5	3.3
Ethiopia[b]				2.1	1.0
Ghana	1.3	2.6	1.0	1.0	0.6
Kenya				1.8	0.4
Morocco	0.5	2.6	2.0	0.7	2.4
Nigeria				2.3	1.0
South Africa	1.5	2.6	1.2	2.2	0.4
Tanzania				1.5	0.9
Zambia				2.1	-0.6
Weighted average[c] :					
Asian countries	0.4	0.8	-0.2	2.7	4.5
Latin American countries	1.6	2.2	1.4	2.7	1.2
African countries	1.1	1.4	1.0	1.9	1.0
Average developing countries	0.6	1.0	0.3	2.8	3.5
Average 16 advanced economies[d]	1.6	1.7	1.2	3.6	1.7

Notes:

a. India prior to 1950 refers to undivided India, including Bangladesh and Pakistan.

b. Ethiopia pre 1992: Ethiopia and Eritrea, post 1992 Ethiopia.

c Average of countries in table weighted by population size.

d Advanced economies: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Norway, Sweden, Switzerland, U.K. and U.S.A. Germany refers to united Germany.

e For Africa and total developing countries figures refer to 1973-2008.

Sources:

1870-1950: Maddison, Historical Statistics of the World Economy: 1-2008 AD, Feb. 2010. http://www.ggdc.net/maddison/. 1950-2009: Conference board/Groningen Growth and Development Centre, *Total Economy Database*, http://http://www.conference-board.org/data/economydatabase/, downloaded Sept 2010. The Total Economy Database originally derives from the Maddison database, but after 1990 there are differences.

The periodisation of the data in Table 1 derives from Maddison (1989, 2001). Between 1870 and 1913 there was substantial foreign investment in developing countries and the exports of agricultural and mining products increased rapidly. There was growth in both rich and poor countries, with Asia lagging behind other regions and Latin America growing at the same rate as the advanced economies.

From 1913 to 1950 growth in the world economy stagnated as a result of wars and economic depressions. Developing countries were heavily hit by the economic crisis of 1929, especially the Asian countries, which were most deeply involved in international trade.

The period between 1950 and 1973 was a golden age of dynamic development, with growth of per capita incomes in the world economy higher than ever before in economic history. Both rich and poor countries profited from the liberalisation and growth of world trade and the increase in investment and capital flows. Growth in the advanced economies was more rapid than in the developing countries.

For the period between 1870 and 1973, the figures in Table 1 illustrate that economic developments in rich countries and developing countries tend to be linked. Otherwise than suggested by theories of underdevelopment, growth in the rich countries was not accompanied by stagnation in developing countries. On the contrary, if the heart of economic growth in the rich countries started beating at a slower pace, this had negative consequences in other parts of the world economy. If growth in rich countries accelerated, growth in developing countries tended to respond.

This does not mean that the discussion of underdevelopment theories can be concluded. In the first place, table 1 refers to gross domestic product rather than gross national product. It is conceivable that part of gross domestic product of developing countries drains away in the form of factor payments to foreign owners of capital. Not only will national product then be lower than domestic product, but economic growth will also be lower than if all economic surpluses had been reinvested in the domestic economy. In the second place, income per capita is an average figure, which disregards the income distribution within a country. Rapid growth can go hand in hand with rapidly increasing inequality and can even be accompanied by immiserisation of large segments of the population. Even when developing countries are catching-up, the world household income distribution may not be becoming more equal. In the third place, between 1913 and 1950, the development experiences of some Latin American countries are not inconsistent with underdevelopment theory. In this period industrial imports from Europe stagnated due to wars and economic crises. This gave Latin American countries such as Brazil a chance to build up a domestic manufacturing sector.

Growth in Latin America was higher than elsewhere in the developing world and also higher than in the advanced economies.

After the oil crisis of 1973, there was a slowdown of global growth relative to the period 1950-73 in the advanced economies (Maddison, 1989). Most developing countries, especially in regions other than Asia showed lower average growth rates than in the golden age. However, because of the accelerated growth in some very large Asian countries, the total weighted growth rate in developing countries from 1973 to 2009 was higher than in the period 1950-1973.[24] Between 1950 and 1973, income per capita in the advanced economies was growing more rapidly than in developing countries, so that the gap between rich and poor became ever larger. Since 1973, average growth in our sample of developing countries was higher than that in advanced economies. This primarily reflected accelerating growth in large Asian economies, including China and India.

The average figures mask highly divergent trends between regions. Asia was growing much rapidly than the advanced economies, while both Latin America and Africa experienced very sluggish long-run growth rates. There are also important differences between sub periods.

In table 2, the period 1973-2009 is broken down into five subperiods in order to bring out the effects of four major historical shocks - the oil crisis of 1973, the debt crisis of 1982, the Asian financial crisis of 1997 and the global financial crisis of 2007. The subperiods are 1973-81, 1981-96, 1996-2000, 2000-2007 and 2007-9. In this table, South Korea and Taiwan are included in the advanced country averages from 2000 onwards, because they have become high income economies and can no longer be considered as developing countries.

After the oil crisis of 1973, growth in the advanced economies slowed down markedly compared the golden age. Initially, Latin America was able to sustain its growth momentum till around 1981, through highly expansionary fiscal and monetary policies. The average Latin American growth rate for this period was 2.1 per cent. After 1981, Latin American economic development stagnated severely as a result of misguided policies, hyperinflation and the impact of the 1982 debt crisis (Maddison, 1989). Negative growth in Congo, Côte d'Ivoire, Ethiopia, Nigeria, South Africa, Tanzania and Zambia reflected the onset of economic stagnation on the African continent after 1973. The African economies would continue to stagnate till around

[24] The averages in table 3.1. and 2 are weighted with population size, giving large countries a heavy weight. Using population weighted averages gives very different results than the use of unweighted averages. One should realise that the population of India is about twice as large as the total combined population of sub-Saharan Africa.

2000. In contrast, growth started to accelerate in Asia from 1973 onwards. The average growth rate of 2.7 per cent between 1973 and 1981 was much higher than in the advanced economies or Latin America.

Table 2:

*Growth of GDP per **c**apita, 1973-2009, annual average compound growth **r**ates (%)*

	1973-81	1981-1996	1996-2000	2000-2007	2007-2009 [c]
Bangladesh	1.3	1.8	3.4	4.1	5.4
China	3.6	6.6	4.3	11.2	8.2
India	1.7	3.5	3.6	5.9	4.8
Indonesia	3.5	4.2	-1.0	3.7	4.1
Iran	-4.8	0.7	2.5	5.5	1.6
Malaysia	5.1	4.8	2.5	3.2	1.6
Pakistan	3.0	2.9	0.9	3.5	0.4
Philippines	2.5	-0.4	1.2	2.8	3.1
South Korea	5.4	7.5	3.0	4.2	1.9
Sri Lanka	3.2	3.2	4.3	3.8	-0.7
Taiwan	6.0	6.5	4.8	3.3	5.0
Thailand	4.4	6.5	-1.8	4.3	-1.7
Turkey	2.0	2.7	1.7	3.3	-0.7
Argentina	-0.6	0.6	0.7	2.8	0.0
Brazil	2.8	0.6	0.5	2.0	1.7
Chile	2.1	3.2	2.1	3.3	0.8
Colombia	2.5	1.7	-0.6	3.5	0.2
Mexico	4.1	-0.5	4.0	1.3	-1.2
Peru	1.0	-1.3	0.8	3.9	3.4
Venezuela	-1.0	-0.9	-0.7	2.9	0.7
Congo, Dem. Rep.	-3.9	-4.8	-6.8	1.6	1.4
Cote d'Ivoire	1.1	-2.7	-0.7	-1.9	1.3
Egypt	6.1	2.0	4.0	2.4	4.3
Ethiopia[a]	0.1	-0.4	-0.1	4.9	8.5
Ghana	-2.5	0.3	2.0	3.1	4.4
Kenya	0.8	0.1	-0.7	1.7	-0.4
Morocco	3.1	1.6	0.4	3.8	4.7
Nigeria	-1.0	-0.8	0.4	7.4	2.7
South Africa	0.9	-1.2	1.1	3.2	-0.6
Tanzania	-0.3	-0.7	1.3	4.7	4.6
Zambia	-1.6	-2.6	-0.5	3.5	4.0
Average					
Asian countries[d]	2.7	4.7	2.8	7.6	5.6
Latin American countries	2.1	0.3	1.3	2.2	0.8
African countries	1.0	-0.2	1.1	3.4	3.5
Average developing countries[d]	2.4	3.1	2.3	6.1	5.5
Average 16 advanced economies[b]	1.8	2.0	2.7	1.7	-1.9

Notes:

a. Ethiopia pre 1992: Ethiopia and Eritrea, post 1992 Ethiopia

b. From 2000 onwards, advanced country averages include South Korea and Taiwan

c For Africa and Developing Countries total the figures refer to 2007-2008

d averages for Asia and developing countries after 2000 excluding South Korea and Taiwan

Sources: see Table 1

1973-2009: Conference board/Groningen Growth and Development Centre, total Economy, Database, http://http://www.conference-board.org/data/economydatabase/, downloaded September 2010

The impact of the 1982 debt crisis was particularly severe in Latin America. Many economies experienced contraction of GDP in the 'lost decade' of the 1980s (Hofman, 1998), only really starting to recover after 2000. African countries also suffered heavily in the wake of the 1982 debt crisis. Between 1981 and 1996, average per capita output declined by 0.2 per cent per year. In contrast, Asian countries surged ahead growing at 4.7 per cent per year, providing an example of catch up relative to the advanced economies.

The euphoria of Asian growth was temporarily shaken by the Asian financial crisis of 1997, which dramatically interrupted growth in countries such as Thailand and Indonesia. Other Asian countries recovered quickly or were less affected, but average growth in the Asian countries declined from 4.7 per cent to 2.8 per cent between 1996 and 2000.

After 1981, Latin America lost much of its earlier gains, while Asia continued on a catch-up trajectory. Between 1973 and 2000, Africa provided an example of falling behind, with many countries experiencing real declines in per capita GDP over long periods. In sum, between 1973 and 2000 we see divergent trends in the developing world with catch up in Asia, stagnation in Africa and a mixed record in Latin America.

After 2000, growth started to accelerate in the developing world. Asian economies were growing very rapidly, in particular those of China and India. Latin America was finally recovering from the long period of stagnation since 1980, though growth was still slower than elsewhere in the developing world. The most amazing changes are to be found in Africa, where average growth was 3.4 per cent per annum between 2000 and 2007. This growth is mainly driven by primary exports.

The final column of table 2 shows the immediate effects of the global financial crisis of 2007. It is too early to assess the long-run effects of this crisis, but it is clear that the advanced economies have suffered much more than the developing countries. In the advanced economies, GDP per capita contracted by almost 2 percent in 2008 and 2009, while average growth in the developing countries was 5.5 per cent. After a long period of catch up in Asia since 1973, we presently seem to be witnessing a sea change in the international economic order.

8.2 Investment: how important is capital?

One of the issues in classical and modern theories of economic development has to do with the rate of capital accumulation and the contribution of capital to growth. Along with education, capital is one of the most important proximate sources of growth in figure 1. In

post-war thinking about development, capital accumulation was seen as the key to growth and development. Inability to save and too low levels of capital per worker explained low levels of development.

A well-known theory of Lewis and Rostow, discussed briefly in section 5.1, states that sustained economic growth will occur when the rates of saving and investment increase from 5 per cent or less to more than 12 per cent of net national income. Have developing countries been able to save enough to meet the requirements of this theory?

Table 3 presents data on gross domestic investment as a percentage of GDP. The data refer to gross investment (i.e. before subtraction of depreciation) rather than net investment. However, one may assume that 5 per cent net roughly corresponds to 8 per cent in gross terms (Maddison, 1989). This implies that most of our developing countries were already investing more than the Lewis-Rostow lower bound of 5 per cent in 1950. Since then most developing economies have succeeded in increasing investment to levels in percentage terms exceeding those of the rich countries. Between 1950 and 1973, investment rates increased from 13.7 to 20.6 percent, while investment rates in the advanced economies reached their peak level of 27.2 per cent. By 1981, the average investment rate in developing countries was higher than in the advanced economies. After the 1982 debt crisis, investment rates in six of the seven Latin American and eight of the eleven African countries declined sharply. The investment rates in many Asian countries continued to increase, reaching peak levels in the 1990s (an average of 28.9 per cent of GDP in 1990). By 2008, investment levels in developing countries were substantially higher than in the advanced economies (24.6 percent against 21.8 per cent).

The data in Table 3 can be interpreted in two ways. First, it seems clear from a comparison of Table 2: and Table 3 that on average high rates of investment and capital accumulation have been associated with rapid economic growth since 1950. Capital is an important proximate source of growth. Yet the causal relationship between investment and growth is not unambiguous. Differences in growth performance between individual countries are not directly related to differences in investment efforts. Similar investment rates can result in very different growth outcomes. Some countries use investments much more effectively and productively than others. Wasteful investment in prestige projects, for instance, results in high investment rates but low growth. The African economies between 1973 and 1996 provide ample illustration of the combination of rather high investment rates and low or even negative growth. The ‘capacity to absorb investment’ is of the greatest importance for the contribution of investment to economic development (Myint, 1980). This capacity depends on a variety of complementary economic, political, cultural and institutional factors.

Table 3

Gross domestic investment as percentage of GDP (at current market prices)

	1950	1973	1981	1990	1997	2008
Bangladesh	5.5	12.9	23.5	17.1	20.7	24.2
China	10.4 a	29.4	32.5	36.1	37.9	42.5
India	9.9	18.2	23.8	24.2	23.9	35.6
Indonesia	11.5	20.8	26.7	30.7	31.8	27.8
Iran		25.5	27.1	37.2	35.7	33.2
Malaysia		25.5	35.0	40.4	33.8	27.4
Pakistan	5.5	12.9	18.8	18.9	17.9	22.0
Philippines	15.0	21.8	27.5	24.2	24.8	15.2
South Korea	5.7	25.4	29.4	37.5	36.0	31.2
Sri Lanka	11.8	13.7	27.8	22.2	24.4	27.1
Taiwan	14.5 b	29.1	29.9	23.9	22.7	27.4
Thailand	11.8	27.0	29.7	40.4	33.8	27.1
Turkey	11.3	14.7	17.9	22.9	26.4	19.9
Argentina	13.3	20.9	22.7	14.0	19.4	23.3
Brazil	12.3	23.2	23.1	20.2	17.4	18.2
Chile	8.0	10.5	22.7	25.2	27.7	24.5
Colombia	16.9	18.3	20.6	18.5	20.9	24.8
Mexico	14.1	20.0	27.5	23.1	26.0	26.3
Peru	17.1	20.3	34.3	16.1	23.8	26.1
Venezuela		31.0	24.4	14.1	25.5	20.0
Congo, Democratic Rep.		16.8	10.5	12.8	2.5	23.9
Côte d'Ivoire		23.2	25.9	6.7	14.4	10.1
Egypt	11.8	13.1	29.5	28.8	17.6	22.4
Ethiopia	11.8	13.1	14.5	12.9	19.8	19.8
Ghana	15.1	9.0	4.6	14.4	24.8	35.9
Kenya		25.8	27.7	24.2	15.1	19.2
Morocco		16.9	26.1	24.0	20.7	33.1
Nigeria	7.2	22.4	23.3	14.7	22.0	
South Africa		27.7	34.2	17.7	16.6	22.0
Tanzania		21.4	24.6	26.1	14.9	16.6
Zambia		28.9	19.3	17.3	14.6	21.6
Average Asian countries[c]	10.3	21.3	26.9	28.9	28.4	27.0
Average Latin American countries	15.6	20.6	25.0	18.8	23.0	23.3
Average African countries	16.0	19.8	22.6	20.0	18.0	21.8
Average developing countries[c]	13.7	20.6	24.7	22.8	23.0	24.6
Average 16 advanced economies	21.6	27.2	23.0	23.09	20.9	21.8

Notes:

a 1952; b 1951 c. averages 2008 excl. South Korea and Taiwan

Sources:

1950: Maddison (1989), table 6.6, except for Egypt, Ghana, Kenya, Nigeria, South Africa, Sri Lanka, Turkey, Venezuela and all advanced economies except France, Germany, Japan, U.K and USA: World Bank, *World Tables 1980*. 1973-1981: World Bank, *World Development Indicators*, CD-ROM, 1999, except: Tanzania: 1973-1983, World Tables 1995. 1990 – 2008 and Iran, 1950-2008: World Bank, World Development Indicators Online, 2010, http://databank.worldbank.org, downloaded October, 2010. Taiwan 1950-2008: DGBAS,*Statistical Yearbook of the Republic of China, 2008.*

8.3 Export performance

Tables 4 and 5 give a picture of export performance in developing countries. Table 4 presents data on the growth of exports between 1870 and 2007. The characteristics of the main phases are clearly distinguishable. Exports were growing at just below five percent per year from 1900 to 1913. Between 1913 and 1950 growth rates slumped, especially in Asian countries heavily involved in world trade. In four Asian countries export growth was even negative. Between 1950 and 1973 exports from the advanced economies grew at 8.6 per cent per year. Average export performance in the developing countries was also much higher than in the pre-1913 period, though still lower than in the advanced economies.

After the 1973 oil crisis, export growth from the advanced economies slowed down to 5 per cent per year between 1973 and 1998. In this period, the growth of exports from developing countries become higher than from the advanced economies. Asian countries showed exceptionally high growth rates of 8.7 per cent, while exports from African countries grew more slowly at 3.3 per cent. In Congo and Zambia the growth rate of exports was around zero.

In the period between the Asian crisis of 1997 and the financial crisis of 2007, exports from developing countries grew at breakneck speed. The Asian growth rate was 10 per cent per year, the African growth rate was 8.9 per cent per year. Latin America was growing at 5.9 per cent per year. Developing country exports were growing almost twice as rapidly as exports from the advanced economies.

Table 4

Export performance, 1870-2007, annual average growth rates (%)

	1870-1913	1900-1913	1913-1950	1950-1973	1973-1998	1998-2007
Bangladesh	2.4	4.2	-1.5	2.0	9.3	11.2
China	2.6	4.7	1.1	2.7	11.8	20.5
India	2.4	4.2	-1.5	2.5	5.9	13.1
Indonesia	4.2	4.0	2.3	6.5	7.3	8.2
Iran				*5.6*	1.2	3.8
Malaysia				6.3	10.2	7.4
Pakistan	2.4	4.2	-1.5	3.6	7.5	9.4
Philippines	2.8	2.8	3.7	5.9	9.0	*8.6*
South Korea		8.0	-1.1	20.3	13.9	13.0
Sri Lanka				1.2	4.0	5.1
Taiwan		7.4	2.6	16.3	12.1	9.5
Thailand	4.1	5.0	2.3	4.4	11.7	9.8
Turkey						
Argentina	5.2	4.2	0.2	3.1	7.1	*5.0*
Brazil	1.9	*0.4*	1.7	4.7	6.6	8.0
Chile	3.4	3.8	1.3	2.6	9.2	6.4
Colombia	2.0	7.8	3.9	3.8	5.9	8.9
Mexico	5.4	4.6	-0.5	4.3	10.9	7.0
Peru	1.7	6.7	2.9	5.8	1.5	7.8
Venezuela			5.4	4.0	0.9	-2.0
Congo, Democratic Rep.				*3.1*	0.1	9.9
Côte d'Ivoire				*8.6*	4.1	4.9
Egypt				*2.0*	5.9	13.7
Ethiopia					*2.3*	12.9
Ghana			3.1	2.8	0.9	5.4
Morocco				*5.3*	2.0	6.4
Kenya				*4.4*	3.3	5.1
Nigeria				7.4		
South Africa				7.4	2.8	*3.0*
Tanzania				6.3	*9.4*	*9.0*
Zambia				*1.4*	-0.3	16.0
Average Asian countries	3.0	4.9	0.7	6.4	8.7	10.0
Average Latin American countries	3.3	4.6	2.1	4.0	6.0	5.9
Average African countries				4.6	3.3	8.9
Average developing countries	3.1	4.8	1.4	5.3	6.1	8.5
Average 16 advanced economies	3.9	4.8	1.1	8.6	5.0	4.7

Notes:

Figures in italics refer to different periods: Brazil, 1901-1913; Iran 1961-73; Kenya, 1954-73; Malaysia 1952-1973; Philippines 1998-2006; Argentina, 1998-2006; Congo, Cote d' Ivoire, Egypt, Morocco and Zambia, 1960-1973; Ethiopia, 1981-1998; Tanzania, 1990-98; South Africa, 1998-2005; Tanzania 1998-2006; Zambia 1998-2007

figures in current dollars deflated with US GDP deflator

Sources:

1870-1998, unless indicated otherwise from Maddison (2001), table F-2. 1900-1913 from Maddison, 1989, table 6.1 ; Sri Lanka, Turkey, Morocco, South Africa (1950-1998), Malaysia 1952-98, Iran (1961-98), Kenya, (1954-96) from IMF, IMF, International Financial Statistics Database, downloaded, October 2010, http://www.imfstatistics.org/imf/ downloaded October 2010; Congo, Democratic Rep., Cote d'Ivoire Egypt, Ethiopia, Ghana, Tanzania and Zambia 1960-1998 from, World Bank, *World Development Indicators Online*, downloaded, October 2010, http://databank.worldbank.org/ddp/home.do?Step=12&id=4&CNO=2, downloaded October 2010

1998-2007: IMF, 2010: Argentina, Brazil, Colombia, India, Morocco, Pakistan, Peru, Philippines, South Africa , South Korea, Sri Lanka, Thailand, Turkey, advanced economies except Austria; WDI, 2010: Austria, Bangladesh, China, Chile, Congo, Democratic Rep., Cote d'Ivoire, Egypt, Ethiopia, Ghana, Iran, Kenya (1996-2007), Malaysia, Mexico, Tanzania and Venezuela; Taiwan, DGBAS, Statistical Yearbook for the Republic of China 2008, 2009; Pakistan, 1998-2007 from WTO, 2010,http://stat.wto.org/StatisticalProgram/WSDBStatProgramTechNotes.aspx?Language=E#Top

8.4 Can primary exporters become manufacturing exporters?

Table 5:
Manufactured exports as percentage of total merchandise exports

	1953	1990	2000	2007
Bangladesh	1	77	91	88
China		72	88	93
India	48	71	78	64
Indonesia	0	35	57	43
Iran			7	*10*
Malaysia		54	80	71
Pakistan	1	79	85	80
Philippines	8	38	92	85
South Korea	0	94	91	89
Sri Lanka		54	75	68
Taiwan	6	93	95	99
Thailand	2	63	75	77
Turkey	1.1	68	81	82
Argentina	10	29	32	31
Brazil	2	52	58	48
Chile	2	11	16	11
Colombia	1	25	32	40
Mexico	8	43	84	72
Peru	3	18	20	14
Venezuela	0 a	10	9	*5*
Congo, Democratic Rep.			10	10
Côte d'Ivoire	1 a	11	14	14
Egypt	4.2	42	38	19
Ethiopia		7	10	
Ghana	10 a	8	15	21
Kenya	12 b	29	21	37
Morocco		52	64	67
Nigeria	3 a	1	0	2
South Africa		29	54	52
Tanzania	13 a	8	20	23
Zambia		5	11	7
Average Asian countries [c]	7	67	77	69
Average Latin American countries	4	27	36	32
Average African countries	8	20	26	25
Average Developing countries [c]	6	41	49	44
Average 16 advanced economies		72	72	70

Note:s a 1960; b 1961 c averages 2007 excluding S. Korea and Taiwan
Sources: 1953: Maddison (1989); Egypt and Turkey derived from Maddison (1970); Venezuela, Côte d'Ivoire Ghana, Kenya, Nigeria and Tanzania from World Bank, *World Development Report 1983*,1990.:World Bank. *World Development Indicators 2001;* 2000-2007: World Bank, *World Development Indicators Online, 2010*

Table 5 effectively demolishes the stereotype of developing countries as exporters of primary agricultural or mining products. This stereotype derives from the colonial division of labour in the world economy in the period 1870-1913, when developing countries specialised in primary exports. It is no longer relevant for large parts of the developing world. From 1953 to 2000 the average share of manufactured exports in total merchandise exports in developing

countries increased from 6 per cent to 49 per cent, ending up at 44 per cent in 2007. In Asian developing countries the increase is even more dramatic, from 7 per cent in 1950 to 69 per cent in 2007. This share exceeds that of the advanced economies.

8.5 External finance: does money flow from poor to rich countries?

Theories of underdevelopment and dependence suggest that there is a permanent drain of resources from poor countries to rich. This net outflow of resources reduces the possibilities for domestic investment, capital accumulation and growth and keeps poor countries poor and dependent. This is an example of a theory about more ultimate causality where characteristics of the international order act as obstacles for development.

Table 6 provides some empirical information about the role of foreign finance in developing countries. At the beginning of the twentieth century, a typical colony would normally export primary products. It would export more than it imported. The surplus on the trade balance would be compensated by an outflow of profits, interest payments, salaries of colonial officials, gold and reserves to banks in the colonial mother country. This drain limited developing country growth potential, as suggested by dependency theories.

Compared to the pre-war period, one of the salient characteristics of the international economic order since 1950 is that financial flows were reversed. In most countries and most periods, a net influx of financial capital compensated for deficits in the trade balances and the current account balances. During much of the post-war period, developing economies were able to import more consumer goods, capital goods and intermediate goods than they could have financed from their export revenues. The capital flows consisted of commercial loans, direct investment, portfolio investment and development aid. Net capital inflows served to finance imports. A part of the net inflow was used to service dividend and interest payments on earlier loans and investments.

Together with imports and exports of goods and services and transfer payments, dividends and interest payments figure on the current account of the balance of payments. Deficits or surpluses on the current account are balanced by capital flows on the capital account or changes in the gold and foreign currency reserves of a country.

In principle, it is more advantageous for a developing country to use net capital inflows to finance imports of goods, especially capital goods, than for the payment of dividends and interest. But dividend and interest payments should not be exclusively interpreted as a detrimental drain of resources. If investments and loans make a positive contribution to the

productive potential of a country, then factor payments represent payments for the productive services of foreign capital. Less favourable is the case in which interest is paid on loans that have been used for purely consumptive purposes, while new inflows of capital are required to service the interest payments. Then a country can get caught up in an increasing spiral of indebtedness, without any improvement of its productive potential.

Table 6 offers a rough picture of the importance of external finance in developing countries. External finance is defined here as the net balance of exports and imports of goods and non-factor services, with the sign reversed.[25] This concept shows to what extent inflows of capital allowed developing countries to import more goods and services than they were exporting.[26]

Between 1950 and 1981 there was an unmistakable though modest net inflow of capital in developing economies, averaging between 1.1 and 2.6 per cent of GDP. Between 1950 and 1973, 26 of our 31 countries had a net inflow. This inflow is inconsistent with underdevelopment theories, which assume that there is a permanent outflow of capital from poor to rich countries. The exceptions were typically primary exporters such as Zambia, Venezuela and Cote d'Ivoire with a surplus on their balance of payments owing to exports of products such as copper, oil and groundnuts. Between 1974 and 1981 21 of the 31 countries had a net inflow of capital. Many of the countries with a net outflow were oil exporters such as Indonesia, Iran, Nigeria and Venezuela.

The debt crisis of 1982 caused the inflow of capital, in particular the inflow of private capital, to stagnate in Latin America. An increasing number of countries were faced with net outflows of capital, creating the paradoxical situation that developing countries were financing the advanced economies. The net outflow of capital was most marked in Latin American countries, between 1982 and 1990 and between 1998 and 2009.

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[25] This concept is referred to in the literature as resource balance. Factor services are excluded from the resource balance. These factor services refer to the services of the production factors labour and capital. They include wages for workers working outside their own country, dividends, profits and interest payments.

[26] An alternative concept is external finance as the net balance of the current account of the balance of payments with the sign reversed. This concept includes among others payments for factor services. In Table 3.6 the data for 1950-66 from Maddison (1989) refer to this concept of external finance. After 1966 the data in the table refer to the resource balance concept.

Table 6: External finance as percentage of GDP, 1950-2000 (at current market prices)

	1950-73	1974-81	1982-90	1991-97	1998-2009
Bangladesh	2.5	8.9	8.1	5.8	6.4
China	0.2 a	0.1	0.3	-2.0	-4.5
India	1.8	1.1	1.7	0.7	2.5
Indonesia	3.1 b	-6.4	-1.4	-0.9	-4.5
Iran	3.1 f	-5.6	4.9	-2.1	-4.5
Malaysia	-4.0 d	-3.5	-3.4	0.8	-18.3
Pakistan	4.4	10.1	9.9	3.7	3.8
Philippines	2.1	4.4	1.5	7.1	2.2
South Korea	8.4	5.8	-1.9	1.3	-2.2
Sri Lanka	1.0	8.6	11.4	9.6	8.9
Taiwan	3.1 c	-0.6	-9.9	-2.2	-5.5
Thailand	1.8	4.8	2.7	4.5	-5.3
Turkey	1.8 d	5.3	2.7	3.9	1.8
Argentina	0.6	-0.9	-3.5	1.3	-4.7
Brazil	1.3	2.3	-3.1	0.1	-1.0
Chile	1.3	2.4	-2.6	-0.6	-6.4
Colombia	2.0	-1.2	-1.9	2.4	3.0
Mexico	1.9	1.6	-4.2	1.7	1.8
Peru	2.6	3.1	-0.3	3.8	-1.9
Venezuela	-4.3	-3.1	-4.8	-5.5	-10.8
Congo, Democratic Rep.	2.2 d	2.7	0.5	-1.2	6.9
Côte d'Ivoire	-3.6	-0.2	-5.5	-6.6	-9.1
Egypt	4.0	15.2	12.9	5.3	4.6
Ethiopia		0.5	5.1	6.4	16.4
Ghana	0.9	0.8	4.3	12.1	21.9
Kenya	0.0 d	4.2	4.9	2.3	8.9
Morocco	1.4 d	12.5	6.3	5.2	6.3
Nigeria	4.5 d	-1.3	-2.2	-5.1	-9.9
South Africa	-2.4 d	-2.9	-5.6	-2.7	-0.5
Tanzania	3.3 d	9.9	14.9	21.5 e	5.5
Zambia	-12.9 d	2.3	0.5	5.3	5.3
Average Asian countries	2.2	2.5	2.0	2.3	-1.1
Average Latin American countries	0.8	0.6	-2.9	0.4	-2.8
Average African countries	-0.2	4.6	4.6	5.6	6.5
Average developing countries	1.1	2.6	1.4	2.4	0.8

Notes:
a 1953-73; b 1966-73; c 1951-73; d 1960-1973; e 1990-96; f 65-73 g 1998-2009 averages excl. S. Korea and Taiwan

Source: 'External finance' is the resource balance (net balance of all exports and imports of goods and non-factor services) divided by GDP at market prices, with sign reversed. 1950-1973: A. Maddison (1989), table 6.7 except for countries denoted by footnote d. Sri Lanka, Venezuela, Cote d'Ivoire 1950-59 from Maddison, 1970, 1960-73 from World Bank, *World Development Indicators online*, downloaded October 2010. All data 1973-2009 from World Bank-WDI (2010), except Tanzania 1960-1986 from Tanzania national accounts. Various issues, Taiwan, 1974-81 from Maddison (1970), Taiwan 1982-2009: DGBAS, National Statistics of Taiwan, the Republic of China, National Accounts, website:
http://eng.stat.gov.tw/ct.asp?xItem=25763&CtNode=5347&mp=5

Outflows from countries such as Taiwan and South Korea and can be interpreted in a more positive sense. They represent repayment of past debts or new outward foreign direct investment by rapidly growing economies which have attained surpluses on the balance of

payments through success in manufactured exports. The same holds for China, which has had a net outflow of capital since 1991. This capital flows not only to the advanced economies such as the USA, but also to developing countries in Africa and elsewhere.

The figures for the period 1991-7 illustrate a resumption of capital flows into most developing countries, with an average inflow of 2.4 per cent for all developing countries. The impact of the Asian financial crisis of 1997 is clearly visible in the figures for the period 1998-2009. For instance there are massive outflows of capital in the hard-hit Asian economies of Indonesia, Malaysia, South Korea and Thailand. On the other hand the outflow from China is an indication of the increasing strength of the Chinese economy.

8.6 Are developing countries dominated by foreign interests?

Table 7 presents data on the total value of foreign capital in developing countries from 1870 to 2008. This table provides an indication of globalisation trends and of the importance of foreign presence in developing countries. Between 1870 and 1914 investment in developing countries increased rapidly, as foreign direct investment developed harbours, roads and infrastructure to exploit the possibilities of primary exports. The real value of foreign capital in this period increased almost six fold. After 1914 there was a decline in the stock of foreign capital in developing countries as the world economy slowed down. In real terms the value of capital in 1950 was only 27 per cent of that in 1914. As a proportion of GDP it was down to half its 1870 level. After 1950, we see an explosive increase in the value of foreign capital from 63.2 billion dollar in 1950 to 4851 billion dollar in 2008.

Table 7*: Gross value of foreign capital in developing countries, 1870-2008 ($ bn)*

	1870	1914	1950	1973	1998	2000	2008
Total in current prices	4.1	19.2	11.9	172	3242	3715	7407
Total in 1990 prices	40.1	235.4	63.2	495.2	2743	3032	4851
Stock as percentage of Developing Country GDP	8.6	32.4	4.4	10.9	51.9	53.8	43.0

Notes: The gross value of foreign capital is the sum of the stock of inward foreign direct investment, long and short term loans and portfolio equity. The share of foreign capital to GDP is calculated at constant 1990 prices till 1973, and as a percentage of current GDP thereafter. Foreign capital in current prices deflated to 1990 prices with the US GDP: deflator

Sources: 1870-1973 from Maddison (2001), table 3-3. FDI stock and GDP shares 1998-2008 from UNCTAD, *World Investment Report, 2009*. External debt stocks and GDP deflator from World Bank, World Development Indicators Online, November, 2010.

How to interpret these figures? It is clear that in the long run the stock of foreign capital has increased, indicating net inflows of capital. This contradicts the predictions of dependency theory. However, a negative interpretation of these trends is that the value of foreign capital is a measure of the degree of foreign domination of the economies of developing countries. This

domination is increasing. There is an element of truth in this interpretation, especially when domestic economic and political structures are weak and governments are unable to bargain with powerful multinational firms. However, by the same criterion, many European advanced economies are also dominated by foreign capital.

From our macro perspective the figures can be given a more positive interpretation. A net inflow of foreign capital provides a positive impulse to the economic development of a country. An inflow of foreign capital can contribute to rapid growth and economic dynamism. Periods when the inflow of capital stagnates, such as the period 1914-1950, are usually periods of weak growth performance. Rapid growth in the booming economies in South-East Asia goes hand in hand with massive foreign investment, which transfers much needed capital, technology and know-how to the receiving economy.[27] Of course the impact of foreign capital and foreign firms in developing countries needs to be studied in more detail. A positive evaluation of foreign investment does not mean that developing countries should not set conditions for the operation of multinational firms and foreign investors in the domestic economies. The Asian crisis has made us more conscious of the potential disadvantages of extreme openness to foreign capital.

8.7 Are Developing Countries Capable of Structural Change?

Nobel Prize-laureate Simon Kuznets has emphasised that modern economic development implies changes in the structure of the economy. In the process of *structural change*, the importance of the agrarian sector declines, while that of the industrial sector increases. The industrial sector offers more scope for accumulation of capital per worker and technological change. Productivity per worker in industry is much higher than in traditional agriculture. Therefore structural change is one of the major forces contributing to productivity growth and economic dynamics in development. This is referred to as the *structural change bonus.* At a later stage of development the service sector overtakes the industrial sector and becomes the most important sector in terms of its share in employment and production.

There is an ongoing debate about productivity growth in the service sector. Baumol (1986) suggests that in many service sectors opportunities for productivity growth are constrained, owing to the personal and inherently labour intensive nature of many services (haircuts, restaurants, tourism, medical services, counselling). Therefore, productivity growth will slow

[27] South Korea is an interesting exception. Until recently domestic investment predominated.

down as the service sector increases in size (a *structural change burden*). However, the service sector is an extremely heterogeneous sector. Some subsectors such as financial services, software or transport do exhibit substantial technological change and productivity growth. In the recent literature, the dynamic nature of the service sector receives more emphasis. It is also seen as a sector, which enables productivity growth in other sectors such as manufacturing (Marks, 2009).

Table 8 presents information on changes in the structure of employment between 1950 and 2000, Table 9 on changes in the structure of production between 1950 and 2000. Both tables show that there have been major structural changes in developing countries. The share of agriculture in both employment and value added declined between 1950 and 2000. The shares of industry and services increased. As labour productivity in industry is higher than in agriculture, the share of industry in production is always higher than its share in employment. High labour productivity is one of the reasons why the modern industrial sector in developing countries is unable to provide a rapidly growing population with sufficient employment. This is one of the crucial differences between industrialisation processes in the nineteenth-century and present-day processes of industrialisation.

Table 8 illustrates the changes in the structure of employment. The share of agriculture decreased from 64 per cent to 43 per cent between 1950 and 2000.[28] Nevertheless, with the exception of Latin America, agriculture was still by far the largest sector in terms of employment in the year 2000. The average share of agriculture was more than ten times as high as that in the advanced economies, indicating that there is still enormous scope for further structural change in developing economies. In countries such as Bangladesh, India, Ghana, Côte d'Ivoire, Kenya, Tanzania and the Democratic Republic of Congo agrarian employment even accounted for more than 60 per cent of total employment. On average, the share of agriculture in total employment in Latin American countries (22 per cent) was much lower than in the densely populated Asian countries (40 per cent) and the African countries (60 per cent). Between 2000 and 2007 every country for which we have data showed marked decreases in the shares of agriculture. In most countries, the share of services increased substantially. These changes are an indication of the rapidity of structural change in recent years.

[28] The averages for 2007 are biased downward because data for countries with high shares of agriculture are missing.

For the structure of production, Table 8 shows that the share of agriculture in total GDP in developing countries declined from 38 per cent around 1950 to 17 per cent in 2005. Compared to the advanced economies, however, the share of agriculture in developing economies is still seven times as high. The share of manufacturing increased from 11 per cent in 1950 to a peak of 19 per cent in 1980, followed by a modest decline to 17 per cent in 2005. In Asia the share of manufacturing continued to increase, reaching 23 per cent in 2005. The highest manufacturing shares were registered in China. In the advanced economies the share of manufacturing steadily declined from 31 per cent in 1950 to 16 per cent in 2005. In 2005, the average share of manufacturing in developing countries was somewhat higher than in the advanced economies.

It is striking how important the service sector has become in developing countries. Even in the 1950s, services were the largest sector in terms of value added. Developing countries have not followed the classical sequence of shifts from agriculture to industry, followed by later shifts from industry to services. Rather the service sector developed parallel to the industrial sector, as the shares of agriculture declined. By 2005, the service sector accounted for more than 50 per cent of total value added and around 44 per cent of total employment.

In part the rapid growth of the service sector can be explained by the expansion of the government sector in developing countries in the post-war years. As the government sector was characterised by low productivity, the large share of services acted as a brake on growth. But in recent years, the expansion of services been driven by market services. At present there is a lively debate about whether the service sector might supplant the manufacturing sector as an engine of growth in developing countries (Szirmai, 2009; Szirmai and Verspagen, 2011).

Table 8: Structure of employment by sector 1950-2000 (%)

	1950[a]			1980			2000[b]			2007[c]		
	Ag	Ind	Serv	Ag	Ind	Serv	Ag	Ind	Serv	Ag	Ind	Serv
Bangladesh	77	7	16	75	6	19	63	10	25	48	15	37
China	77	7	16	74	14	12	48	22	13	44	18	16
India	72	10	18	70	13	17	67	13	20	62	16	22
Indonesia	75	8	17	57	13	30	45	16	20	41	19	40
Iran				0	0	0				23	32	45
Malaysia	63	12	25	50	16	34	18	32	50	15	29	57
Pakistan	77	7	16	54	16	30	47	17	36	44	21	35
Philippines	71	9	20	51	16	33	39	16	45	36	15	49
South Korea	73	3	24	36	27	37	11	28	61	7	26	67
Sri Lanka	56	14	30	54	14	32	42	23	33	31	27	39
Taiwan	57	16	27	22	38	40	10	29	62	6	36	55
Thailand	82	3	15	71	10	19	49	18	33	42	21	37
Turkey	77	8	15	58	17	25	46	21	34	26	26	48
Argentina	25	31	44	13	34	53	12	32	56			
Brazil	60	18	22	31	27	42	23	20	57	19	21	59
Chile	36	30	34	17	25	58	14	26	60	12	23	64
Colombia	57	18	25	34	24	42	34	24	42	18	20	62
Mexico	61	17	22	36	29	35	21	25	53	14	26	60
Peru	58	20	22	40	18	42	40	18	42	9	42	49
Venezuela				16	28	56	11	24	65	9	23	68
Congo, Democratic Rep.							68	13	19			
Côte d'Ivoire				65	8	27	65	8	27			
Egypt	64	12	24	46	20	34	30	22	48	31	22	47
Ethiopia							89	2	8	80	7	13
Ghana	62	15	23	56	18	26	62	10	28	54	0	0
Kenya				81	7	12	81	7	12			
Morocco							45			43	20	36
Nigeria				68	12	20	45	7	48			
South Africa							14			9	26	65
Tanzania				86	5	10	84	4	12	75	5	20
Zambia				73	10	17	75	8	17			
Average Asia	71	9	20	52	15	25	40	20	36	37	21	39
Average Latin America	50	22	28	27	26	47	22	24	54	14	26	60
Average Africa							60	9	24	49	13	30
Average developing countries [d]	64	13	23	49	17	30	43	18	37	34	21	44
Average 16 advanced economies	25	36	39	7	34	59	4	26	70	3.1	23.9	72.4

Notes:

a 1950 except Egypt, South Korea, 1951, China, 1952, Indonesia, Malaysia, and Ghana, 1960.

b Data for years between 1995-2000 except Argentina, Colombia, Peru, Ghana, Ivory Coast, Kenya, Morocco, Congo, and Zambia, 1990, Tanzania, 1991 and Nigeria, 1986.

c. 2007 averages exc. S. Korea and Taiwan

d. Regional percentages are unweighted averages of country percentages and do not add up to 100.

'Agriculture' includes agriculture, forestry and fisheries; 'Industry' includes mining, manufacturing, construction, gas, water and electricity. 'Services'include wholesale and retail trading, trade, transport and communication, financial and business services, and community and personal services.

Sources: 1950: Maddison (1989), table C-11 except for Ghana and Egypt from: Mitchell (1982) and Turkey: from Maddison (1986). 1980: A. Maddison (1989) except for Turkey, Venezuela, Cote d'Ivoire, Egypt, Ghana, Kenya, Nigeria, Tanzania and Zambia from World Bank-WDR (1988). 1990-2000 from ILO, (2002), except Argentina, Colombia, Peru, Cote d'Ivoire, Kenya and Nigeria from World Bank-WDR (1995). Morocco and South Africa from World Bank, World Development Indicators, 1999, Congo from ILO, 2002, Ethiopia from World Bank, World

Development Indicators online, 2010; 2007 from World Development Indicators Online, downloaded November 2010, except India and Taiwan from GGDC 10 sector database, http://www.ggdc.net/databases/10_sector.htm

Table 9: Structure of production, 1950-2005 (value added in agriculture, industry and services as percentage of GDP)

	1950 [a]				1980 [b]				2005[c]			
	Ag	Ind	Man	Serv	Ag	Ind	Man	Serv	Ag	Ind	Man	Serv
Bangladesh[d]	61	7	7	32	32	21	14	48	20	27	17	53
China	51	21	14	29	30	49	40	21	13	48	34	40
India	55	14	10	31	36	25	17	40	18	28	16	54
Iran	58	9	7	33	24	42	13	34	13	47	28	40
Indonesia	32	31	9	37	16	31	8	53	10	45	12	45
Malaysia	40	19	11	41	23	41	22	36	8	50	30	42
Pakistan	61	7	7	32	30	25	16	46	21	27	19	51
Philippines	42	17	8	41	25	39	26	36	14	32	23	54
South Korea	47	13	9	41	16	37	24	47	3	40	28	56
Sri Lanka	46	12	4	42	28	30	18	43	17	27	15	56
Taiwan	34	22	15	45	8	46	36	46	2	26	22	72
Thailand	48	15	12	37	23	29	22	48	10	44	35	46
Turkey	49	16	11	35	27	20	17	54	11	27	22	63
Argentina	16	33	23	52	6	41	29	52	9	36	23	55
Brazil	24	24	19	52	11	44	33	45	6	30	18	64
Chile	15	26	17	59	7	37	22	55	4	42	16	53
Colombia	35	17	13	48	20	32	24	48	12	34	16	53
Mexico	20	21	17	59	9	34	22	57	4	26	18	70
Peru	37	28	15	35	12	43	20	45	7	35	16	58
Venezuela	8	48	11	45	6	46	16	49	4	55	18	40
Congo, Democratic Rep.	31	34	9	35	27	35	15	38	46	27	7	28
Côte d'Ivoire	48	13		39	26	20	13	54	23	26	19	51
Egypt	44	12	8	44	18	37	12	45	15	36	17	49
Ethiopia	68	9	6	23	61	11	5	29	46	13	5	41
Ghana	41	10		49	58	12	8	30	37	25	9	37
Morocco	44	17	11	39	33	21	13	47	27	19	12	54
Kenya	37	30	15	33	18	31	17	50	13	29	17	58
Nigeria	68	10	2	22	21	46	8	34	23	57	4	20
South Africa	19	35	16	47	6	48	22	45	3	31	19	67
Tanzania	68	10	4	22			12		46	17	7	37
Zambia	9	71	3	19	15	42	19	43	23	30	11	47
Average Asia [e]	48	16	10	36	24	33	21	42	14	36	23	49
Average Latin America	22	28	16	50	10	40	24	50	7	37	18	56
Average Africa	47	18	9	35	28	30	13	42	27	28	11	44
Average developing Countries [e]	42	19	11	39	22	34	19	44	17	33	17	49
Average 16 advanced economies	16	41	31	43	4	36	24	59	2	28	16	70

Notes:

a. Earliest year for which data are available: 1950, except for Morocco, Taiwan and Thailand, 1951; China and Tanzania, 1952; South Korea, 1953; Malaysia and Zambia, 1955 ; Iran, 1959; Ghana, Ivory Coast, 1960, Ethiopia 1961. Australia, 1953, Belgium, 1953, West Germany, Italy and Norway, 1951, Japan, 1952;

b Tanzania 1978 instead of 1980, Ethiopia, 1981

c Canada 2003 instead of 2005, Venezuela 2004

d. Bangladesh 1950, same data as Pakistan

e 2005 average excl. S. Korea and Taiwan

Sources:

General: UN, *Yearbook of National Accounts Statistics*, 1957, 1962 and 1967; Groningen Growth and Development Centre, *10 sector database,* http://www.ggdc.net/index-dseries.html: OECD, National Accounts 1950-68, 1971.

World Bank, *World Development Indicators Online*, accessed April 2008;
BEA, National Income and Product Accounts, http://www.bea.gov/national/nipaweb/TableView.asp#Mid
Specific country sources : IBGE - Diretoria de Pesquisas - Departamento de Contas Nacionais (Brazil, 1950-59); NBS, *China Statistical Yearbook 2000*, table 3-1 (China) ; Van der Eng, 2008 (Indonesia); Prins and Szirmai, 1998 (Tanzania);UNIDO yearbook, 2000 (Peru). Yamfwa et al., 2002, (Zambia); UN Statistical Division, National Accounts Online, downloaded November 2011: http://unstats.un.org/unsd/snaama/dnlList.asp. (Ethiopia). For detailed source notes see: www.dynamicsof development.com.

8.8 How unequal is the income distribution?

There is a widespread view that inequality tends to increase in the course of economic development. As discussed in section 5, Kuznets has argued that income inequality will tend to increase in the course of industrialisation but then tends to decrease as societies become more prosperous and more modern. This is referred to as the *inverted u-curve of inequality* hypothesis (see Szirmai, 1986; Ch. 2). Most economic theories of backwardness emphasise the positive economic functions of inequality for savings, in line with Keynesian economic theories. As the poor consume most of their incomes, while rich people can save part of their income, increasing inequality will increase aggregate savings (see Thirlwall, 1997; Ch. 12). Higher saving rates contribute to growth of per capita incomes and, in the longer run, to a reduction of poverty. As income per capita increases, the bargaining power of the poorer sections of the population will increase and income inequality will start to decline. Cross-country research on the relationship between income per capita levels and the degree of inequality tends to support this hypothesis (Bacha, 1979; Deininger and Squire, 1996), but time series analysis is less conclusive (Deininger and Squire, 1998; Feireira, 1999; Thorbecke and Charumilind, 2002,). In the advanced economies, income inequalities have been increasing since 1980 (Atkinson et al. 2010), after a long period of declining inequality from the 1930s onwards .

Radical and underdevelopment theorists agree that income inequality is increasing, but evaluate this much more negatively. They do not believe that inequality will necessarily lead to higher savings and more growth. They even argue that a combination of increasing average incomes and increasing inequality can lead to impoverishment of the bottom 40 percent of the population.

The answers to these questions are ultimately empirical rather than ideological and may differ from country to country and region to region. On average there is strong evidence that rapid

growth of per capita incomes tends to reduce poverty, as was the case in China and Indonesia. However, distributive policies can be very important. Similar levels of income per capita can coexist with very different degrees of inequality, poverty and immiserisation. This is an important example of how intermediate factors interact with the proximate sources of growth to produce different socio-economic outcomes.

Table 10 presents some rough empirical information on income inequality, primarily based on primary household survey data. The table presents information on the Gini index (an index running from zero for complete equality to one for complete inequality)[29], the share in income or consumption of the bottom 40 per cent of the population and the share of the top 10 per cent of the population for the period 1980-2007.

The table provides ample evidence of the high degree of inequality in present-day developing countries. On average, the bottom 40 per cent of the population had 19 per cent of total income in 1980, while the top 10 per cent had 33 per cent. The degree of inequality in developing countries is much higher than in advanced economies – as measured by the Gini index as well as by the shares of the top 10 per cent and bottom 40 percent. This is not inconsistent with the Kuznets hypothesis, though one cannot confirm or reject the hypothesis on the basis of cross-country comparisons. Inequality is by far the highest in Latin America, whether measured by the Gini index or by income shares. The top 10 per cent of income recipients enjoy well over forty per cent of total income. For our thirty-one sample countries, the correlation coefficient between income per capita in 2000 and percentage of population earning less than one dollar a day is -0.50.[30] This provides an indication of the inverse relationship between level of income per capita and poverty on the one hand. It also confirms that the importance of the income distribution for poverty, as much of the variation in poverty remains unexplained by average levels of income per capita.

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[29] The Gini index is defined as half of the sum of all possible differences between the incomes of units, divided by the mean income (μ) times the square of the number of units (n^2):

$$G = (\sum_{i=1}^{n}\sum_{j=1}^{n}\left|y_i - y_j\right|)/(2n^2\mu)$$

[30] Income per capita from table 3.1, percentage of population earning less than 1$ a day from World Bank, *World Development Indicators, 2001*, table 2.6.

It should be noted that distribution data are notoriously difficult to compare across countries and even more so over time. The income concepts are not standardised: some surveys focus on household consumption, others on income. Some surveys use household equivalent incomes (standardised for household composition), others do not. Some surveys focus on the distribution over persons, rather than households. The estimates of inequality vary from year to year and from survey to survey. One therefore needs to be very careful in drawing premature conclusions.[31] This being said, Table 10 shows no conclusive evidence of increasing inequality in developing countries between 1980 and 2007. This runs counter to prevailing view in development economics that inequality is increasing in the rapidly growing Asian economies. The average Gini index for all developing countries increased marginally from 0.421 in 1980 to 0.433 in 2007. The only region where the Gini is going up is Africa, but even here the average share of the bottom forty per cent is improving. What we do see is a pronounced increase in inequality in the advanced economies between 1980 and 1995. The average Gini coefficient increases from 0.215 in 1980 to 0.298 in 1995. This runs counter to the Kuznets hypothesis that in the long-run income inequality in the advanced economies will decrease.

[31] The standardised database of Solt (2009) is an attempt to tackle these problems. These new data have not yet been incorporated in the present paper.

Table 10: Distribution of income or consumption, 1980-2007

	Gini Index			bottom 40%			top 10%		
	1980	1995	**2007**	**1980**	1995	**2007**	**1980**	**1995**	**2007**
Bangladesh	25.9	33.6	31.0	24.0	20.7	30.5	21.9	28.6	26.6
China		40.3	41.5		16.1	27.7		30.4	31.4
India	32.1	37.8	36.8	21.0	19.7	28.5	26.4	33.5	31.1
Iran	40.4	31.7	37.6	19.0	21.5	28.6	28.3	26.7	30.1
Indonesia	47.4	44.1	38.3	25.4	26.7	28.6	36.9	33.8	29.6
Malaysia	48.6	49.2	37.9	25.7	12.5	29.1	36.4	38.4	28.5
Pakistan	33.4	31.2	31.2	20.6	22.4	30.4	27.8	27.6	26.5
Philippines	41.0	46.2	44.0	16.6	14.2	26.8	32.7	36.6	33.9
South Korea	36.7	31.6	31.6	18.2	20.4	31.0	28.1	24.3	22.5
Sri Lanka	32.5	34.4	41.1	20.7	19.8	27.3	26.4	28.0	33.3
Taiwan	27.7	31.7	33.9	20.7	20.2	19.1	24.0	24.4	25.5
Thailand	45.2	41.4	42.5	15.0	16.2	27.0	35.5	32.4	33.7
Turkey	43.6	41.5	41.2	15.7	16.0	27.4	35.3	32.3	31.3
Argentina	44.5	48.6	48.8	26.5	25.4	25.3	34.0	36.6	36.1
Brazil	57.5	59.2	55.0	21.7	21.3	22.6	47.3	46.7	43.0
Chile	56.4	57.5	52.0	10.0	9.7	23.4	45.7	46.9	41.7
Colombia	59.1	57.1	58.5	20.8	9.6	21.4	41.2	46.1	45.9
Mexico	46.3	51.9	51.6	26.0	11.6	23.1	44.0	41.1	41.3
Peru	45.7	46.2	50.5	14.0	13.5	24.4	35.5	35.4	38.4
Venezuela	55.6	46.8	43.4	9.6	25.8	27.0	43.5	35.5	32.7
Congo, Democratic Rep.			44.4			26.4			34.7
Côte d'Ivoire	41.2	36.7	48.4	15.8	18.3	24.3	31.4	28.8	39.6
Egypt	37.4	28.9	32.1	17.6	23.0	29.9	28.8	25.0	27.6
	32.4	40.0	29.8	17.6	27.0	30.6	28.8	33.8	25.6
Ghana	35.4	39.6	42.8	18.7	16.3	27.1	27.3	29.5	32.5
Kenya		44.5	47.7		14.7	25.0		34.9	37.8
Nigeria	39.2	39.5	42.9	17.7	17.1	27.0	31.8	30.9	32.4
Morocco	38.7	50.6	40.9	16.4	12.6	27.1	28.2	40.8	33.2
South Africa		56.6	57.8		22.0	21.9		45.1	44.9
Tanzania		38.2	34.6		17.8	29.6		30.1	27.0
Zambia	51.3	52.6	50.7	11.2	10.9	24.3	38.5	41.0	38.9
Average Asian countries	37.9	38.1	38.5	20.2	19.0	28.4	30.0	30.5	30.5
Average Latin American countries	53.4	53.1	51.8	17.0	15.2	23.6	42.9	41.9	40.5
Average African countries	39.4	42.7	42.9	16.4	18.0	26.7	30.7	34.0	34.0
Average developing countries	42.1	43.0	43.3	18.7	18.1	26.6	33.3	34.2	34.1
Average 16 advanced economies	21.5	29.8	29.5	22.6	21.6	26.6	22.6	23.5	24.2

Note:
The data refer either to inequality of personal income or consumption expenditures. 1980: 1980 or earliest year in period 1980-90; 1985: 1985 or year closest to 1985 in period 1990-2000; 2007: 2007 or latest year in period 2000-2008. The Gini index has been multiplied by 100. The averages for Asia and developing countries 2007 exclude S. Korea and Taiwan.

Sources:
World Bank Global Poverty Monitoring website (http://www.worldbank.org/research/povmonitor/index.htm); WIDER, World Income Inequality Database, downloaded November 2010, http://www.wider.unu.edu/research/Database/en_GB/wiid/ ;World Bank, *World Development Indicators*, 2001,table 2.8; World Bank, World Development Indicators Online, Downloaded November 2010, http://databank.worldbank.org/ddp/home.do?Step=3&id=4;DGBAS, *National Statistics of Taiwan, the Republic of China*, http://www129.tpg.gov.tw/mbas/doc4/89/book/77.xls) (Taiwan); For detailed source notes see www.dynamicsofdevelopment.com

9 Concluding remarks

The focus of this paper is on the explanation of long-run trends in socio-economic development. The paper presents a comprehensive framework of the ultimate, intermediate and proximate sources of growth and development. A selection of statistics on proximate sources of growth is discussed in section 8.

The framework of sources of development is used as a means to compare and synthesise contributions to the study of development from a variety of disciplines. It also helps us to put the different explanatory factors – institutions, class conflict, geography, culture, demography, advances in knowledge - emphasised by different schools of thought into perspective.

Classical theories in economic and the social science focus on the grand question of the mysterious puzzle of the breakthrough of the West. They try to identify the ultimate drivers of change, such as market institutions in classical economics or class conflict and technological change in the Marxist tradition. They overwhelmingly have an internalist perspective focusing on changes within societies. The exception is formed by theories of imperialism which analyse class contradictions on a global scale and see external exploitation as an explanation of stagnation in the developing world.

In post-war modernisation theories, one could argue that institutional obstacles to modernisation are key elements of these theories. Both neo-classical theory and growth accounting focus on proximate causality. Modelling or measuring the proximate causes of growth is important in both approaches. The approach is internalist, focusing on the speed of accumulation of factor inputs in the domestic economy and the efficiency with which they are used. Institutions play little or no role. Of course there are historically oriented authors such as Abramovitz and Maddison, who go far beyond the proximate level to analyse the ultimate factors driving growth as well, as the intermediate role of policy in growth and development.

In other strands of research within the internalist tradition, institutions do play a central role. This is of course obvious in the work of Douglas North, which takes institutions as its core theme. The same is true of Gunnar Myrdal, who saw institutionalized inequality as the main factor blocking development in Asia and elsewhere. Finally, Rodrik develops his own framework of proximate and ultimate causality. His work on short run fluctuations downplays the role of fundamental institutional reform and focuses on identifying the binding constraints to growth at the intermediate level. He tries to formulate policies that tackle these binding

constraints to unleash growth. In the long run, however, he sees institutional characteristics as the prime explanation of divergence in economic performance.

In dependency theories, the importance of institutions is combined with an externalist perspective on their creation. In this view, regressive institutions have been created, imposed and maintained by exploitative external forces. These institutions subsequently act as obstacles to development. Compared to dependency theory, structuralist theories pay less attention to institutions. They have strong policy implications with regard to import substitution and public interventions in the economy, which in our framework operate at the intermediate level.

Finally, evolutionary economics and Gerschenkronian catch up theory are seen as successfully combining insights from internal and external perspectives. International technology flows and distance to the technology frontier are important external characteristics, but the internal absorptive capacities of societies determine whether they can profit from the advantages of technological backwardness. Both strands of theorising are open to institutional analysis, without placing institutions as such at the centre of the theory. Gerschenkron focuses primarily on ultimate causality and the explanation of accelerated catch up. Evolutionary theory is more eclectic combining both micro-analysis of the behaviour of economic actors at the proximate level with analysis of long-run trends in the Schumpeterian tradition.

The discussion of empirical data on long-run economic development in section 8 of the paper serves to illustrate the important point that theoretical discussions on the sources of development should never be divorced from painstaking empirical research on the actual historical development trends. It makes no sense to discuss a theory of the declining terms of trade, if the terms of trade are not declining. It makes no sense to develop a general theory of divergence between rich and poor countries if selected developing countries are experiencing rapid catch up since 1973. The way forward is through a better integration of the theory and empirics of development.

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