

**International price shocks and development:
A general equilibrium approach with applications to Burkina
Faso.**

Part 1:

**Development and development Paradigms: a (Reasoned) review of
prevailing Visions.**

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Abstract

This paper attempts to sketch prevailing *development paradigms*, i.e. the definition of modalities to achieve development based on either a codified set of activities and/or based on a vision regarding the functioning and evolution of a socio-economic system. The aim of this exercise would be to contribute to the interpretation of recent past and ongoing development processes and policies and to support the exploration of alternative development paradigms to address emerging and future development issues. After defining the concepts of development and development paradigms, this paper identifies some key “ingredients” of recent and prevailing development “recipes”. Mutual links among these “ingredients” are explored through select contributions in the literature which focuses on development issues. On this basis, some cause-effect relationships are highlighted, which are at the basis of most development processes. The analysis of these cause-effect relationships allows for the identification of select development paradigms prevailing in different countries, during different periods and within different development contexts. In light of the emerging issues affecting the sustainability of development achievements in industrialized countries, the concluding remarks reassess the prevailing vision according to which selected countries are considered “*developed*”, as opposed to others considered “*developing*”.

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1 Introduction

In an ever changing context, where emerging issues raise questions to the development community on the way development processes have been and are being designed and supported, it is important to critically assess prevailing visions about development and adapt them, or even adopt alternative, more suitable approaches. As a contribution to this assessment, this paper attempts to sketch prevailing *development paradigms*, i.e. defined visions and related activities regarding the functioning and evolution of socio-economic systems. The aim of this paper is to provide some conceptual elements for further qualitative and quantitative analytical work, to feed the debate on development and related policy decision making processes.

In section 2, after defining the concepts of development and development paradigms, some key “ingredients” of recent past and prevailing development “recipes” are identified. In sections 3 to 7, the mutual links among them are explored through selected contributions in available literature which focuses on development issues. . On this basis, some cause-effect relationships are highlighted, which are at the basis of most development processes. . The analysis of these cause-effect relationships allows for the identification of selected development paradigms prevailing in different countries, during different periods and within different development contexts. Findings are summarized in Section 8, which also provides some insights on further work to be carried out on their basis. Section 9 provides concluding remarks and section 10 contains a list of references to the various strands of the literature on which the work is based.

2 Defining development, development paradigms and development ingredients

2.1 Development defined

In general terms, “development” means an “event constituting a new stage in a changing situation”¹ or the process of change *per se*. If not qualified, “development” is implicitly intended as something positive or desirable. When referring to a society or to a socio-economic system “development” usually means the improvement either of the general situation of the system, or of some of its constituting elements. Development may occur due to some deliberate action carried out by single agents or by some authority pre-ordered to achieve the improvement, to favourable circumstances or both. Development policies and private investment, in all their forms, are examples of such actions.

Given this broad definition, “development” is a multi-dimensional concept in nature, because any improvement of complex systems as indeed actual socio-economic systems are, can occur in different parts, in different ways, at different speeds and driven by different forces. In addition, the development of one part of the system may be detrimental to the development other parts, giving rise to conflicting objectives (trade-offs) and conflicts. Consequently, measuring development, i.e. determining whether and quantifying the extent to which a system is developing, is an intrinsically multidimensional exercise.

¹ Oxford English Dictionary. <http://oxforddictionaries.com>

2.2 What should be developed? Dimensions of development

Even if the development of a socio-economic system can be viewed as a holistic exercise, i.e. as an all-encompassing endeavour, for practical purposes, in particular for policy making and development management, the focus of the agents aiming at development is almost always on selected parts of the system or on specific features. To this end, “development” is qualified and specified in different ways. A summary (non-exhaustive) list of possible qualifications comprises:

- **Economic development:** i.e., improvement of the way endowments and goods and services are used within (or by) the system to generate new goods and services in order to provide additional consumption and/or investment possibilities to the members of the system.
- **Human development:** people-centred development, where the focus is put on the improvement of the various dimensions affecting the well-being of individuals and their relationships with the society (health, education, entitlements, capabilities, empowerment etc.)
- **Sustainable development:** development which considers the long term perspectives of the socio-economic system, to ensure that improvements occurring in the short run will not be detrimental to the future status or the development potential of the system, i.e. development will be “sustainable” on environmental, social, financial etc. grounds.
- **Territorial development:** development of a specific region (space) achievable by exploiting the specific socio-economic, environmental and institutional potential of the area, and its relationships with external subjects.

Economic development has been traditionally seen as the first form of development. It has often been strictly associated to the concept of economic growth, in turn defined as an increase in the *per capita* income of the economic system. Indeed, growth defined in this way can be seen more as the result of an economic development process, i.e. the transformation of the structure of an economic system, rather than the development process *per se*. Countless economists provided insights and proposed models to explain how economic systems develop (or should develop) to generate growth. Just to mention some milestones, it is worth to mention the contributions of Shumpeter (1911)², who suggested that economic systems evolve through subsequent disequilibria due to agents which introduce innovations, more than “developing” according to a pre-determined path. Ramsey (1928)³ set a model to maximize the consumption of future generations with endogenous savings, disutility of work and individuals with an infinite time horizon. Allais (1947)⁴ (and, later, P. Samuelson) set the first “*overlapping generations model*”, where individuals have a finite time horizon but overlap with other individuals living longer. Solow (1956)⁵ with his “*Long Run Growth Model*” highlights that, increasing the capital per unit of labour (a shift in the capital/labour ratio) increases labour productivity and generates growth. But factors exhibit diminishing marginal productivity. The diminishing marginal productivity should push the economy at a point where additional capital per worker would have no impact on production. The output would increase only if also labour increases. In this situation, there would be no interest to invest

² Shumpeter J. (1911) *The Theory of Economic Development: An inquiry into profits, capital, credit, interest and the business cycle* (original title in German) 1911.

³ Ramsey F, P.(1928). "A mathematical theory of saving". *Economic Journal*, vol. 38, no. 152, December 1928, pages 543–559.

⁴ Allais M.(1947) *Économie et Intérêt. Présentation nouvelle des problèmes fondamentaux relatifs au rôle économique du taux de intérêt et de leur solutions*. Paris, Imprimerie nationale. Vol 2(1947),

⁵ Solow R.M (1956). *A contribution to the theory of economic growth*. The quarterly Journal of Economics Vol 70, No. 1 (Feb.1956). 65-94

more because this would bring no returns. Therefore, output, capital and labour would all increase at the same rate (steady state)⁶. Less-industrialized countries, which enjoy a lower capital/labour ratio, should benefit more of capital increases (investment) than industrialized ones, where the capital/labour ratio is higher. The larger returns on investment in less industrialized countries, (assuming constant returns to scale), should generate convergence between less-industrialized and industrialized countries. However, exogenous technology improvements shift the output pushing forward the steady state. Romer (1986), with his “*endogenous growth model*” questioned the idea of technology shifts as exogenous to the economic system, highlighting how investment and human activities in general have positive spillover effects on knowledge, implying that technology, which is an application of knowledge to production processes, is endogenous, i.e. generated within the economic system. Similarly, impacts of investment in research (innovation) and in human capital on technological changes and growth, have been considered. For instance, Aghion and Howitt (1990)⁷ address the issue of research and obsolescence and highlight that the expectations of an accelerated pace of research in the future can depress current research fearing rapid obsolescence of possible innovations (a too fast process of Schumpeterian creative destruction). Galor and Zeira (1993)⁸ highlight how strong income inequalities may prevent investment in human capital leading to lower per capita output. Galor and Moav (2004)⁹ identify the replacement of physical capital accumulation with human capital accumulation, stimulated by a more equitable income distribution, as an advanced stage along the development process, which sustains the so called “modern growth”, as opposed to the “industrial revolution” growth.

Human development. The above-mentioned emphasis on the links between human capital and growth constituted a step towards a multi-dimensional concept of development, where knowledge is not only functional to economic growth but an end *per se*, as it generates empowerment, self-reliance and a general improvement in community and social relationships. Nowadays the concept of development encompasses a set of elements comprised in more than one of the above-mentioned qualifications. UNDP (2010)¹⁰ for instance, provides an aggregate concept of human development and the in the basis of three criteria, i.e. (i) “Long and healthy life”, (ii) “knowledge” and (iii) “A decent standard of living”, respectively measured by life expectancy at birth, mean years and expected years of schooling and gross national income per capita at purchasing parity. The associated Human Development Index (HDI) is then adjusted on the basis of (iv) the inequality in the

⁶ Solow accepts almost all the assumptions of the Harrod-Domar model, except the fixed proportions between capital and labour. See: Harrod R. F (1939) An Essay in Dynamic Theory. *The Economic Journal*, Vol. 49, No. 193. (Mar., 1939), pp. 14-33. and: Domar, E. (1946), ‘Capital Expansion, Rate of Growth and Employment’, *Econometrica*.

⁷ Aghion, P. Howitt, P (1990): A Model of Growth Through Creative Destruction Working Paper No. 3223 January 1990 NBER

⁸ Galor, O. and Zeira (1993) Income Distribution and Macroeconomics. *Review of Economic Studies* (1993) 60 (1): 35-52

⁹ Galor, O., Moav O. (2004): From Physical to Human Capital Accumulation: Inequality and the Process of Development. *Review of Economic Studies*, Vol.71, 4, pp 1001-1026, Dec 2004.

¹⁰ UNDP (2010) Human development Report 2010. The real wealth of nations: pathways to human development. http://hdr.undp.org/en/media/HDR_2010_Complete_reprint.pdf

The HDI is calculated as the geometric mean of three indexes for the tree components. Each index ranges between 0 and 1 because the minimum level of the selected measure observed between 1990 and 2010 in any country is set to 0, the maximum level observed is set to 1 and all the other observations are normalized within these bounds. Inequality adjustments are made by means of the Atkinson index of each measure (Atkinson, A. 1970. “On the Measurement of Inequality.” *Journal of Economic Theory* 2(3): 244–63).

distribution of the specific feature within country, assuming that the unequal distribution of the wellbeing is an undesirable feature of development processes.

Sustainable development. The Concept of “sustainable development” was firstly introduced by Brundtland (1987)¹¹, which defines development as “sustainable” if it “*meets the needs of the present without compromising the ability of future generations to meet their own needs*”. Sustainable development implies minimizing the use of exhaustible resources, or at least, ensuring that revenues obtained from them are used to ensure a constant flow of income across generations, and making an appropriate use of renewable resources. This applies to energy (oil and oil products in particular) but also to fish stock, wildlife, forests, water, land, air. Land degradation, due to soil erosion and salinization, persistent water and air pollution, depletion of fish stock and deforestation are all examples of consequences of non-sustainable activities. Soil conservation practices, Good Agricultural Practices (GAP) based on reduced use of energy, pesticides and chemicals, waste management and recycling, waste water treatment, use of renewable energy sources such as biomasses and solar panels, are frequently cited as techniques for sustainable development. The concept of sustainability has also been extended beyond environmental concerns, to include social sustainability, i.e. long term acceptance and ownership of development changes by the citizens, their organizations and associations (civil society), and financial and economic sustainability.

Territorial development. This dimension of development refers to a territorial system, intended as a set of interrelationships between rural and urban areas, in a space characterized by the existence of poles of attraction for human activities (production and consumption of goods and services, but also culture and social life), and connected by information systems and transport infrastructures. When referring to production activities, poles of attraction can be characterized as “Clusters” where for various reasons homogeneous or closely interlinked activities are implemented. Territorial systems are open to influences from the national and supra-national contexts and from the interrelationships between territories. Territorial development implies focusing on the assets of the territory, its potentials and constraints (FAO, 2005). Policies to exploit and enhance these potentials play an important role in the development process.

2.3 How to develop: development paradigms

Development was almost never considered to be a “god-given” condition of socio-economic systems, implying that policy makers at national and international level have always thought that some activities (or even refraining from carrying out any activity) were required to promote positive changes. However, countries, as well as the international development community, in different periods have privileged specific ways of achieving development, adhering to a specific “**Development paradigm**” i.e. to a defined modality or a path to follow to achieve development, based on a codified set of activities and/or based on a vision regarding the functioning and evolution of a socio-economic system.

Identifying an exhaustive set of past and present “paradigms” adopted to develop socio-economic systems is a very tall order¹². The difficulty arises due to various factors such as:

¹¹ Brundtland (1987) *Our Common Future* (1987), World Commission on Environment and Development (WCED) Oxford: Oxford University Press.

¹² However attempts have been carried out in this direction. See e.g.

Adelman, I., and Morris, C.T., (1967) *Society, Politics and Economic Development: a Quantitative Approach*. Hopkins Press.

the complexity of the development concept *per se*, and also due to its multidimensional nature; the diversity of countries and country experiences; the different overlapping thoughts and related actions carried out at national, regional and international level; the analytical difficulties to identify cause-effect relationships between development policies and results achieved, controlling for other factors influencing development processes such as endowments, level of well-being achieved so far, geographic location, geo-political and geo-strategic influences, dimensions, degree of social/ethnic homogeneity etc.

Nevertheless, it is particularly important, in the light of emerging global development issues such as the overuse of exhaustible energy sources, carbon emissions and climate change, recurrent food crises, the general social and political instability of entire regions, widespread inequalities and persistent poverty and food security, to assess past processes and design-redesign ongoing/future ones to find new perspectives for development processes and related policies. In this light, and particularly in the light of the unsustainable levels of development of the so called “developed” countries, it is compulsory to fully revisit the way development has been conceived so far and completely reassess the usefulness of the dichotomy “developed” versus “developing” countries. The identification of prevailing development paradigms is a first step in this reassessment process.

2.4 Identifying development paradigms and related policies

To identify prevailing development paradigms and related policies, it may be useful to take a glance at a macroscopic perspective of what is going on in the global development arena. A good starting point are, for instance, the declarations of the G8 Summit on global governance and global food security (“L’Aquila declarations” G8, 2009)¹³. Even if such declarations in general emphasize more development objectives than instruments and processes required to achieve them, some “ingredients” of the prevailing “development recipes” are identifiable, such as: economy-wide growth, increased agricultural production and productivity, support to small scale industries, promotion and protection of innovation, transfer of clean, low-carbon technologies, development of human capital, research, infrastructure, further opening markets to international trade and foreign investment, stability and good governance, social protection mechanisms such as safety nets and social policies for the most vulnerable. Among other things, all this should allow for the achievement of the Millennium Development Goals (MDGs) set by the United Nations at the beginning of the millennium (poverty reduction, food security, health, education, sustainable resource use, good governance)¹⁴. In particular, all the above should lead to the achievement of the first MDG: “*Eradicate extreme poverty and hunger*”, probably the most challenging objective to achieve in a sustainable way¹⁵.

These different “ingredients”, interlinked by mutual cause-effect relationships, have been and are currently being mixed in different proportions by all bi-lateral and multi-lateral

Morris, C. T., Adelman I. (1988) Comparative Patterns of Economic Development, 1850-1914. Hopkins Press

¹³ G8 (2009) L’Aquila Joint Declarations: Promoting the Global Agenda (2009)

http://www.g8italia2009.it/static/G8_Allegato/G8_G5_Joint_Declaration.pdf and:

L’Aquila Joint Statement on Global Food Security

[http://www.g8italia2009.it/static/G8_Allegato/LAquila_Joint_Statement_on_Global_Food_Security\[1\].0.pdf](http://www.g8italia2009.it/static/G8_Allegato/LAquila_Joint_Statement_on_Global_Food_Security[1].0.pdf)

¹⁴ United Nations (2000). United Nations Millennium Declaration. Resolution adopted by the General Assembly, 8th plenary meeting, 8 September 2000. <http://www.un.org/millennium/declaration/ares552e.htm>

¹⁵ For a critique to the MDGs, in particular to the way they have been set without taking into account the specificities of various continents, specifically Africa, see: Easterly W. (2009): How millennium development goals are unfair to Africa. World development, Vol. 37, No. 1, pp. 26–35, 2009

development agencies, including the Food and Agriculture Organization (FAO)¹⁶, the International Fund for Agricultural Development (IFAD), the United Nations Development Programme (UNDP), the World Bank and the other regional development banks, as well as by different countries in different regions, to create “development recipes” which reflect different development paradigms.

The emphasis given to the different “ingredients” both in the literature and in the development practice (policies, programmes, funding etc), reflects the different visions of what really matters to develop a socio-economic system i.e. the different development paradigms i.e. different visions about what type of development is desirable, and how it is achievable.

However, as both on conceptual grounds and in practice these ingredients are almost often entangled, it may prove useful to gain a better understanding of development and development processes, attempting to disentangle them by analyzing the main mutual cause-effect relationships.

A first way of looking more systematically into these “ingredients” could be to split this broad family into development “objectives”, i.e. desirable development achievements, and development “instruments”, i.e. means in the hands of policy makers to be used to achieve development objectives. However a conceptual issue arises when attempting this exercise. Given the existing cross linkages and feed-back effects among development “ingredients”, it may not always be possible to operate such separation. This applies in particular for all those cases where a development achievement clearly contributes to generate further development, i.e. it becomes instrumental to the achievement of a new (further) development objective. This is the case, for instance of education. A given level of schooling can be considered a development objective, as it is a desirable achievement per se, in terms of increased personal empowerment, more active participation to decision making processes, and social life etc. Though, the achievement of such objective is instrumental to the achievement of other development objectives, such as improved sanitation (through the possibility to read leaflets, effectively use drugs etc) or improved production processes (through increased possibilities to discover innovations, exchange information etc).

A second way of looking to them would be to focus on selected “macro-ingredients” to which the recent (and less-recent) development literature and development practice have given prominence, identifying their mutual cause-effect relationships and other determinants. I will focus on: i) the growth of an economic system, ii) the development of specific sectors, notably agriculture; iii) the level and dynamics of poverty and inequality; iv) technology choices and technological changes in production processes, and v) the influences of external factors and the international context¹⁷.

¹⁶ FAO (2003) adopted the so-called “*Twin-Track Approach*”, as the conceptual framework for its “Anti-Hunger Programme”. It comprises both programmes aimed at improving the direct and immediate access of food to food-insecure people and interventions aimed at agricultural development and off-farm income generation, on the assumption that there are mutually reinforcing relationships between these components towards food insecurity and poverty reduction. FAO (2003): *Anti-Hunger Programme: A twin-track approach to hunger reduction: priorities for national and international action* Food and Agriculture Organization of the United Nations. Rome.

¹⁷ In some contexts the “development community” uses the words “growth” and “development” as almost synonymous, above all when associated to some sectoral-subsectoral qualifiers such as “agricultural growth”. This is evident, e.g., looking at:

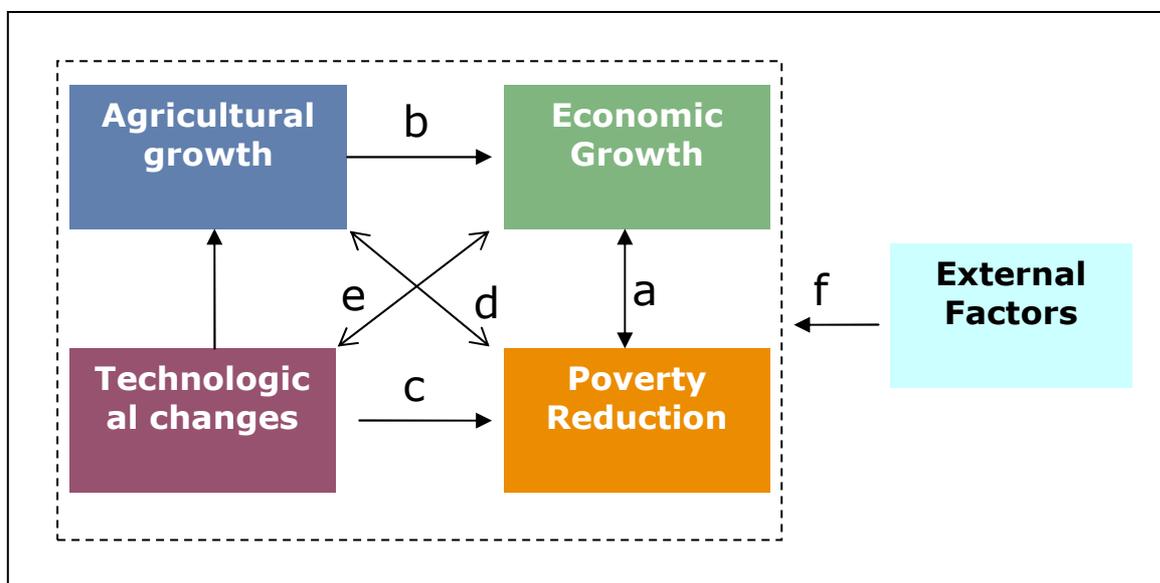
World Bank (2005): *Agricultural growth for the poor: an agenda for development*. The International Bank for Reconstruction and Development/The World Bank. I adopt here the terminology “agricultural development” as opposed to “agricultural growth” qualifying it as I did for “economic development” versus “economic growth” in

2.5 Disentangling development ingredients

In the next sections, by means of a reasoned literature review on the above elements, this paper explores some mutual links between the different elements mentioned, notably:

- a. Economic growth versus poverty and inequality reduction;
- b. Agricultural development versus economic growth;
- c. Agricultural development versus poverty and inequality reduction;
- d. Technological changes versus poverty and inequality reduction;
- e. Technological changes versus economic growth;
- f. Influence of external factors on poverty, technological changes and agricultural development (See Figure 1).

Figure 1: Technological changes, Agricultural development, growth and poverty



Cross-linkages among these elements are not easy to disentangle and the different strands of literature dealing with these mutual relationships very often overlap.

Nevertheless, despite the abovementioned practical and conceptual difficulties, an attempt will be made to provide some guiding elements through recent (and less recent) findings in these areas.

The review of the literature on these topics, which by no means intends to be exhaustive, aims at shedding some light on key constituting ingredients of development paradigms and on the development paradigms themselves.

section 2.2, i.e. growth, measured in terms of increased output, as a result of a development process (technological change, use of additional factors etc).

3 Economic growth versus poverty and inequality reduction

In analysing the links between growth and inequality, Kuznets (1955)¹⁸ wondered whether the reverse U-shaped relationship between growth and inequality “...of the older developed countries [is] likely to be repeated in the sense that in the early phases of industrialization in the underdeveloped countries income inequalities will tend to widen before the levelling forces become strong enough first to stabilize and then reduce income inequalities”. He particularly addressed the issue of the affordability of the likely increase in inequality, as a price to be paid to achieve growth, in the context of extremely low income levels. Indeed, he underlined the need of what, almost forty years later, would be called “pro-poor growth”:

“How can either the institutional and political framework of the underdeveloped societies or the processes of economic growth and industrialization be modified to favour a sustained rise to higher levels of economic performance and yet avoid the fatally simple remedy of an authoritarian regime that would use the population as cannon-fodder in the fight for economic achievement? How to minimize the cost of transition and avoid paying the heavy price-in internal tensions, in long-run inefficiency in providing means for satisfying wants of human beings as individuals-which the inflation of political power represented by authoritarian regimes requires?”

Almost two decades later, economists systematically started exploring the links between the growth of an economic system, which was essentially measured in terms of variation of GDP, and poverty reduction. Chenery and Ahluwalia (1974)¹⁹ pioneered these studies by proposing a model of “*redistribution with Growth*” and underlined the importance of applying redistributive processes to growth, if poverty had to be reduced.

Since then, several authors have attempted to measure, both theoretically and empirically, the extent to which poverty reduction is related to growth and/or redistribution. For example, Datt and Ravallion (1992)²⁰ divide poverty changes into three components respectively as growth, inequality changes and a residual component. Kakwani (1993)²¹ works out the “Growth elasticity of poverty”, i.e. the percentage change in poverty for a 1 percent growth in the mean income of the society, keeping constant the income distribution (as if everyone in the society received the same proportional change of its income). Ravallion and Chen (1997)²² estimate, on the basis of a sample of less industrialised countries, that the “growth elasticity of poverty” was about - 3, i.e. that 1 percent increase (decrease) in the mean income reduces (increases) the “poverty incidence” by 3 percent²³.

Bourguignon (2003) provides the mathematical link between growth elasticity of poverty reduction and the initial inequality as well as the location of the poverty line in relation to

¹⁸ Kuznets S. (1955) Economic Growth and Income Inequality. *The American Economic Review*, Vol. 45, No. 1. (Mar., 1955), pp. 1-28.

¹⁹ Chenery, H., and M. Ahluwalia (1974) *Redistribution with Growth*. Oxford: Oxford University Press.

²⁰ Datt, G., and M. Ravallion (1992) Growth and Redistribution Component of changes in Poverty Measures: A Decomposition with Applications to Brazil and India in the 1980s. *Journal of development Economics* 38, pp275-295.

²¹ Kawani N., (1993). Poverty and Economic Growth with Application to Cote d’Ivoire. *Review of Income and Wealth* 39, 121-139.

²² Ravallion, M. and Chen S. (1997). What Can New Survey Data Tell us about Recent Changes in Distribution of Poverty? *The World Bank Economic Review* 11: 357-382.

²³ The “poverty incidence” is the proportion of people with income or expenditure below a given “poverty line”, i.e. a threshold that represents the minimum level of income or expenditure required to be considered non-poor.

mean incomes, by assuming that incomes are log-normally distributed. Under this assumption, the complete distribution of income is known, provided information on mean income and the Gini coefficient is available. Bourguignon also identifies a direct link between a permanent redistribution of income and the elasticity of poverty reduction w.r.t. growth. Redistributing income leads to an “*acceleration*” of poverty reduction for a given rate of economic growth, thanks to an increase in the elasticity of poverty reduction to growth associated with the redistributive process.

Ravallion and Chen (2003) develop a pro-poor growth measure, based on the so-called “growth incidence curve” (GIC), which is in turn based on the slopes of the Lorenz curves in two subsequent periods and the growth rate of the mean income²⁴. This measure is the mean growth rate of income for the poor and can be interpreted as the ordinary growth rate scaled up or down according to whether the distributional changes were pro-poor or not.

Kakwani and Son (2003), after working out a “Poverty Equivalent Growth Rate”(PEGR) which embodies distributional concerns²⁵, calculate the PEGR for different countries, namely, Thailand, Korea and Vietnam, and by comparing the PEGR with the actual growth rate, rank countries according to the “pro-poorness” of their growth patterns.

Son (2004)²⁶ proposes a supposedly “*more conclusive*” pro-poor growth index than the one developed by Ravallion and Chen, as it allows us to judge whether growth is pro-poor or not in most situations, being based on Generalized Lorenz curves (GL), which consider second order dominance, rather than on ordinary Lorenz curves (L) which consider only first order dominance²⁷. Furthermore, Son and Kakwani (2008) work out a new “PEGR” and use it to classify growth patterns of eighty countries, finding that “... *global growth processes have not generally been favourable to the poor. The global reduction in poverty would have been much greater if growth were generally positive and pro-poor*”²⁸.

In tandem, at the beginning of the 2000s a wave of thought rose which somewhat downsized the importance of redistribution for poverty reduction. On the basis of some econometric work based on panel data of several countries, Dollar & Kraay (2002) in their most cited (and criticised) article “*Growth Is Good for the Poor*”; highlight the role of growth as being the main factor contributing to reduce poverty: “*Average incomes of the poorest fifth of a country on average rise or fall at the same rate as average incomes*”. In other words, they find a “one-to-one relationship between growth and incomes of the poor. As the authors point out:

²⁴ Ravallion, M., Chen S. (2003). Measuring Pro-Poor Growth. *Economics Letters* 78 (2003) 93–99. This measure is based on the ordinary Lorenz curves. This implies that this measure checks for the first order dominance of the income distribution at time t with respect to the distribution at time t-1. It does not provide conclusive results on whether the growth is pro-poor or not in absence of first order dominance.

²⁵ The PEGR is claimed to be superior to the Ravallion and Chen (2003) estimate of pro-poor growth as PEGR respects the “monotonicity criterion”, i.e. for any increase in the index, poverty should fall (and vice-versa). Kakwani N., Son, H. (2003) Pro-poor Growth: Concepts and Measurement with Country Case Studies. *The Pakistan Development Review* 42 : 4 Part I (Winter 2003) pp. 417–444

²⁶ Son H., (2004) A Note on Pro-Poor Growth. *Economics Letters* 82 (2004) 307–314

²⁷ For a discussion on ordinary Lorenz curves versus Generalized Lorenz curves see for example Bellù and Liberati (2005). Bellù and Liberati (2005): Ranking Income Distributions with Generalised Lorenz Curves. EASYPol series (www.fao.org/easypol) Food and Agriculture Organization of United Nations. Rome.

²⁸ “*Of 131 spells when growth rates were positive, growth was pro-poor in 55 (23.2%) cases and anti-poor in 76 (32.1%) cases. In 53 out of 106 spells of negative growth rates, the poor suffered proportionally a greater decline in their consumption compared to the non-poor*”. Son H., H , Kakwani N. (2008): Global Estimates of Pro-Poor Growth. *World Development* Vol. 36, No. 6, pp. 1048–1066, 2008

“evidence does strongly suggest that economic growth and the policies and institutions that support it on average benefit the poorest in society as much as anyone else”. Policy implications are that selected pro-poor policies may be less useful for poverty reduction than general “enabling-environment-oriented” policies because *“... private property rights, stability, and openness contemporaneously create a good environment for poor households (and everyone else) to increase their production and income”*. In addition, there is *“...little evidence that formal democratic institutions or a large degree of government spending on social services systematically affect incomes of the poor”*.

Furthermore, Kraay (2004)²⁹ uses data from several household surveys in less industrialised countries in the eighties and nineties to show that most of the variation of poverty can be attributed to the growth of average incomes.

These results have been used to support the latest wave of thinking, and related policies, conceiving growth as the primary “ingredient” for development, under the belief that growth, even if it accrues for the rich, trickles-down to poor through the normal income distribution channels and the functioning of free markets, favoured in turn by the withdrawal of national governments, the liberalisation of foreign trade and the promotion of foreign investments. This vision configures a sort of **“free market trickle-down growth”** development paradigm, according to which, other development ingredients are of secondary importance.

However, around fifty years earlier Kutznetz (1955), highlighting some still very actual issues, warned that: *“Because they may have proved favourable in the past, it is dangerous to argue that completely free markets, lack of penalties implicit in progressive taxation, and the like are indispensable for the economic growth of the now underdeveloped countries. Under present conditions, the results may be quite the opposite:*

- *withdrawal of accumulated assets to relatively “safe” channels, either by flight abroad or into real estate; and*
- *the inability of governments to serve as basic agents in the kind of capital formation that is indispensable to economic growth.*

It is dangerous to argue that, because in the past foreign investment provided capital resources to spark satisfactory economic growth in some of the smaller European countries or in Europe's descendants across the seas, similar effects can be expected today if only the underdeveloped countries can be convinced of the need of a ‘favourable climate’.”

In addition, even when trickle-down mechanisms work, they don't assure an efficient allocation of resources leaving room for government interventions to redistribute income (Aghion, 1997).³⁰

Similarly, among development circles it is currently commonly recognised that; *“The best way to reduce poverty is to provide people with opportunities to earn income through participation in the production process. Therefore, any strategy aimed at defeating food insecurity and poverty in the long run will have to be rooted in sustainable, broad-based economic growth and development”*. (FAO 2006)³¹.

²⁹ Kraay, A. (2004). "When is Growth Pro-Poor? Evidence from a Panel of Countries", The World Bank, Policy Research Working Paper No. 3225.

³⁰ Aghion, P. Bolton, P. (1997) A Theory of Trickle-down Growth and Development. The review of economic studies, vol. 64, Issue 2 (Apr., 1997), 151-172

³¹ Kidane, W, Maetz, M. (2006) Food Security and Agricultural Development in Sub-Saharan Africa: Building a Case for More Public Support. FAO UN policy Assistance Series;

The qualification of growth as “broad-based”,³² is of fundamental importance: only growth processes that include the large majority of individuals and households are assumed to be poverty reducing. However, it is not always clear whether this “broad-based” growth, in order to be considered “pro-poor” has to lead to a reduction of absolute poverty, as measured on the basis of some sort of “absolute” poverty line or, whether it also has to lead to a reduction of the relative poverty, i.e. poverty measured on the basis of some sort of income or expenditure inequality index. This issue is reported in literature as the debate on the definition of “pro-poor growth”.

Lopez (2004) summarises the debate, identifying two main positions:

- The first definition of pro-poor growth focuses solely on the link between poverty and growth: growth is pro-poor if it reduces poverty, where poverty is defined on the basis of some absolute criterion³³. This is the view supported by Ravallion (2004)³⁴, for example.
- The second definition, as presented in Kakwani and Pernia (2000)³⁵, qualifies growth as “*pro-poor only if, in the growth process, “the poor benefit proportionally more than the non-poor, i.e. growth results in a re-distribution in favour of the poor”*”; explicitly admitting that there may be growth processes that cannot be characterised as “pro-poor even if they generate a reduction of poverty incidence. This means that it is not absolute poverty which matters, but relative poverty.

The definition provided by Kakwani and Pernia, while being more difficult to meet, looks more attractive in the long term as relative income inequality has implications for non-income aspects relevant to well-being, such as the position of each individual (or household) within the society; her/his empowerment, the actual, effective role and functioning of institutions, including the way participation and democracy effectively works. Strong income inequality, may indeed lead to an erosion of the substance of any democratic institution, given the objective disparities of power of the different members of a society. Analysing poverty and informing policy processes by making use of relative rather than absolute poverty, may also help to capture “...*a wider range of factors such as powerlessness, survival, personal dignity, security, self-respect ...*” (Carvalho and White 1997)³⁶ which are usually taken into account by qualitative rather than quantitative approaches for poverty analysis.

As a concluding remark on the links between growth and poverty reduction, it is worth mentioning the findings of De Janvry and Sadoulet (1998)³⁷. After analysing the causal relationships between growth and poverty by means of econometric analysis on a panel of twelve Latin American countries between 1970 and 1994, they conclude that “*Growth only*

³² The use of the term “broad-based” firstly appeared in the World Development Report 1990: World Bank (1990), Washington D.C.

³³ For a discussion on absolute versus relative poverty, see, e.g. Bellù L.G., Liberati P (2005) Impacts of Policies on Poverty The Definition of Poverty. EASYPol Series (www.fao.org/EASYPol) FAO U.N. Rome.

³⁴ Ravallion, M. (2004) Pro-poor Growth: A primer. Washington ,D.C.: Development Research Group, The World Bank.

³⁵ Kakwani N., Pernia E.M., (2000): What is pro-poor growth? Asian Development Review, vol. 18, no. 1, Asian Development Bank.

³⁶ Carvalho, S., White H. (1997). Combining the Quantitative and Qualitative Approach to Poverty Measurement and Analysis. The Practice and the Potential. World Bank technical paper 366.

³⁷De Janvry, A. Sadoulet, E. (1998). Growth, Poverty, and Inequality in Latin America: a causal analysis, 1970-1994. Department of Agricultural and Resource Economics Working Paper no.784. Berkeley, University of California USA.

reduces urban and rural poverty if the initial levels of inequality and poverty are not too high. In the Latin American countries where this is not satisfied, growth is totally ineffective in reducing poverty/inequality". In other words, 'growth' (without any qualifier) is good for poverty (and inequality) only if we do not talk about 'serious' poverty (and inequality).

The position of economists and development institutions viewing growth as an ingredient of development only if associated to a somehow equitable distribution of income, reflect the so-called "***pro-poor (broad-based or balanced) growth***" development paradigm. On the basis of the various contributions reviewed above, we can say that, overall, the debate among the supporters of this view has been on how to define and how to measure pro-poor, broad-based, balanced growth and how to achieve it. The debate around the latter point swings between i) the relative weight the promotion of small scale activities, notably smallholder agriculture, agro-processing in rural areas and small scale industrial activities in urban areas; ii) the support of large scale activities, also funded by Foreign Direct Investment (FDI) necessarily associated to strong institutions ensuring appropriate functioning of factor markets and natural resources (capital, labour, land, water, ores, oil etc) to grant decent working conditions and remunerations, non-depletion of the natural resource base and social sustainability also through an efficient fiscal system; and iii) the promotion of social policies, safety nets, direct support to poorest through provision of services (health, education, housing etc.) associated to policies to ensure inclusion, empowerment and self-reliance of the weakest layers of the society.

4 Agricultural growth versus economic growth

In an economic system, some sectors play the important role of "engines of growth" more than others. It is commonly recognised that the development of the agricultural sector is particularly important in less industrialised countries to support the general economic growth for different reasons, because it:

- is integrated down-stream as it supplies primary commodities to selected national value chains (agro-industry, textile, and more recently, bio-fuels), thus allowing national value added generation and distribution;
- distributes income to people whose consumption patterns are primarily orientated towards nationally produced commodities, giving rise to multiplier effects;
- produces food for the national market, contributing to food availability at national level, so reducing or zero-ing the need to import these necessary items and contributing to keep food prices acceptably low to feed the labour force in other sectors.
- may provide foreign currency by means of agricultural exports, allowing the import of industrial goods and including capital equipment for the industrial sector;
- is a main source of a low-cost labour force, whenever the technological changes in agriculture induce the release of labour which becomes available to industry and services.
- contributes to generate savings within the economic system which can finance the generation and/or consolidation of the industrial sector.

These arguments are based on findings of a conspicuous mass of studies on agricultural development and growth, carried out over the last sixty years³⁸.

Just after the Second World War, economists dealing with development issues started consolidating their vision of 'agriculture' (broadly intended as a set of traditional, subsistence and rural activities) as an ancillary sector functional to the development of the more 'modern' industrial sector..

The Nobel laureate Arthur Lewis, in the fifties pioneered the exploration of the industrialisation process of a dualistic economic system, characterised by two sectors: "subsistence" sector and "capitalistic" sector, with "unlimited" supply of labour, flowing from the first to the second:

" In many economies an unlimited supply of labour is available at a subsistence wage.....The main sources from which workers come, as economic development proceeds, are subsistence agriculture, casual labour, petty trade, domestic service, wives and daughters in the household, and the increase of population....In such an economy employment expands in a capitalist sector as capital formation occurs.... Capital formation and technical progress result not in raising wages, but in raising the share of profits in the national income.As the capitalist sector expands, profits grow relatively, and an increasing proportion of national income is re-invested.... The capitalist sector cannot expand in these ways indefinitely, since capital accumulation can proceed faster than population can grow. When the surplus is exhausted, wages begin to rise above the subsistence level.... The country is still, however, surrounded by other countries which have surplus labour. Accordingly as soon as its wages begin to rise, mass immigration and the export of capital operate to check the rise. ... The importation of foreign capital does not raise real wages in countries which have surplus labour, unless the capital results in increased productivity in the commodities which they produce for their own consumption.Practically all the benefit of increasing efficiency in export industries goes to the foreign consumer; whereas raising efficiency in subsistence food production would automatically make commercial produce dearer" (Arthur Lewis - 1954)³⁹ „

In the sixties, this "reserve army", concentrated in rural areas (generically referred to as "agriculture" by many authors) inspired the traditional view of the link between agriculture and growth, according to which a "developing" economy is a "dual" system where a "dynamic" industrial sector is associated with a more "traditional" agricultural sector. However, very often, the "traditional sector" was not seen only as a "reservoir" of labour, but more generally as a source of "surpluses" (variously defined as for example, savings, excess labour force, inputs, food etc), to be extracted and put at the service of the "modern" (industrial, urban) sector. Technology and productivity enhancements in the "agricultural" sector allow for the generation of "surpluses" that feed the evolution of the industrial sector. For example Kutznets (1964)⁴⁰, in describing the role of agriculture and related policies in such a "dual" system, highlights that it is important to identify ways to extract the agricultural

³⁸ For a comprehensive treatment of the theory of the growth of the agricultural sector within the context of a growing economy see e.g. : Mundlak, Y. (2000). *Agriculture and Economic Growth* Theory and Measurement. Harvard University Press

³⁹ Lewis, W. A. (1954). 'Economic Development with Unlimited Supplies of Labour', *The Manchester School*, Vol. 22, pp. 139–191.

⁴⁰ Kutznets, S. (1964) Economic Growth and the Contribution of Agriculture: Notes for measurement" In C. Eicher and L. Witts: *Agriculture in Economic Development*. New York. McGraw-Hill.

“surplus” to finance industrial capital formation without hampering the growth pattern of the agricultural sector itself.

Fei and Ranis (1964)⁴¹ proposed a dual-economy model where the economic system goes through subsequent phases of development determined by productivity changes in agriculture: a) in the absence of any technological change in agriculture, labour is in excess supply and its marginal productivity is zero; in this phase labour may be supplied to the industrial sector without any loss of agricultural output; b) technological changes in agriculture improve the marginal productivity of labour so that it becomes positive but less than the real wage. In this case, labour flows to the industrial sector with some loss of agricultural output.

Jorgenson (1967)⁴², adopting an analytical framework similar to that of Fei and Ranis, added emphasis to the role of the agricultural surplus as a generator of savings, which in turn allowed capital accumulation and consequent expansion of the economic system. By comparing the “classical” approach to the development of a dual economy and the “neoclassical” one, he first highlights that: “*the chief difference between these two approaches to the development of a dual economy is in conditions governing the supply of labour to the industrial sector. In the classical approach to the theory [...] labour is available in unlimited amounts at a fixed real wage. In the neo-classical approach labour is never available to the industrial sector without sacrificing agricultural output*”. According to Jorgenson, despite the difference regarding the supply of labour, both theories converge on : “*the central fact of economic development is capital accumulation (including knowledge and skills with capital)*”. However: “*... Disguised unemployment is neither necessary nor sufficient to generate a sustained rise in the share of saving. Ultimately, a sustained increase in the saving share depends on a positive and growing agricultural surplus and not on the presence or absence of disguised unemployment*”.

Dixit (1970)⁴³, as a follow-up to the work of Jorgenson, puts forward the idea that in a dual/labour-surplus economy, technical progress as well as capital accumulation in ‘agriculture’ could allow this labour to become productive. This implies that the level of employment for which the marginal product of labour becomes zero (assuming diminishing productivity of labour) could be moved forward to a point where all the agricultural labour force is productively absorbed. Therefore, technical progress and capital accumulation in agriculture could prevent the decline of agricultural employment and its transfer to the industrial sector. This consideration gives a ‘new dignity’ to the ‘agricultural’ sector, which is not perceived any longer as completely ancillary to the rest of the economic system, but as a sector the development of which can contribute to productive job creation and overall well-being, by means of technical progress and capital accumulation. .

The idea of a ‘New dignity’ to the agricultural sector, intended as ‘rural space’, was also provided by the work of Harris and Todaro (1970)⁴⁴. In a different conceptual context, characterised by unemployment in the ‘modern’ sector, these authors developed a dualistic labour market model on the basis of which some paradigms of the relationships between the agricultural and the industrial sectors needed to be revisited. Productivity improvements in the agricultural sector (considered to be rural space) were no longer seen as devices allowing the

⁴¹ Fei, J. C. H., and Ranis, G. (1964), *Development of the Labour Surplus Economy*, Homewood: Irwin, 1964

⁴² Jorgenson D., W. (1967) Surplus Agricultural Labour and the Development of a Dual Economy, *Oxford Economic Papers*.1967; 19: 288-312

⁴³ Dixit, A., (1970): Growth patterns in a dual economy. *Oxford Economic Papers*, 22 (2) July 1970, pp. 229-33.

⁴⁴ Harris, J. R., and Todaro, (1970) M . P., 'Migration, Unemployment and Development: a two-sector analysis', *The American Economic Review*, 60 (1) , Mar. 1970, pp. 126-42.

release of labour from agriculture towards the industrial sector, but rather as devices to keep labour in rural areas, thus reducing unemployment in industrial (urban) areas. According to this model, rural areas release labour up to a point where the expectations regarding the wage differentials between rural and urban areas are offset by the probability of falling unemployment in the urban areas. Therefore, a direct policy implication is that promoting the development of activities in rural areas could reduce the wage differentials between rural and urban areas and, by way of consequence, reduce unemployment in the industrial (urban) sector.

Morrison and Thorbecke (1990)⁴⁵ provide a rigorous definition of the “agricultural surplus” and a methodology to measure it. They make use of a Social Accounting Matrix framework, where all the accounts (activities/commodities, factors, institutions and Rest of the World) are separated into agriculture and non-agriculture⁴⁶. The net domestic flows of goods and factors from agriculture to non-agriculture are computed, to obtain the “domestic agricultural surplus”. Furthermore, the “foreign agricultural surplus”, as the difference between exports and imports of agriculture, is calculated. The sum of domestic and foreign surplus constitutes the total surplus. Adopting this definition allows for the measurement of the contributions of agriculture to growth. In addition, it allows for an assessment of the impacts of policies favouring technological changes in agriculture.

Chow (1993)⁴⁷, with reference to China, highlights that the development strategy from the beginning of the fifties to the end of the eighties was characterised by capital accumulation at the expense of consumption, essentially by peasants, and promotion of industry at the expense of agriculture. This “*low-wage industry-led*” development paradigm, which led to investing a large share of national output, especially into heavy industry, generated significant growth rates (around 6% annum) for over almost forty years. In the absence of substantial technological changes in agriculture, this has apparently been an industry-led long-term growth, with prices of agricultural goods growing much faster than the industrial ones, essentially to absorb excess demand for agriculture and excess supply for industry. Apparently, the Chinese case confirms the paradigm that wants “agriculture” as a supplier of “surplus” to the industrial sector. In the absence of significant technological changes in agriculture, this transfer had to occur at the expense of consumption in rural areas. The peculiar institutional settings of China, i.e. autocratic and centrally planned, might have favoured inter-sectoral surplus transfers even if not supported by increased agricultural surplus generation. However, the long term rise of the relative prices of agricultural goods has partially reduced the net transfers from the agricultural sector to the industrial sector.

To assess the role of agriculture in supporting the expansion of industry it is important to capture both physical flows of commodities and services, and changes in relative prices of agricultural goods and services w.r.t. industrial ones, as inter-sectoral transfers of surplus occur both ways, Winters et al (1997)⁴⁸ call them “visible” and “invisible” surpluses. The

⁴⁵ Morrison C., E. Thorbecke (1990). The concept of Agricultural Surplus. World Development 18 (8) 1081-1095

⁴⁶ A Social Accounting Matrix is a summary table of the transactions occurring among productive sectors, domestic “institutions” (households, government, enterprises) and the rest of the world, based on the national accounts. Indeed, the separation adopted, specifically for households, reflects more the geographic location : “urban” and “rural”.

⁴⁷ Gregory C. Chow (1993): Capital Formation and Economic Growth in China. The Quarterly Journal of Economics, Vol. 108, No. 3 (Aug., 1993), pp. 809-842

⁴⁸ Winters, P., De Janvry A., Sadoulet E., Stamoulis K, 1996. The Role Of Agriculture In Economic Development: Visible And Invisible Surplus Transfers Department of resource economics working paper n 143.

authors revisited the SAM approach followed by Morrison and Thorbecke, where construction was based on fixed prices, and adopted a SAM-based CGE approach with flexible prices. Starting with an “archetype” SAM for a “typical” African country developed by Sadoulet et al (1992)⁴⁹, a two-sector model was built and used to calculate the change in the “visible” and “invisible” agricultural surplus generated by a 10% increase of total factor productivity. The authors found that, in the base case, the agricultural surplus is small, representing around 0.4 % of the GDP, as in the archetype SAM for Africa (and also in reality), whereas the level of interaction between agriculture and non-agriculture is weak. The 10% increase of agricultural productivity gives rise to a change in the surplus transfer of around 1% of GDP. The relevant finding however is that the “invisible” transfer (via changes in relative prices) exceeds by far (around four times) the “visible” one.

More recently, the causal links between agriculture growth and economic growth has also been emphasized for instance by Tiffin and Irz (2006)⁵⁰, who, by means of an econometric model analyse the direction of causality between the agricultural value added per worker and the Gross Domestic Product per capita in a panel of 85 countries. They conclude that, for less industrialized countries there is clear evidence that the first “causates” the second.

Furthermore, in the line traced by Johnston and Mellor (1961)⁵¹, Anriquez and Stamoulis (2007) revisited the role of agriculture as an engine of growth providing new evidence to the importance of “backward” and “forward” linkages of the sector. The authors calculate that for a sample of 26 low-middle income countries, backward and forward linkage indexes⁵² and emphasise that, in earlier stages of development, agriculture plays an important developmental role thanks to its backward linkages. This opposes the historical view (see e.g. Hirschman, 1958) that denied agricultural development the role of ‘engine of growth’ due to its weak backward linkages with the rest of the economy⁵³.

Overall, the role of the agricultural (rural) sector has been perceived alternatively as a passive supplier of low-wage labour to feed the growth of the industrial sector, or as a sector that, if properly managed, can provide income, improve income distribution, generate savings, and export revenue, at the service of the whole economy. In the first case, the primary ingredient of development is the creation of a solid industrial sector with the aim of using in a more efficient way the available endowments. In the second case, the development of the whole

⁴⁹ Sadoulet E., Subramanian S. and De Janvry A. (1992). Adjusting to a Food Price increase in the context of Stabilization Policies : An Analysis Using Archetype Financial CGE for Developing Countries. Report prepared for the World Bank.

⁵⁰ Tiffin R, Irz X, (2006) Is agriculture the engine of growth? *Agricultural Economics*, 35: 79–89. July 2006.

⁵¹ Johnston B,F and Mellor J,W. (1961): The role of agriculture in economic development, *American Economic Review* 51(4): 566-593, 1961. Anríquez, G., Stamoulis, K. 2007. Rural development and poverty reduction: Is Agriculture Still a Key? e-JADE, FAO- Rome.

⁵² In an Input-Output (I-O) context, as in the one adopted by the authors, “*backward linkages*” are the relationships of a sector with the other sectors via its input requirements; “*forward linkages*” instead refer to relationships of a sector with the others by means of the absorption of the sector’s outputs downstream. The authors work out backward and forward linkages of the agricultural sector as first-round multipliers, i.e. “attenuated” Leontief multipliers which rule out second to nth-round effects, on the assumption that these further effects may not be realised due to frictions in the economic system or structural changes occurring during the adjustment process. In addition, these effects are weighted with the relative importance within the economy of the sectors providing the input or adsorbing the output. For more details on these indicators, see Anriquez et al (2003): Anriquez G, Foster, W, Valdéz A (2003): *Agricultural Growth linkages and the Sector’s Role as Buffer. Roles of Agriculture Project. FAO. Rome*

⁵³ Hirschman, A., O. (1958): *The strategy of Economic Development*, Yale University Press, New Haven, Connecticut.

socio-economic system is supported by the development of the agricultural sector. This can be seen as an “*Agriculture-based*” development paradigm.

This paradigm has to be further qualified if agricultural growth has to directly contribute to the various dimensions of socio-economic development. In particular, it has to take into account which type of agriculture, and in which context, directly contributes to poverty reduction and to other development dimensions, beyond its contributions to poverty reduction through impacts on economic growth (see the next section on agricultural growth versus poverty reduction).

In any case, under the Agriculture-based development paradigm, while the agricultural sector plays the role of an engine of development, the industrial sector plays an ancillary role, at least during the “early stages” of the development process. However, most of the supporters of agriculture have always seen the sector as a “temporary” engine, in view of better times, i.e. the next stages of the “development process”.

However, whether the concept of “stage” of development is still meaningful or not, is a debatable issue. Even if it is difficult to infer any conclusive judgement, given the quantity and complexity of the contributions provided by many authors on the links between agriculture, industry, economic growth and development, the feeling is that most of the literature moves within the ‘growth paradigm’, traced by Rostow (1960)⁵⁴ where a somehow ‘deterministic’ path in five “stages” was set out. These five stages are essentially based on the history of western countries, from, “*the traditional society*” to “*the age of mass-consumption*”, through “*the pre-conditions to take off*”, “*the take off*” and “*the drive to maturity*”. Taking for granted the “*five stages*”, of growth, almost automatically translated into the five stages of development until recently, technological changes in agriculture (or some surrogate shortcut, as in the case of China), can be seen as “*pre-condition to take off*”, which allows the sector to increasingly generate surplus that feeds the industrial sector. These “five stages” can be seen as an “*overarching deterministic development paradigm*” into which fit most of the past and prevailing views of development processes.

5 Technology changes *versus* economic growth.

A further question, still open, is whether these technological changes which are able to generate additional surplus, have to be exogenous, as suggested by Rostow and other supporters of “*technology transfers*”, or whether these changes have to be endogenous, i.e. based on domestic investment on knowledge, as suggested e.g. by Romer (1986)⁵⁵ and other supporters of the “*endogenous growth-based*” development paradigm. Romer and Lucas (1988)⁵⁶, observing the failure of the expected cross-country convergence, dropped two central assumptions of neoclassical models: i) that technological changes are exogenous; and ii) that the same technological opportunities are available all over the world. This led to the introduction of the so called “Endogenous growth model” where investment not only increases the stock of capital, but generates “spillovers” in such a way that also technological

⁵⁴ Rostow W.,W. (1960) *The Stages of Economic Growth. A non-communist Manifesto*. First Edition. Cambridge University Press.

⁵⁵ Romer P., M. (1986). Increasing Returns and Long-Run Growth. *The Journal of Political Economy*, Vol. 94, No. 5 (Oct., 1986), pp. 1002-1037

⁵⁶ Lucas, R. E., Jr., "On the Mechanics of Economic Development," *Journal of Monetary Economics*, July 1988, 22:1, 3-42.

changes occur at the same time, generating further growth. These spillovers may be generated for instance, by “learning-by-doing” processes. Factors typically exhibit increasing returns, as the expansion of the activity levels increases the generation of knowledge, thus leading to technology improvements. Additional endogenous growth models, focusing on endogenous innovations and the temporary monopolistic rents to remunerate innovations and on the role of human capital (Mankin, Romer, Weil, 1992)⁵⁷, investigating the extent to which the possibility to benefit monopoly profits motivate innovation progressed and highlighting links between market size, international trade, and growth (Grossman & Helpman, 1989)⁵⁸ were also developed⁵⁹.

The role of the government is controversial when assuming endogenous technology. On the one hand, public expenditure on research and development contributes to generate new knowledge and support the discovery and application of innovations. Similarly, expenditure to enforce property rights would allow private agents investing in innovations to benefit from their investment, thus stimulating new innovations. On the other hand, excessive levels of taxation may discourage economic activities as would reduce private returns on investment (Barro, 1990)⁶⁰.

Implications for development processes of the “**Endogenous Growth-based development paradigm**” are various and possibly controversial. As spill-over effects of investment and/or learning-by-doing processes, by definition exist only if people are investing and/or doing something, this paradigm leaves the unresolved issue of how to start up any growth-based development process. A ready made answer could rely on foreign investment and technology transfers, possibly associated to some degree of international trade. Technology transfers may be useful to start-up production and accumulation processes both in terms of capital and in terms of learning-by-doing knowledge. As paradoxical it could be, endogenous growth-based development processes should rely on exogenous growth-based processes for their start-up, above all in situations where negligible economic activities are going on (for instance, post-conflict, post-emergency situations). However endogenous growth-based approaches raise strong questions on the concept of “technology transfers” per se. Extraneous production modalities, retained or disguised information on know-how by investors, associated to missed control on capital accumulation processes by local actors, for instance, due to stealth expatriation of profits, may hamper the accumulation of capital as well as the endogenous generation of innovations by blocking learning-by-doing dynamics, hampering the empowerment of local actors and jeopardizing the appropriate use of local endowments.

⁵⁷ Mankiw, N. Gregory, David Romer, and David N. Weil, "A Contribution to the Empirics of Economic Growth," *Quarterly Journal of Economics*, May 1992, 107, 407-37.

⁵⁸ Grossman, G. and Helpman E., "Product Development and International Trade," *Journal of Political Economy*, December 1989, 97:6, 1261-83

⁵⁹ A survey of Endogenous growth models is provided by: Romer (1994), P. M. The Origins of Endogenous Growth *The Journal of Economic Perspectives*, Vol. 8, No. 1. (Winter, 1994), pp. 3-22.

⁶⁰ Barro, R., "Government Spending in a Simple Model of Endogenous Growth," *Journal of Political Economy*, 98, 1990, S103-S125.

6 Agricultural growth and technological changes versus Poverty reduction

The direct link between agricultural growth and economic growth discussed above is still of actual concern, as many less industrialised countries produce large shares of their GDP from within the agricultural sector. However, in the last decade, in the mainstream of the debate on pro-poor growth, the focus shifted somewhat from the direct linkages between agricultural growth and economic growth, to the role of agricultural growth for poverty reduction. From the announcement of the Millennium Development Goals onward, the main question addressed by the ‘development community’ has been how to promote sustainable, “broad-based” economic growth and development in less industrialised countries to achieve poverty reduction. An ancillary question is to what extent agricultural growth is a good - or even the best - tool to fight poverty. In other words, is agriculture really the most promising sector for the achievement of poverty reduction (and, possibly, eradication)?

To answer this question, several economists have been engaged in exploring links between the growth of the agricultural sector and poverty reduction, mainly using SAM-based multiplier approaches⁶¹, CGE models and econometric analysis of international panel data.

In order to explain the differences in income inequality across countries, Bourguignon and Morrison (1998)⁶² carried out some econometric estimates using a sample of 38 less industrialized countries between 1970 and 1985. The authors found that the dualism between agriculture, characterized by low productivity of factors, and the rest of the economy, comparatively more productive, still explains most of the income inequality, concluding that *‘in many countries increasing the level of productivity in traditional agriculture may have become the most efficient way of reducing inequality and poverty’*.

Thirtle et al (2003)⁶³, analysed data on 59 countries by means of an econometric model adopted to keep in account the causal chain between agricultural R&D, agricultural productivity growth, GDP per capita, inequality and poverty reduction. The authors found that agricultural productivity growth has a substantial impact on poverty reduction, whereas productivity growth in industry and services does not.

Timmer (1997, 2002, 2003)⁶⁴ highlights that the impact of agricultural growth on poverty depends upon the way in which the poor are connected to growth (the so called “elasticity of connection” of poverty to growth) and the way in which a country’s income is distributed. *“With highly unequal distributions of income, caused to a substantial extent by highly unequal*

⁶¹ Multiplier analysis has been developed by Pyatt, G. and J I Round (1979): Accounting and fixed price multipliers in a SAM framework. *Economic Journal*, 89 (356): 850-873. An application of a detailed multiplier analysis can be found in: Khan, H.A. (1999). Sectoral growth and poverty alleviation: a multiplier decomposition technique applied to South Africa. *World Development*.

⁶² Bourguignon, F., Morrisson, C. (1998). Inequality and Development: the Role of Dualism. *Journal of Development Economics* 57:2, 33-57.

⁶³ Thirtle C., Lin L. & Piesse, J, (2003). The Impact of Research-Led Agricultural Productivity Growth on Poverty Reduction in Africa, Asia and Latin America. *World Development*, Elsevier, vol. 31(12), pages 1959-1975, December.

⁶⁴ Timmer, C.P. (1997). How well do the poor connect to the growth process? Cambridge, Mass., USA, Harvard Institute for International Development

Timmer, C.P., (2002). Agriculture and economic development. In: Gardner, B. and Raussler, G.(Eds.), *Handbook of Agricultural Economics*. Elsevier Science, Amsterdam, North Holland.

Timmer, C.P., (2003) Agriculture and Pro-Poor Growth. The Pro-Poor Economic Growth Research Studies. Boston Institute for Developing Economies.

land ownership, agricultural growth actually seems to exacerbate poverty. By contrast, when a country's income distribution is relatively equal, agricultural growth stimulates the rest of the economy at the same time that it strengthens the connection of the poor to that more rapid growth" (Timmer 2003).

Aghion and Armendariz (2004), reporting the results of Datt and Ravallion (1998) and Todaro and Smith (2003), with reference to India, highlighted the technological changes in agriculture (notably the so-called Green Revolution), which played a fundamental role in poverty reduction.⁶⁵

Byerlee et al. (2005), summarised the findings of twelve country case studies on *"how to operationalize pro-poor growth"*, and suggested that agriculture impacts on poverty reduction also by means of generation of direct income, in particular from exports. According to the authors, macro economic and agricultural reforms in the nineties led to a substantial reduction of poverty among crop producers in selected countries such as Vietnam, Uganda, Ghana, Zambia and Burkina Faso, because *"devaluation, removal of export taxes and ... the closing of para-statal marketing boards have substantially improved the incentives for traditional export crops such as coffee and cotton. ... Not surprisingly, farmers producing export crops experienced the fastest pace of poverty reduction"*⁶⁶. However, the authors have to admit the fragility of this channel for poverty reduction, due specifically to international price shocks and their limited geographical impact: *"...poverty levels in Ugandan coffee areas declined by 50 percent between 1992 and 1999 (although they rose again with the collapse of coffee prices in recent years)... The effects on pro-poor growth have often been narrowly confined to areas with suitable agro-climatic conditions and/or access to infrastructure"*.

Emphasis on the role of agriculture to reduce poverty has been put by World Bank (2005, 2008)⁶⁷. Others (e.g. FAO 2009) highlight how poverty is positively affected by agricultural development, specifically by productivity shifts due to investment in infrastructure and R&D, leading to the consequent reduction in prices of staple food consumed by the poor⁶⁸.

The conventional wisdom on the role of agriculture for poverty reduction is well summarised by Byerlee et al. (2005): *"mass of evidence [is] already available on the central role of increasing agricultural productivity on pro-poor growth, especially in the early stages of development, and especially if productivity growth is transmitted to lower food prices. ... Given widespread household food insecurity, the major challenge in Africa is how to*

⁶⁵ Aghion P., Armendariz B. (2004) report the findings of Todaro and Smith (2003): "after the green revolution of the late 1960s and early 1970s, agricultural production started increasing at an annual rate of 3%. This was largely due to improvements in agricultural technologies and irrigation systems...". Datt and Ravallion (1998) who, combining data from 24 household sample surveys spanning 35 years with other sources, found that *"higher farm productivity brought both absolute and relative gains to poor rural households"*. See:

Aghion P., Armendariz B. (2004) A New Growth Approach to Poverty Alleviation. Mimeo Harvard University.

Todaro, M., and Smith, S. (2003). Economic Development, Essex, Pearson Education Limited..

Datt G., Ravallion M. (1988). Farm Productivity and Rural Poverty in India, FCND Discussion Paper No. 42 International Food Policy Research Institute. Washington, D.C.

⁶⁶ Byerlee et al. (2005), Agriculture, Rural Development, and Pro-poor Growth. Country Experiences in the Post-Reform Era. Pp.20-21. Agriculture and Rural Development Discussion Paper 21 The World Bank Washington D.C.

⁶⁷ World Bank (2005): Agricultural growth for the poor: an agenda for development. The International Bank for Reconstruction and Development/The World Bank.

World Bank (2008): World development report 2008: Agriculture for development. International Bank for Reconstruction and Development/ The world Bank. Washington D.C.

⁶⁸ FAO 2009: State Of Food and Insecurity (SOFI) 2009. FAO Rome.

stimulate broad-based productivity growth in food staples and sustain overall productivity gains over decades, if the Asian record of poverty reduction is to be repeated”.

Agriculture however, in addition to direct income generation accruing to poor is also seen to play an indirect role on poverty reduction through its support to local expenditure on items produced by poor people outside agriculture but living in the same territory. Mellors (2001), with reference to Pakistan, states that: *“The poor in rural areas are heavily concentrated in the rural non-farm sector. They produce non-tradable goods and services. That is, local demand is essential to their growth. It is rising agricultural incomes that provide that growth in local demand. Thus, agriculture’s massive impact on poverty is indirect, working through expenditures on the rural non-farm sector”.* Analogous findings, mutatis mutandis, are reported by Ryan & Miller (2003) who carry out a CGE-based analysis, for Chile⁶⁹. Furthermore, De Janvry and Sadoulet (2000)⁷⁰, based on the analysis of Latin-American countries, highlight that there is no ‘one fits all’ strategy to reduce poverty, particularly rural poverty, as the rural poor are highly diversified. *“Heterogeneous access to assets, heterogeneous exposure to market failures and to institutional gaps and heterogeneous access to public goods induce income earning strategies that are highly diverse across households”.* This in particular, implies that off-farm activities, including migration, generates a complementary income to the agricultural income, which is important for many households, and indeed, for some of them, constitutes a valid exit strategy from poverty⁷¹.

These considerations allow us to identify, beyond agriculture-led development processes, the existence of a **“rural development”** paradigm, where the accent is put, not only, or not mainly on agriculture *per se*, but on the development of a set of economic relationships among agents living in the same rural space and on the relationship of the rural space with other spaces, whether be they urban, peri-urban or other rural spaces. This refers for instance to “Clusters” where for some historical, technical or economic or cultural reasons homogeneous or closely interlinked activities are implemented. Policies to maintain and enhance these clusters play an important role in the development process (Timpano et al. 2008, European Commission)⁷². Local value chains integrating primary agricultural production, processing and marketing are examples of such clusters. More in general, the rural development paradigm embodies the concept of “territorial development”, which, in turn embodies the concept of “community-based development” broadly intended, i.e. not only seen as an intra-community process but a process involving the relationships of a given community with other communities in the national, or even international arena (FAO, 2005)⁷³.

⁶⁹ Raúl O’Ryan, Sebastián Miller, 2003. The Role of Agriculture in Poverty Alleviation, Income Distribution and Economic Development: A CGE Analysis for Chile. Roles of Agriculture (ROA) project FAO-UN Rome.

⁷⁰ De Janvry A., Sadoulet E. (2000), Rural Poverty in Latin America: Determinants and Exit Paths, Food Policy, 25, 389-409

⁷¹ On the links between agriculture and poverty reduction in a longer term perspective see also Hazell, P. (1999). Agricultural Growth, Poverty Alleviation, and Environmental Sustainability: Having it All, IFPRI, Washington D.C. and Hazell, P. and Haggblade, S. (1993). Farm/non-farm growth linkages and the welfare of the poor. In: Lipton, M. and van de Gaag, J. (Eds.), Including the poor. The World Bank, Washington, D.C.

⁷² Timpano, F. Piva M. (2008) (Editors). Cluster Policies and Local Development. Vita e Pensiero ed. Milano. European Commission (2008) The Concept of Clusters and Cluster Policies and their Role for Competitiveness and Innovation: Main Statistical Results and Lessons Learned. *Commission Staff Working Document SEC (2008) Europe INNOVA / PRO INNO Europe paper N° 9.*

⁷³ FAO (2005): An approach to rural development: Participatory and Negotiated Territorial Development (PNTD). Rural Development Division Food and Agriculture Organization of the United Nations (FAO) April 2005. http://www.fao.org/sd/dim_pe2/docs/pe2_050402d1_en.pdf

7 External factors *versus* growth, poverty, technology and agricultural development

The question why it seems extremely difficult for some countries *to get a seat on the development bus*, i.e. to get out of persistent poverty, extreme inequality, latent or explicit lasting conflicts, diffused food and health insecurity etc, has puzzled economists (and non-economists as well) for many decades. Development (or “non-development”) processes do not happen in a “vacuum” but are affected by and intrinsically linked to the environment in which they occur. Therefore, it is wise to wonder how, why and to what extent external factors, and related external shocks, intended as sudden, significant and persistent variations of one or more of these factors affect the development (or under-development) dynamics of selected countries or groups of countries. An associated question is why some economies are more resilient than others to external shocks thus remaining more stably on their growth path.

External factors influencing less industrialised economies are many and diverse and have been considered by different branches of economics, sociology and anthropology literature. All this makes it impossible to provide a comprehensive literature review. Nevertheless, an attempt will be made to focus on selected factors which more or less recently captured the attention of the development community. Among them, we can mention:

- **international trade-related factors**, such as international trade treaties (WTO membership and related clauses and conditions; bilateral trade agreements, regional groupings and associations, custom unions and free trade zones and other treaties and agreements directly influencing international trade), all this influencing the degree of openness or protection of countries;
- **Other international policy frameworks** (e.g.: international agreements constituting frameworks for national policies, such as MDGs, the “*Right to food*” convention, other human rights and international juridical engagements)⁷⁴;
- **Immigration, emigration and remittances**, influencing income-saving levels of zones of origin and destination, the overall macro-economic performances of origin countries in the short medium run and demography in the medium/long run
- **Foreign Direct Investment (FDI)**;
- **Official Development Assistance (ODA)**;
- **Global macro-economic cycle**, influencing all the above factors through e.g. shifts in the demand of commodities or foreign labour, changes in the level of ODA and/or FDI etc.
- **International financial and monetary agreements** (Rules and regulations related to international financial transactions, borrowing, lending, monetary stability etc.);
- **Natural resource management agreements** (e.g. international watershed management and water use agreements);
- **Natural hazards** (such as floods, droughts, trans-boundary pests and diseases).

The implications, scope, short and long-term consequences of all the above-mentioned factors on national socio-economic systems are determined by: i) the “state” of each specific country, both in the short-medium term (e.g. the potential volume of its international trade, quantity and quality of human and physical capital available, availability of natural resources) and in the long-term (e.g. geographic position, natural hazards etc.); and ii) the interactions occurring between domestic and international (foreign) actors.

⁷⁴ On the importance of global policy frameworks for national development and national policy making processes see e.g. Cistulli (2007). Cistulli V. (2007): *The Global Policy Environment: a Conceptual Framework*. EASYPol series n. 99 FAO UN – Rome. www.fao.org/easypol

Countries carry out domestic production/consumption activities and trade with their partners under the influence of the above mentioned factors. Indeed, these factors, together with a multitude of other domestic factors, such as: the economic behaviour of domestic agents (producers and consumers) ; the role played by the government; the degree of integration and homogeneity of the society; the state of infrastructures; the degree, effectiveness and enforceability of domestic legislation etc, all contribute to shape the performance of an economic system in the short, medium and long term.

The links between internal and external factors in determining the performance of an economic system have been analysed from different perspectives in different periods. Following Gore (2000)⁷⁵ “*Before the propagation of the Washington Consensus in the 1980s, mainstream explanations of the development process [...] were conducted within a national frame of reference [...] (and) economic and social trends within countries were explained, in the mainstream on the basis of conditions within countries themselves, i.e. as a result of national factors*”. The author, however, highlights that an important counter current came from the “structuralists” (particularly in Latin America), which focused on the importance of “centre-periphery” relations and the links between internal and external factors.

Structuralist economics originated within the Economic Commission for Latin America (ECLA) in the early fifties by the works of its director Raul Prebisch (1950)⁷⁶. Less industrialised countries have to rely on imports to get industrial, manufactured goods or services; such as capital equipment, domestic appliances, office equipment, cars etc. To countervail imports of manufactured goods and services they tend to specialise in one or a few export commodities, usually agricultural crops, but also other primary commodities like timber or ores. Prebisch argued that different sets of goods are produced by less industrialised countries with respect to the industrialised ones. The weak institutions and low bargaining power in less-industrialized countries do not allow for starting up the process of accumulation of primary capital and the consequent development process. The so called “*Prebisch-Singer hypothesis*”⁷⁷, based on these considerations, argued that the degradation of terms of trade due to the different income elasticities of the two sets of goods, other things being equal, would progressively impoverish less industrialised countries to the advantage of the industrialized ones. This implies that countries should adopt a strategic behaviour towards the achievement of national objectives, using a mix of policies comprising selective openings associated with protective measures in sensitive areas (e.g. infant industry, minimum food stocks etc).

Since the 1980s, a radically different vision of the links between internal and external factors was adopted by economists adhering to the so called “Washington consensus”, as defined by Williamson (1990)⁷⁸. It was advocated and supported from the 1980s to the early 2000s in

⁷⁵ Gore (2000): The rise and fall of the Washington Consensus as a Paradigm for Developing Countries. World Development Vol 28 No 5 pp 789-804, 2000

⁷⁶ Prebisch R (1950). The Economic Development of Latin America and its Principal Problems. United Nations Dept. of Economic Affairs, 1950.

⁷⁷ For the work of Singer on trade and investment linkages and terms of trade see: Singer (1950) and Singer (1998).

Singer, H. W. (1950) The distribution of gains between investing and borrowing countries. *American Economic Review, Papers and Proceedings* 40 (2 (May), 473-485

Singer (1998) The terms of trade fifty years late: convergence and divergence South Letter No. 30, Volume 1, 1998 The south centre <http://www.southcentre.org>

⁷⁸ Williamson (1990) defined a package of policy measures, specifically suitable for Latin American countries facing economic crises, comprising: 1) Fiscal discipline; 2) A redirection of public expenditure priorities towards

various forms and degrees by almost all bilateral and multilateral development agencies. In particular, the prescriptions related to trade liberalisation, conceptually rooted in the Ricardian comparative advantage (Ricardo, 1817)⁷⁹, and liberalisation of inflows of Foreign Direct Investment (FDI), put a direct focus on the importance for an economic system to be “contaminated” by external factors. These would have to affect both capital accumulation processes (the FDI) and the sources and destination of goods and services, to be purchased or sold also on external markets. For instance, Josling (1998)⁸⁰ advocated for trade liberalization in agriculture as a way to reduce foodstuff costs and improve the allocation of scarce resources, Krueger (2001)⁸¹ criticized import substitution strategies and emphasize the importance of international trade for economic development, Berg and Krueger (2003)⁸² claimed that there is a strong positive relationship between openness to international trade and growth.

According to the “*Washington Consensus*” development paradigm, international markets would always be available to absorb exports and provide imports at prices independent from the quantities of commodities traded. This applies in particular to “small countries”, which are typically price-takers as the volumes of commodities absorbed by or provided to foreign partners are negligible in respect of the total volumes traded on the international markets. In addition, foreign investment would complement domestic savings and would bring with it new ‘modern’ technologies, to the benefit of the less industrialised economies. Countries that adjust their domestic policies accordingly and enter the global arena would benefit from the new ‘globalised’ environment. Others which do not adjust would be marginalised from the ‘development’ mainstream (Dollar and Kraay, 2004)⁸³.

Whether less industrialised countries should adhere to the ‘Washington consensus’ paradigm, somewhat revised in the later years to accommodate some social concerns, or should adopt other approaches based on ‘structuralist’ analysis, is an open question among development economists. Pingali (2006)⁸⁴ for example, attempts a nuanced answer to the question above. He browses some likely impacts of globalisation on agriculture, taking into account some relatively recent phenomena such as increased vertical integration, changing food production systems and technologies and the role of supermarkets. He adopts a (quite deterministic) tripartite classification of countries, i.e.: *i) countries at the low end of the transformation process; ii) countries in the process of agricultural modernization; iii) countries at the high end of the transformation process*, and for each of the groups identifies some challenges and

fields offering both high economic returns and the potential to improve income distribution, such as primary health care, primary education, and infrastructure. 3) Tax reform (to lower marginal rates and broaden the tax base); 4) Interest rate liberalisation; 5) A competitive exchange rate; 6) Trade liberalisation; 7) Liberalisation of FDI inflows; 8) Privatisation. 9) Deregulation (in the sense of abolishing barriers to entry and exit). 10) Secure property rights.

Williamson, J. (1990), "What Washington Means by Policy Reform", in J. Williamson, ed., *Latin American Adjustment: How Much Has Happened?* (Washington: Institute for International Economics).

⁷⁹ Ricardo D. (1817): *On the Principles of Political Economy and Taxation*.

<http://www.econlib.org/library/Ricardo/ricP.html>

⁸⁰ Josling T. (1998): *Agricultural trade policy: completing the reform. Policy analyses in international economics*, 53. Institute for International Economics, Washington D.C.

⁸¹ Krueger, A. (1998), *Why Trade Liberalisation is Good for Growth*. *The Economic Journal*, 108: 1513–1522.

⁸² Berg A., Krueger A., (2003): *Trade growth and Poverty: a selective survey*, in: *Annual conference on development economics: the new development agenda*. Edited by Pleskovic B. and Stern N..International Bank for Reconstruction /World Bank. Washington D.C.

⁸³ Dollar, D., Kraay, A. (2004), *Trade, Growth, and Poverty*. *The Economic Journal*, 114: F22–F49.

⁸⁴ Pingali P. (2006) *Agricultural Growth and Economic Development: a view through the globalization lens*. FAO- Rome

opportunities, concluding that: *“trade liberalization and global inter-connectedness poses new opportunities and challenges for developing countries...[but]... the transition will be pro-poor to the extent that production and post harvest activities continue to be labour intensive and to the extent that there is an expansion in employment opportunities outside agriculture”*. In addition, *“trade liberalization should go hand in hand with public support for improving agriculture productivity”*.

Regarding the FDI, issues arise on how to retain the surplus generated by national economies in order to feed their development process in a globalised environment characterised by strong interdependencies, but also by deep asymmetries (know-how, technology, market power, human capital endowment etc). The strength of national institutions is a key factor enabling less-industrialised countries to retain a satisfactory share of value added and other ‘spill-over benefits’ (Romer, 1986) generated by foreign-led companies. OECD (2002)⁸⁵, in a report prepared within the framework of the activities of the *“Committee on International Investment and Multinational Enterprises (CIME)”*, after placing a lot of emphasis on the benefits of FDI, admit that *“Potential drawbacks include a deterioration of the balance of payments as profits are repatriated (albeit often offset by incoming FDI), a lack of positive linkages with local communities, the potentially harmful environmental impact of FDI, especially in the extractive and heavy industries, social disruptions of accelerated commercialisation in less developed countries, and the effects on competition in national markets. Moreover, some host country authorities perceive an increasing dependence on internationally operating enterprises as representing a loss of political sovereignty”*. It is apparent that these drawbacks look even more severe in the absence of enforceable labour market regulations and trade unions, ability to set and maintain decent wage levels, and other civil society active components. These issues are also particularly relevant in the context of the recent wave of “land grabbing” in less industrialised countries by foreign investors and sovereign funds, on which FAO called for a *‘binding code of conduct’* (FAO, 2009)⁸⁶.

The relevance of FDI for national development should also be assessed in the light of the different strategies that foreign investors may adopt to expatriate earnings, by bypassing, or even violating, national legislations. Brealey and Myers (1991)⁸⁷, in their manual *“Principles of Corporate finance”*, suggest some strategies: *“...Multinational companies are always exposed to the criticism that they siphon funds out of countries in which they do business, and therefore, governments are tempted to limit their freedom to repatriate profits [...]. Here, once again, a little forethought can help. For example, there are often more onerous restrictions on the payments of dividends to the parent than on the payment of interest or principal on debt. So, it may be better for the parent to put up part of the funds in the form of a loan. Royalty payments and management fees are less politically sensitive than dividends, particularly if they are levied equally on all the foreign operations”*. Last but not least, *“A company can also, within limits, alter the price of goods that are bought or sold within the group and can require more or less prompt payment for such sales”*.

More in general, some authors tend to de-emphasise the importance of international links for the economic performance of economic systems, attributing more importance to domestic

⁸⁵ OECD (2002): Foreign Direct Investment for Development: Maximizing Benefits, Minimizing Costs. Paris, 2002

⁸⁶ FAO (2009): From Land Grab to Win-Win. Economic and social perspectives. Policy brief 4, June 2009 FAO – Rome.

⁸⁷ Brealey R.A. and Myers S.C: (1991) Principles of corporate Finance, Fourth Edition (p. 880) Mc Graw Hill.

factors. For example, Stiglitz (1998)⁸⁸ claims that successful development is more a matter of designing development strategies which embody a holistic vision of the transformation of the whole society, which goes well beyond the Washington Consensus or other specific recipes addressing specific aspects of socio-economic systems, e.g. greater or lesser role of the government, greater or lesser openness to international trade, greater or lesser functioning of markets, balancing macro-economic imbalances etc. While there is no doubt that each of these aspects is important per se, focusing on one or few of these aspects may not lead to appreciable successes in development, unless a consistent, coherent and complete “*vision of the future combined with a framework for realizing that vision*” is designed. In this framework, emphasis is put on elements of social and organizational capital such as: social cohesion, consensus on common goals, inclusiveness, and appropriate institutions enabling the societies to achieve all the above. Acemoglu et al. (2001)⁸⁹ underline the importance of domestic institutions in less-industrialized countries to steer development processes, and, specifically, to generate per capita income growth. Rodrik (1999)⁹⁰, by means of some econometric work, analyses the dynamics of growth of several countries since 1975, trying to identify the determinants of economic performances. The author emphasises, in particular, the manner in which social conflicts interact with external shock on the one hand, and the domestic institutions of conflict-management on the other. The idea is that “divided” societies, i.e. societies characterised by domestic dichotomies (ethnic, religious, social etc) insufficiently endowed with instruments for conflict management and resolution, are less resilient than others to external shocks, thus showing more erratic growth paths⁹¹.

Rodriguez and Rodrik (2001)⁹² take a critical view of the massive evidence, provided in the trade literature, on the positive correlation between openness to international trade and growth. They question the variables used as proxies for trade openness and the quality of the analyses on which this evidence is based. The importance assigned to trade openness as a growth-determining factor is also related to the approaches used to investigate the link between these two variables. For instance, Taylor (2006)⁹³ criticizes most of the CGE modelling efforts of prominent international organizations advocating more openness to promote growth as they adopt self-fulfilling approaches, i.e. analytical methods designed to provide the “right” answers.

Raddaz (2007)⁹⁴ followed a comprehensive approach, going beyond the considerations of terms of trade only, and found that external shocks, namely terms-of-trade variations, natural disasters and the international economic cycle⁹⁵ explain only a small fraction of performance

⁸⁸ Stiglitz, J. (1998) Towards a New Paradigm for Development: Strategies, Policies, and Processes. Prebisch lecture at UNCTAD, Geneva October 19, 1998.

⁸⁹ Acemoglu D., Johnson S., Robinson J.A., (2001): The Colonial Origins of Comparative Development: An Empirical Investigation. The American economic Review. December 2001

⁹⁰ Rodrik, D. (1999). Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses Journal of Economic Growth Volume 4, Number 4 / December, 1999.

⁹¹ However the open question to this regard is to what extent domestic dichotomies, or at least their dramatic consequences on welfare in periods of crisis, could be considered endogenous tout court.

⁹² Rodriguez F., Rodrik D. (2001): [Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence](#) . NBER Macroeconomics Annual 2000, Volume 15.

⁹³ Taylor L, Armin von R. (2006): Modeling the impact of trade liberalization. A critique of computable general equilibrium models. Oxfam research report July 2006.

⁹⁴ Raddaz C. (2007) Are external shocks responsible for the instability of output in low-income countries? Journal of Development Economics 84 (2007) 155–187.

⁹⁵ The international cycle is measured on the basis of variations of the aggregated GDP of industrialized countries. Some counter-evidence on the importance of the international economic cycle can be found in FAO (2009), where emphasis is put on the role of remittances as a support to household incomes in rural areas.

variability of Low-Income countries. However Raddaz himself reports that Kose and Riezman (2001)⁹⁶, using calibrated general equilibrium small-open-economy models (CGEs) instead of econometric approaches, found that compared with interest rates and productivity shocks, terms-of-trade shocks can explain a large fraction (around 50%) of output fluctuations in low-income countries. This seems to suggest that CGEs better allow highlighting the relationship between terms of trade and country performance.

An additional consequence of the observed limitations and drawbacks of the “Washington consensus” has been the surge of the microeconomic focus of development processes. Increasing attention, beyond global issues such as climate change and global energy constraints, has been paid both in the literature and in the development practice to individual or household behaviour. This has given rise for instance to the surge of experimental studies in development economics (Banerjee and Duflo)⁹⁷, a possibly increased emphasis on household-focused short-term interventions to the detriment of longer term vision and plans by donors and international agencies, a piece-meal, bottom-up approach to development issues (the development “Searchers” as opposed to the “Planners” in Easterly, 2006)⁹⁸. To some extent, this micro-focused approach to development could be seen as a way of promoting development by directly providing “functionings” and improving “capabilities” of individuals, i.e. promoting development by increasing individual “freedom” (Sen, 1999)⁹⁹.

In alternative, this emerging micro-focused approach could be seen as a way to avoid the troubles one would face in attempting to fix the macro-structural imbalances of the global economic system, as were highlighted for instance, by Prebisch. However, to a different degree, many authors, even if not always supporting the Prebisch-Singer hypothesis as literally intended, recognize that in the globalized economic world there are asymmetries, international markets are far from being competitive and emphasise the risks and drawbacks of commodity-dependent peripheral countries. Implicitly or explicitly some of them support a more “strategic” approach to development, say a sort of “*strategic openness*” development paradigm, balancing openness and protection differentiating across commodities, partners, periods etc, rather than a simple and blind adherence to the ‘Washington consensus’ approach. For example, Gilbert (2006)¹⁰⁰ considers that; “*Relative to price of manufactured goods, primary commodity prices have exhibited a variable but steady downward trend over the past century*”. In addition he reports that Grilli and Yang (1988)¹⁰¹ documented the long term decline of primary commodity prices and shows a graph where the deflated IMF commodity index displays a 1.33% decline per annum between 1960 to 2003. After analysing price trends and volatility jointly, he concludes that “*the adverse price trend experienced by almost all the agricultural primary commodities [...] is problematic for primary producing developing countries because, with inelastic demand and elastic supply, the incidence of*

⁹⁶ Kose, M., Riezman, R., 2001. Trade shocks and macroeconomic fluctuations in Africa. *Journal of Development Economics* 65, 55–80.

⁹⁷ Banerjee A.V., Duflo E (2008): *The Experimental Approach to Development Economics* Massachusetts Institute of technology, Department of Economics. Mimeo. September 2008. <http://econ-www.mit.edu/files/3158>.

⁹⁸ Easterly W. (2006): *The white man’s burden: why the West’s approach to aid the rest has done so much harm and so little good*. Penguin Press, New York.

⁹⁹ Sen A., (1999): *Development as Freedom*. Alfred A. Knopf, New York, 1999.

¹⁰⁰ Gilbert C. L. (2006). Trends and volatility in Agricultural Commodity Prices. In “*Agricultural Commodity markets and Trade: Analyzing Market Structure and Instability*”. Edited by A Sarris and D. Hallam. FAO UN-Edward Elgar 2006.

¹⁰¹ Grilli E.R. and Yang M.C. (1988): Primary commodity prices, manufactured goods prices and the terms of trade of developing countries: what the long run shows. *World Bank Economic Review* , 2, 1-47.

productivity advance is very largely on consumers, typically in developed countries. Collectively, developing countries have little incentive to undertake productivity-enhancing investments [...]. The result is that developing country farmers are forced to run fast in order to remain at the same place. Liberalization programmes, often sponsored by bilateral and multi-lateral development agencies have accelerated this process”.

Also Cashin and Mc Dermot (2006)¹⁰², analyse the secular trends of commodities. While refraining from any conclusive judgement about the validity of the Prebisch-Singer hypothesis, notably about the existence of any permanent downward trends in commodity prices, they conclude that, in any case, *“the long lasting variability of commodity prices is problematic, because ‘many developing countries continue to rely on a few commodities for the lion’s share of their export earnings. Therefore, a high degree of variability in commodity prices has serious consequences for commodity dependent countries. In particular, shifts in commodity prices are typically reflected in the terms of trade, real incomes and fiscal positions of commodity dependent countries”.* Small countries having, by definition, no power on the markets of the main commodities internationally traded, are assumed to be particularly vulnerable to external shocks, in particular to shocks directly affecting those markets, such as shortages or sudden price increases in import markets or decreases in export ones.

These considerations are summarized by Stiglitz (2006)¹⁰³: *“...There are some circumstances in which trade liberalisation brings enormous benefits –when there are good risk markets, when there is full employment, when an economy is mature. But none of these conditions are satisfied in developing countries. With full employment, a worker who loses his job to new imports quickly finds another; and the movement from low-productivity protected sectors to high-productivity export sectors leads to growth and increased wages. But if there is high unemployment, a worker who loses his job may remain unemployed. A move from a low-productivity, protected sector to the unemployment pool does not increase growth, but it does increase poverty. Liberalisation can expose countries to enormous risks, and poor countries – and especially the poor people in those countries – are ill equipped to cope with those risks. Perhaps most importantly, successful development means going from stagnant traditional sectors with low productivity to more modern sectors with faster increases in productivity. But without protection, developing countries cannot compete in the modern sector. They are condemned to remain in the low growth part of the global economy. South Korea understood this. Thirty-five years ago, those who advocated free trade essentially told Korea to stick with rice farming. But Korea knew that even if it were successful in improving productivity in rice farming, it would be a poor country. It had to industrialise...”*

The vulnerability of “small” countries to natural disasters, terms-of –trade shocks and other adverse shocks is accentuated when they are “low” or “lower-middle” income countries¹⁰⁴ (World Bank, 2004)¹⁰⁵. Among these countries, “Low-Income Food Deficit Countries”

¹⁰² Cashin P. and Mc Dermot C.J. (2006). Properties of international commodity prices: identifying trends, cycles and shocks. In “Agricultural Commodity markets and Trade: Analyzing Market Structure and Instability”. Edited by A Sarris and D. Hallam. FAO UN-Edward Elgar 2006.

¹⁰³ Stiglitz J. (2006): Social justice and global trade. Social Europe the journal of the European left. Autumn 2006

¹⁰⁴ As classified by the World Bank (Atlas methodology), i.e. countries with a per capita Gross National Income (GNP) less than \$ 3,595 (classification 2008, based on 2006 data). See: <http://siteresources.worldbank.org/DATASTATISTICS/Resources/OGHIST.xls>

¹⁰⁵ World Bank (2004): Global monitoring report. Policies and Actions for Achieving the Millennium Development Goals and Related Outcomes. World Bank, Washington, D.C.

(LIFDC), as classified by FAO UN¹⁰⁶ look even more vulnerable. These countries are considered particularly sensitive on food security grounds as their capacity to access food is directly dependent upon many factors such as: a) prices of food commodities on the international markets; b) prices of main export commodities on the international markets; c) macro-economic stability, including equilibrium of the balance of trade; d) efficiency of logistic facilities and other infrastructures (transport, storage, distribution facilities etc); e) flexibility/resilience of domestic food sector to absorb or adapt to external shocks.

Flexibility and resilience of the domestic food sector and medium-long term equilibrium of the trade balance, are more difficult to achieve by those LIFDC which rely on imports for a significant part of their energy needs. Resilience of the food sector is based on the capacity of the country to expand imports whenever the domestic production is deficient. However, Soaring oil and gas prices impose an additional burden both on the trade balance, through increased oil bills, and on the household budgets through increased food prices due to the increase of imported inputs. This implies that, if a food deficit materializes in association to a rise of international oil and gas prices, little or no margins are left to complement domestic food output with imported food items. Therefore, for LIFDC net energy importers, external shocks on main import-export markets may lead to a significant and sudden worsening of the terms of trade with significant consequences in terms of macro-economic stability and welfare of the population. The international community has recently attributed great importance to external shocks as factors affecting the welfare of populations, due to “soaring food prices” in 2007-2008 and 2011. These crises are assumed to have heavily worsened poverty and food security in LIFDC¹⁰⁷.

Much less emphasis, at least in terms of its impacts on development perspectives and welfare of LIFDC, was put on the soaring prices of energy (oil in particular) from 2003 to 2008. However, while net oil exporting countries experienced huge windfall profits in respect of the 2003 base price, as reported by Bellù (2008)¹⁰⁸, net importing countries had to afford additional oil bills, ranging between 1 % of their GDP in 2006 for most OECD countries up to almost 5% for selected LIFDCs. More than likely, these additional energy bills generated persistent macro-economic instability, decreased overall welfare of the population, increased poverty and hampered their long term development perspectives.

¹⁰⁶ FAO UN classifies as “*Low-Income Food Deficit Countries (LIFDC)*” those countries: a) classified by the World Bank as “International Development Agency (IDA) eligible and 20 years IBRD loans” (Operational Lending Category II, i.e. per capita GNI less than 1,735 US\$. Classification 2008 based on 2006 data); b) net (i.e. gross imports less gross exports) food trade position of a country averaged over the preceding three years. Trade volumes for a broad basket of basic foodstuffs (cereals, roots and tubers, pulses, oilseeds and oils other than tree crop oils, meat and dairy products) are converted and aggregated by the calorie content of individual commodities; c) Self-exclusion criterion (countries that meet the above two criteria but request to be excluded from the LIFDC category. See <http://www.fao.org/countryprofiles/lifdc.asp>

¹⁰⁷ The FAO UN, in partnership with other organisations, launched in December 2007 the “Initiative for Soaring Food Prices” (ISFP), aimed at reducing food insecurity generated in LIFDC by increasing food prices. See (FAO, 2008), Initiative for Soaring Food Prices: programme document, May 2008 FAO UN –Rome. (<http://www.fao.org/isfp/isfp-home/en/>) The ISFP sustained, among other things, the “Emergency Rice Initiative” in 11 countries in West Africa: Benin, Burkina Faso, Cameroon, Côte d’Ivoire, Liberia, Mali, Mauritania, Nigeria, Senegal, Sierra Leone and Togo, aimed at “significantly increase their rice production as of 2008 and 2009,” (see Africa Rice Center (WARDA) www.warda.org.)

¹⁰⁸ Bellù (2008) reports that windfall profits in 2006 for example amounted to almost 16 % of GDP for Cameroon, 22% for Nigeria, 25% for Angola, 28% for Chad, up to almost 50% for Equatorial Guinea.

Bellù L.G. (2008): Windfall Oil Profits and Oil Bills: Some Policy Implications for Sustainable Development. Mimeo.

The considerations put forward above regarding the position of different countries with respect to the rest of the world, suggests that the development potential and possibly the development paradigm adopted or adoptable varies according to the features of the countries. Most oil-mineral-timber endowed countries have enjoyed and are still currently enjoying the possibility of accumulating financial resources to start-up and feed development processes through the export of primary resources. This “*primary-resource export-led*” development paradigm, adopted for instance by most oil producing countries, particularly in the Middle East and Africa, however appears to have some drawbacks. The export of primary commodities as been often associated to the “Dutch disease” problem (The Economist, 1977; Corden and Neary, 1982)¹⁰⁹, i.e. the real appreciation of the domestic currency due to the high foreign currency inflow inside, not permitting the development of other export sectors which are not competitive given the high exchange rate. Such phenomenon has negative effects on development, particularly in the medium-long run (Collier and Goderis, 2009)¹¹⁰ and implies a missed opportunity of a labour-intensive export-led development of countries mostly relying on the export of natural resources, see: (Sachs and Warner, 2001)¹¹¹. In addition, in absence of appropriate mechanisms of “checks and balances” natural resource-based economic systems provide a fertile ground for rent-seeking behaviours, detrimental to the instauration of good governance practices (Collier and Hoeffler, 2009)¹¹².

The above-mentioned export-led development, indeed, contrasts with a type of development based on the export of low-wage labour-intensive (manufactured) commodities, such as China (as described in Chow, 1993) i.e. a “*low-wage labour-intensive export-led*” development paradigm. These latter development paradigms are often associated to a process of “*import substitution*” *industrialization*.

A possibly intermediate export-oriented development paradigm is one adopted by countries which are neither endowed with exportable primary resources nor with any significant industrial system. This is the case of countries producing and exporting mainly primary or semi-processed agricultural “tropical” commodities (tea, coffee, cocoa, cotton, bananas etc). These countries base their development on an “*agricultural commodity export-led*” development paradigm. In addition, countries with a weak industrial sector may find themselves with excess labour because the primary sector is not capable to absorb all the existing labour force even at subsistence wage levels, due to the lack of complementary factors (e.g. capital, infrastructures) and/or natural resources (land, water etc). Therefore, they may adopt an “*Emigration-based*” development paradigm, essentially based on consumption/accumulation mechanisms driven by remittances of the expatriated. Conversely, other countries which are able to attract labour thanks to their endowments (oil, minerals, land etc) may further develop by adopting an “*Immigration-based*” development paradigm.

A further consideration applies to financial sources that may be used to fund capital accumulation to start up and feed development processes. Further to funds from exports,

¹⁰⁹ The Economist (1977): The Dutch Disease. November 26, 1977. pp. 82-83.

Corden, W. M., Neary, J. P. (1982): Booming sector and Dutch disease economics: a survey. Economic Journal, Vol 92.

¹¹⁰ Collier P. Goderis B. (2009): Commodity Prices, Growth, and the Natural Resource Curse: Reconciling a Conundrum. Department of Economics, University of Oxford.

¹¹¹ Sachs, J. D., Warner, A. M (2001) The curse of natural resources, European Economic Review, Volume 45, Issues 4-6, May 2001, Pages 827-838.

¹¹² Collier, P., Hoeffler A.,(2009): Testing the Neocon Agenda: Democracy in Resource-Rich Societies,” *European Economic Review* 53 (2009), 293-308.

selected countries heavily rely on FDI, adhering to a sort of “*FDI-based*” development paradigm. Others instead have to rely on a “*foreign aid-based*” development, whenever foreign aid is not fully absorbed by immediate emergency-related consumption of subsistence goods (e.g. staple food), it is actually spent to fund development (Easterly, 2008) and it is actually effective to support it (Easterly, 2006) ¹¹³.

8 Development paradigms identified

The review of the literature on the ingredients of development and on selected mutual relationships allowed this study to identify a number of possible development paradigms with the following summary features:

- ***Free-market Trickle-down Growth-led*** development. Under this paradigm, growth, even if it accrues to rich, trickles-down to poor through the normal income distribution channels and the functioning of free markets, associated to the withdrawal of national governments, the liberalisation of foreign trade and the promotion of foreign investments.
- ***Pro-poor (broad-based or balanced) growth-led*** development. Growth matters for development only if associated to an equitable distribution of income, to be achieved through the promotion of activities generating a broad-based primary income distribution and institutional mechanisms (e.g. fiscal systems) ensuring an equitable secondary distribution of real income, without necessarily relying on trickle-down mechanisms.
- ***Low-wage industry-led*** development. This model is characterised by capital accumulation especially for the promotion of heavy industry, at least in a first stage, which leads to investing a large share of national output and compressing consumption, thus extracting the surplus from labour. In many situations this has occurred or occurs essentially at the expense of the rural poor who migrate to urban areas.
- ***Low-wage labour-intensive export-led*** development. This type of development is based on the export of labour-intensive manufactured commodities in a context low-wage. It is a variant of the previous paradigm where the focus is placed on export-oriented industrialization (The case of China as described in Chow, 1993 could fit into this category). These latter development paradigms are often associated to a process of “*import substitution*” industrialization.
- ***Agriculture-based*** development. Agricultural growth is seen as directly contributing to the various dimensions of socio-economic development, not only through its contributions to the general growth of the economic system but also for its specific contributions to poverty reduction (in its small-scale version), resilience of local communities, preservation of the environment etc.

¹¹³ Easterly W., Pfütze T. (2008): Where Does the Money Go? Best and Worst Practices in Foreign Aid. Journal of Economic Perspectives—Volume 22, Number 2—Spring 2008.

Easterly W., (2006): Reliving the 50s: the Big Push, Poverty Traps, and Takeoffs in Economic Development. Mimeo http://williamasterly.files.wordpress.com/2010/08/48_easterly_relivingthe50s_prp.pdf.

- **Endogenous growth-based** development. Technological changes required to support economic growth and by way of consequence development don't need to be "exogenous", i.e. generated from outside national socio-economic systems and "transferred". Investment and activities generate "spillovers" e.g. by "learning-by-doing" processes generating knowledge, thus technology improvements. Emphasis is placed on policies favouring local processes, context-specific technologies and the creation and maintenance of human capital.
- **Rural development** paradigm. Here the accent is placed, not only, or not mainly on agriculture or any other sector *per se*, but on the socio-economic relationships among agents present in the same rural space and also on the relationship of the rural space as regards other spaces, whether be they urban, peri-urban or rural. This concept of development fits into the frame of "territorial development" and embodies the concept of "community-based development". Policies to maintain and enhance the above-mentioned relationships play a key role in the development process.
- **Washington Consensus-based** development. Development is only possible if countries are able to benefit from the 'globalised' environment. They have to liberalize foreign trade, privatize public assets, lower marginal tax rates and broaden the tax base; keep tight public deficits, refrain from market interventions, liberalize exchange and interest rates, allow free FDI. This will complement domestic savings and bring new 'modern' technologies. Countries which do not adjust their policies accordingly are most likely marginalised from the 'development' mainstream.
- **Strategic openness-based** development. Balancing openness and protection by differentiating across commodities, partners, periods etc., rather than simply and blindly adhering to the 'Washington consensus'. This implies for example the protection of infant industry, of strategic sectors including food producing ones, preferential trade agreements with selected countries with complementary economies etc, building comparative advantages on selected commodities also through direct public interventions etc.
- **Exhaustible-resource export-led** development. Most oil-mineral-timber endowed countries have enjoyed and are still currently enjoying the possibility of accumulating financial resources to start-up and feed development processes through the export of primary resources. This is the type of development path adopted for instance by most oil producing countries, particularly in the Middle East and Africa.
- **Agricultural commodity export-led** development. This export-oriented development paradigm is often adopted by countries which are neither endowed with exportable primary resources nor with any significant industrial system. This is the case of countries producing and exporting mainly primary or semi-processed agricultural "tropical" commodities (tea, coffee, cocoa, cotton, bananas etc).
- **Emigration-based** development. Countries with a weak industrial sector may find themselves with excess labour because the primary sector is not capable to absorb all the existing labour force even at subsistence wage levels, due to the lack of complementary factors (e.g. capital, infrastructures) and/or natural resources (land, water etc). Their development (including their social stability) is substantially based

on consumption/accumulation mechanisms driven by remittances of expatriated workers.

- ***Immigration-based*** development. Countries able to attract labour thanks to financial resources accumulated through the export of their natural resource base (such as selected Gulf countries) or thanks to a consolidated industry-services system (physical capital, know-how etc) may further develop by attracting labour from excess labour countries and extract labour surplus to further feed their development process.
- ***FDI-based*** development. A further consideration applies to financial sources that may be used to fund capital accumulation to start up and feed development processes. Further to funds from exports, selected countries heavily rely on FDI, above all when they are endowed with natural resources (land, water, minerals, oil) and/or with cheap labour.
- ***Foreign aid-based*** development. Whenever foreign aid is not fully absorbed by immediate emergency-related consumption of subsistence goods (e.g. staple food), selected countries may attempt to kick-start their development process using grants, either channelled to the country through the funding of specific development projects or through the public budget support.

The above-mentioned paradigms are far from being mutually exclusive, as several countries have adopted and are adopting more than one paradigm at the time, as they refer to different phases of economic processes (funding, production, trade), different dimensions of development (economic, social) and impinge on different endowments and resources. For example, a country relying on *Exhaustible-resource export-led* development may have adopted also a *Washington-consensus* set of policies concerning FDI, exchange rate and trade, associated to a strong commitment to promote rural development in selected areas. In addition, the above list does not pretend to be exhaustive as many other factors and related policies might be identified with a closer view of specific country situations and contexts.

Despite these limits, the identified development paradigms are a useful key to interpret the development paths and related policies of single countries or sets of them. More specifically, the development paradigms can be used to explain, e.g. by means of econometric models, the convergence or divergence in the development processes of similar countries adopting different paradigms, of different countries adopting similar paradigms or of similar countries adopting similar paradigms. In addition, as countries are prone to external shocks (e.g. sudden and persistent modifications of their terms of trade), and/or prone to longer term modifications of their development context, (e.g. exhaustion of their resource endowments, incoming environmental constraints due to climate change), the set of development paradigms identified are useful to analyze in such changing contexts, the development perspectives of selected countries under alternative paradigms, e.g. with country-specific and/or regional computable models. This analysis will enable decision makers to highlight the potential and the drawbacks of alternative development paradigms and provide relevant information to feed decision making processes.

9 Conclusions

After defining the concepts of development and development paradigms, this paper identifies some key “ingredients” of recent past and prevailing development “recipes”. Mutual links between these recipes have been explored by browsing selected contributions from the

various strands of literature focusing on development issues. This allowed for the discussion of selected cause-effect relationships which are at the basis of most development processes. This exercise brought the author to identify a set of development paradigms adopted by different countries in different periods and in different development contexts. The author has also highlighted the usefulness of this exercise for further analytical work and for policy decision making in the development domain.

Last but not least, the work has also allowed the author to focus on the prevailing visions of development paths, which to a greater or lesser extent fit into a sort of *Overarching deterministic development path*, according to which countries can be classified as “*developed*”, i.e. which have achieved high levels of per capita income, health care services education etc, and as “*developing*”. The latter countries are on their way to development, trying to “catch up” with the “developed” ones, following the same paths of the developed countries, in terms of economic growth (from agriculture to industry to services), governance (from autocratic regimes to democracy), socio-economic relationships and consumption patterns (e.g. from local markets to supermarkets, from staple cereals to meat etc).

However, in the light of emerging global development issues, this overarching development path may not be the appropriate key any longer to interpret the present and future evolution of both currently less industrialised and industrialized countries. The overuse of exhaustible energy sources on which almost all industrialization processes have been based so far, the related unsustainable level of carbon emissions leading to climate changes, the recurrent food crises, the general social and political instability of entire regions, widespread across-country and within-country inequalities and persistent poverty and food security, highlight the overall non-sustainability of development of the so called “developed” countries.

Thus it is compulsory to: i) reassess the meaningfulness and usefulness of the dichotomy: “developed” versus “developing” countries; ii) fully revisit the way development has been conceived so far and the ongoing global and national development policies; and iii) design-redesign ongoing/future global, national and local development processes keeping into account the emerging limits mentioned above and the global development needs.

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