Development theory and poverty. A review

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Abstract

This review article presents the evolution of development theory during the XX century, the measurement of poverty, the concept and the indices of multidimensional poverty. A special focus concerns the complex linkages between income inequality, poverty and institutions during the growth process of developing countries.

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1 Introduction

Poverty is the human condition that for centuries has deprived the large majority of world population of the freedom to build up a decent life. At the beginning of the XIX century, still the 84% of the world’s population lived in extreme poverty (Maddison, 2001; Bourguignon and Morrison, 2002). The Industrial Revolution—the structural change vividly described in the works of Karl Marx and in masterpieces of the English literature—provided with an income previously unemployed males who had moved to metropolitan areas. Yet, in European regions involved in the industrial take-off, deprived people—for instance those under the social protection of parishes in the countryside—were eradicated from their social environment. Fast-growing urbanization caused life conditions of the poor to worsen (Ravallion, 2013). During the XIX century, institutions of impersonal charity dedicated to the relief of the poor were established in many European industrialized towns. Instead, in the rest of the known world the level of impersonal charity remained very low until the XX century (Greif and Tabellini, 2012). An extreme case of absence of any kind of safety net was wife-selling, the survival strategy of many Chinese destitute husbands which lasted till Chinese Communist Party came to power in 1949.

In most western countries, the economic take-off was completed at the turn of the XX century. From the 1930s to the 1970s, due to high growth rates and the expansion of welfare institutions, within-country income inequality and poverty have shrunk (Piketty, 2013). Instead, between-country inequality kept increasing, mainly because in the second half of the century the process of development languished in many ex-colonial African countries, while in China and India—the two countries with the largest population worldwide—the production of industrial and service sectors has been rocketing. At the start of the new millennium, the per capita GDP of less developed countries (LDCs), in particular of poor economies with high fertility rates, exhibits an increasing gap with respect to emerging and advanced countries (Milanovic, 2005).

2 The appraisal of poverty in the economics of development

The scope of development theory has progressively expanded from the investigation of overall inter-personal income disparities towards the evaluation of life conditions of specific groups, with a special focus on individuals at the bottom of the income distribution. Theoretical and empirical research has increasingly concentrated on the economic drivers of poverty and on the personal and social consequences of being poor. Differently from advanced countries, where the persistence of poverty is the distinctive outcome of a slow and non-inclusive growth process (and more recently also of the progressive expulsion from production of unskilled workers), in LDCs the intensity of poverty has been aggravated by very low pays and meagre labour conditions, due to a fragile industrialization process in densely urbanized areas (Thorbecke, 2006).

During the 1950s, at the dawn of the modern thought on economic development, an harmonious view on economic development prevailed. The constructive intellectual mood of the decade following World War II was nicely portrayed by the
Rostovian hypothesis of five stages of development through which each economic system is bound to evolve: *Traditional society; Preconditions for take-off; Take-off; Drive to maturity; Age of high mass consumption* (Rostow 1952). Accordingly, the neo-classical theory of economic growth, formalized by Solow (1956), conveyed a confident message about a smooth convergence across per capita incomes. In fact, the Solovian model describes an economic system in which labour productivity increases along with the rise in production of the capital-labour ratio, and the flow of savings efficiently finances investment projects. Developing countries, by starting from a capital/labour ratio lower than in the capital abundant industrialised countries, were supposed to attain higher returns on investment, thus expanding faster, and eventually catching-up the per capita income of advanced countries. According to this optimistic view, the continuous improvement of standard of living in advanced countries trickles down in increased demand of traditional goods produced by the LDCs, possibly benefitting also their poor. Provided that increasing fiscal revenues allow the reduction in the tax rate on the rich, thus fostering the incentive to invest, the faster growth rate of backward economies should become self-sustaining.

The analytical switch from the one-sector modelling to the dualistic model proposed by Lewis (1954) marked the start of the strand of literature accounting for the industrial take-off in western countries, with the corresponding decline in the population of the countryside. Kuznets (1955) interpreted statistical evidence of a shrinking GDP share of the agricultural sector, along with the rise in industrial production, as a reflection of a rapidly rising productivity in manufacturing with respect to the constant productivity in agriculture. The inverted-U “Kuznets curve” was the first attempt to present a systematic appraisal of the dualistic process of economic growth in conjunction with income disparities. After that wider wage distances have brought income inequality to a climax, a downward path of the Gini coefficient sets off, with medium and high earnings accruing to the majority of urban workers; accordingly, poverty progressively falls.

In the mushrooming literature on development of the 1950s, this harmonious description of economic development was widely shared. Only a minority among the economists were afraid that the self-regulating market forces alone could not set up a process of development heading to the expansion of well-being for all sections of the population. In fact, many episodes in economic history highlight that a too low saving rate could impede the formation of the amount of resources needed for a country to get out of poverty, thus constraining the economy in a “vicious circle of poverty” (Nurkse 1953). The hypothesis was also investigated that uneven growth paths across economic sectors could generate a disequilibrium dynamics. This impediment to a smooth accumulation of physical capital would have perpetuated backward social and economic conditions (Myrdal 1957).

Therefore, in the development theory of the decade, poverty was still not directly examined. The analytical framework interpreting the evolution of per capita income distances across countries was forecasting a smooth process of diffusion of higher standards of living, which would unavoidably have involved the poor of developing countries. The exception was represented by the “dependency theory”, which posited itself on the extreme side of the explanatory spectrum by denouncing the exploitation of the poor countries by the colonialist countries and the United States.
This approach, which was started by the Argentinean economist Prebisch (1950) has been proposing a gloomy appraisal of economic development. The view pronounced by neo-classical growth models of a well-balanced process through which poor countries would have exited poverty, is utterly turned down. All economies are regarded as strictly interconnected independently from their per capita GDP; unequal terms of trade in international markets harshly penalize backward economies where most of the world’s poor was living. The main tenet is that the whole process of market integration works against enabling the LDCs to follow an autonomous path of growth, and in favour of the rich nations’ accumulation of resources and wealth.

This theoretic vision has broken in the new millennium, by stressing that protectionism—in the form of tariff and non-tariff barriers—prevents the arrival in international markets of the LDCs’ products of agriculture and traditional manufacturing. The economic take-off of backward countries, which would allow the poorest population of the world to overcome bleak deprivation, is also obstructed by the WTO negotiations, where blocking coalitions are organised against the LDCs’ quest for agreements establishing fair trading conditions in truly free markets (Wallerstein, 2004).

Many studies were dedicated in the “golden years” of development theory to the long-term economic planning of the exit from poverty. Two examples of two-sector models witness that this effort has been poorly performing. The Lewis two-sector model (Lewis 1954), that considered agriculture as the static sector where overpopulation is bound to be absorbed by a dynamic industrial sector, could not ponder the cost abatement of innovative production methods in agriculture and apparently ignored the complementarities ruling on the interaction among sectors during the take-off process. The Mahalanobis’ two-sector model of growth (Mahalanobis 1953), by giving priority to the expansion of capital-goods production, was too strongly focused on capital accumulation to construct a large consumption goods sector, thus becoming responsible for the failure of India’s Second Plan of economic development.

The economic thought of the second half of the past century also largely overlooked heterogeneity across social groups and regions in developing countries. New approaches have emerged to gauge why countries belonging to the same economic area, and even endowed with the same amount of resources, follow divergent growth paths and end up with a very different incidence of poverty (Acemoglu and Robinson 2012). In the mid-1980’s, households living in poor rural areas were experiencing much lower prospects of progress in well-being than seemingly identical households living in the urban areas with a much higher per capita income (Ravallion 2005). In the subsequent tumultuous growth process, however, the attraction of affluent metropolitan areas fostered migration from agriculture, which led the contribution to national poverty reduction to be greater in rural than in urban areas (Ravallion and Chen 2007). While job creation is soaring in expanding towns, where innovative sectors are concentrated and high rates of total factor productivity can be obtained, the overwhelming flow of population moving towards metropolitan areas generates new agglomerations of destitute people.

A special case is India, where a cruel caste system, has been hampering the diffusion of the economic and social benefits stemming from liberalization. This
system of social hierarchy is responsible for the enduring exploitation of the Dalit people, procrastinating deep inequalities and poverty especially in rural areas (Drèze and Sen, 2013). Poverty reduction is a much more complex endeavour than policy-oriented models could satisfactorily theorize. Many studies are putting in doubt the conjecture of the defeat of poverty through a progressive absorption of excess population in rural areas (Collier, 2007).

The most relevant research lines at the inception of the XXI century definitely take distance from the harmonious view on economic development and directly focus on enduring poverty within countries. The approach in terms of “poverty traps” emphasizes the strength of self-reinforcing mechanisms, which cause poverty to persist across time (Azariadis and Stachursky, 2005). Many explanations for a society being kept in a “poverty trap” have been put forward (Durlauf, 1999; Azariadis, 2006; Bowles, 2006; Bowles et al., 2006; Durlauf, 2006; Collier, 2007; Chantarat and Barrett, 2012). The various research lines are fastened together by sharing the analytical concepts of “multiple equilibria” and “path dependence”. As for the first, the underlying principle is that the given initial conditions will determine a particular equilibrium position: a too low index of life expectancy in the population of LDCs often discourages people to save, which makes it impossible that an initially low capital stock could reach the size to make the process of economic growth sustainable (Azariadis, 2006). As for the second, history matters: whenever given initial conditions lead to an outcome which in turn reinforces the traditional factors of development, a steady-state equilibrium establishes in the economy.

3 Measures of absolute and relative poverty

Starting from the second half of the 1980s, development theory eventually turned to systematic analyses of the condition of the poor as a separate topic with respect to income inequality. In a path-breaking contribution, Atkinson (1987) warned governments about the need for an informed decision on the poverty line and the appropriate index of poverty to be used for policy aims. The degree of poverty is defined according to two basic measurement concepts:

1. Absolute poverty is the income level insufficient to get the essential goods aimed at warranting sustenance (daily calories, safe shelter, decent clothes, etc.). The World Bank first introduced in 1990 the international poverty line, by the standards of the world’s poorest countries, at $1.00 a day, then corrected to $1.25 a day for 2005 (equivalent to $1.00 a day in 1996 US prices) and recently updated to be $1.25 and $2.50 per day. However, the same level of welfare may depend on a different prices of goods and services, and different levels of consumption needs to be attained, in different countries. In some advanced countries, though the number of people in destitution is limited, an absolute threshold set at a too low level may result inadequate with regard to the standard of living. Developing countries use different absolute poverty threshold, depending on the country’s endowments of factors and natural resources, and on the prevailing views on being poor. Since the absolute measure of poverty just points to the mere survival across space and time, in principle a variation of an index of income inequality has no bearing on this indicator of deprivation.
2. **Relative poverty** considers the poor as the share of population which is below a relative poverty threshold, defined as those individuals with an income which is lower than 50% or 60% of the mean or median income. This index then points to spot people characterised by a wide income distance from the per capita GDP of a country. We may follow Adam Smith in identifying the social cost of inclusion, that is the social value of the sentiment of comparing oneself with dignity with his neighbours (Smith, 1776, V, ch. 2). Hence, the threshold of relative poverty can be regarded as the quantitative definition of social inclusion, whereby the relative poor vary at any place and in each time that people live.

The debate is very alive about which is today the appropriate measure of relative poverty in developing countries. To determine the appropriate relative threshold, in order to devise policies oriented to shield the poor and promote social inclusion, the rate of change of per capita GDP, and the internal dynamics of the growth process, are both crucial. In fact, despite the dropping numbers of the absolutely poor, the well-being of the poor may worsen during the economic take-off of a developing country. Regarding in particular the emerging economies, which are fully involved in international trade and in globalized financial markets, the need for the relative evaluation of poverty acquires a peculiar strength, as the poor are more harshly hit in case a deep economic crisis propagates across the world economy (Chen and Ravallion, 2013).

One problem with this measure, which is common to most processes of development, arises when the rich increase their income while the earnings of the middle class and of the poor remain constant. The incidence of poverty could then be overestimated, as the rise in the mean income has the effect to posit too many poor individuals above the relative poverty threshold. The opposite problem arises whenever the choice of the relative threshold is influenced by the evolution of inequality within the income distribution. In fact, after any rise in per capita GDP growth, the relative poverty line may be set at a too “high” level. By using the normalization with the median income, any rise in mean income results in a disproportional weight attributed to the relative income of the poor, so that the decline in the incidence of poverty could be underestimated. Moreover, the cost of living in developing and emerging countries tends to rise more proportionally than average income, so that for the very poor the cost of social inclusion is substantial.

An alternative method of measurement—the “income standard approach”, where the line is set at the mean income of the bottom 20% of the population—is not advisable. This method is plagued by two faults: the arbitrariness of both a threshold set equal for all countries, and a cut-off that in a pro-poor growth process gives to those individuals above the threshold a weight equal to that of those below.

All in all, to be considered poor one has to be below two thresholds: an absolute one—related to consumption needs for physical survival—and a relative one relative to the objective distance from the mean income, which may reflect a bleak exposure to social exclusion (Atkinson and Bourguignon, 2001). Furthermore, the subjective perception of relative poorness, that is the sentiment of deprivation felt in the comparison with the other persons in the community, may aggravate the condition of the needy people (Runciman, 1966).
The indexes most used in the empirical literature are: (i) the head-count, computing the incidence of the poor in the population; (ii) the poverty gap, computing the intensity of poverty as the ratio with respect to the poverty threshold of the sum of the poor’s income distances from the poverty threshold; (iii) the Foster-Greer-Thorbecke generalized index of poverty \cite{Foster1984}, assigning an increasing weight the more individuals earn incomes below the poverty threshold. It is also important to determine whether the poor is a single individual, or he belongs to a household where individual welfare is equalized by means of intra-family redistribution. Due to a higher correlation across incomes of individuals belonging to the same family, the increases of the last decades in the index of income inequality, affecting both developing and advanced economies, probably contributed to the rise in polarization between rich and poor households.

In the perspective of development theory, it is worth noticing that many individuals, that are poor for the advanced countries’ standards, constitute the “middle class” of LDCs. Considering 70 countries belonging to the developing world, the “middle class” of these LDCs can be assumed to range between their median poverty line ($2.00 per day at 2005 PPP) and the US poverty line ($13.00 a day at 2005 PPP) \cite{Ravallion2010a}. An hybrid definition is used by \cite{Birdsall2010} for the assessment of life conditions of the middle-income individuals in developing countries. She considers poor those individuals of LDCs with income between $10.00 a day (in 2005 PPP)—a relatively high level if compared to the global poverty line of $1.25 a day, but fairly low by OECD standards—and at or below the 95th percentile of the income distribution.

4 The turn to multi-dimensional well-being and poverty

Development theory has gone through three succeeding appraisals of the “content” of poverty conditions. The literature has initially focused on “income”, and then switched to the “basic needs” perspective, as countries may differ a lot in terms of the cost of living even though they share the same mean (or median) income in the computation of relative poverty. Eventually, development theory has opened out to non-economic and non-social drivers of prosperity and poorness, namely culture and institutions. In presenting his “capability approach” \cite{Sen1985a}, Amartya Sen advocates the freedom of every human being to achieve his well-being by autonomously choosing his preferred sets of functionings. This liberty establish the right of any person to constitute his own capability to do and be what he has reason to value, reflecting the person’s own conception of life. By embracing the “capability” perspective, which is multidimensional by definition, many research lines started investigating poverty as a multi-dimensional phenomenon, pointing to the various life dimensions—in addition to income—through which social exclusion manifests \cite{Anand1997}.

The fact that the process of economic development is fundamentally multi-dimensional \cite{Nolan2007} has two important implications. First, it unavoidably exerts an heterogeneous impact across people, so that well-being achievements are unevenly distributed among the various groups of the population. Second, it causes the evolution of the various dimensions of well-being to follow
uneven dynamic paths. These two main characteristics of development make it essential a careful evaluation of the progress of well-being—overall, and within each dimension—in each country year by year.

In 1990 the United Nations have presented the Human Development Index (HDI), a composite index aggregating each country’s achievements in income, health, and education. By characterizing human development as the sum of these three basic dimensions, the construction of the HDI aimed to counter the paradigm of development policy put forward by the “Washington consensus”, where the sole diffusion of market relations is credited to trigger GDP growth, in turn defeating poverty and promoting the achievement of higher levels of well-being. Instead, the United Nations stresses the importance that governments set comprehensive guidelines for development, ranging from material to non-material goals.

The present HDI is the geometric average (replacing the arithmetic average in 2010) of three indices, one for each human dimension (H): health (life expectancy), education (mean years of schooling and expected years of schooling), and income (the per capita gross national income, GNI; the standard of living dimension is valued in PPP US$ and considered as an input into the formation of capabilities):

\[
\text{HDI} = \sqrt[3]{H_{\text{health}} \times H_{\text{education}} \times H_{\text{income}}}. 
\]

This summary measure, though inelegantly combining inputs to well-being (income is a proxy for the person’s command over resources to be used to acquire goods and services) and outcomes of well-being (health, schooling), represents the first important step towards the construction of a yardstick of capability achievements (UNDP [2011]). To allow each of the three sub-indices to vary between zero and one, they are normalized using given upper and lower bounds. From a theoretical perspective, these bounds correspond to a “satiation” point, beyond which additional increments do not contribute to the expansion of capabilities, and to a subsistence minimum, respectively. The goalpost for the maximum income is $75,000 (PPP), and for the minimum is $100 (PPP). This very low minimum value for per capita GNI is explained by the considerable amount of unmeasured subsistence and non-market production in economies close to the minimum that is not captured in the official data. Setting aside the problem of data availability, many other relevant dimensions would of course be needed to fully assess human development as a function of capabilities’ achievement. Sen deliberately leaves the selection of capabilities undetermined, as it pertains to the cultural values prevailing in each society at a certain time (Chiappero-Martinetti and Moroni [2007]).

The aggregation method of the HDI has been questioned on the ethical ground, as the marginal rate of substitution of any non-material well-being goes up with income. Moreover, the HDI has equal weights on each dimension. Obviously, weights are needed, as it is not always possible to identify who are the “multi-dimensionally” poor. In the perspective to empower the individuals to be in control of their own conception of the good, a public discussion in each LDC, heading to a democratic deliberation about the choice of a different weight for each dimension, could be a wise solution (Sen [1985b]). How appropriate would be their choice in each context is highly questionable, as it entails to trade-off quite dissimilar indicators (e.g., cooking with wood and the risk of child death) (Ravallion [2011]). The task of the
HDI just consists in exploiting the more comprehensive information delivered by a multidimensional index. The computed value should not be interpreted as a sort of social welfare function to be maximized, but only as an indicator of the achievement of capabilities.

A weakness of the HDI is its lack of consideration for cross-correlation among dimensions. Since higher levels of per capita GDP usually come together with high levels of health and education, the “endogeneity problem” makes the causality links among these three dimensions of well-being hard to detect. While a lower income inequality has the likely effect to reduce the dispersion index of the other two dimensions, a substantial part of the impact of better health and education on the HDI is absorbed in the fall of the Gini index of income inequality, as improved skills and quality of life have the side-effect to boost the earnings particularly of the poor. The elasticity of a country’s HDI to income inequality may then turn out to be much higher than the elasticity to the health and the education inequality. Which one out of the double direction of causality prevails across the three dimensions is central to the understanding of the many ways in which the attainments in terms of multidimensional well-being spread over in the relief of poverty conditions.

In his seminal 1976 paper, Amartya Sen objected to the uni-dimensional approach to the measurement of poverty. In proposing the ordinal measurement of poverty, he put forward the two main issues to be tackled by any index of poverty: (i) identification (i.e. a poverty line, so to answer the question: “Who is poor?”) for the purpose of targeting; (ii) aggregation (i.e. a poverty measure, so to answer the question: “How much poverty?”) for the purpose of evaluating and monitoring. Granted that poverty is tightly connected to multidimensional well-being, the United Nations (UN) has developed a Human Poverty Index (HPI), first published in the Human Development Report of 1997 as a composite indicator of the standard of living of a country, complementing the Human Development Index. The background paper for this Human Development Report was “Concepts of Human Development and Poverty: A Multidimensional Perspective” by Anand and Sen (1997). They introduced non-material sources of deprivation in the construction of the HPI, but the “multi-dimensionally” poor people could not be identified.

By positing the concept of poverty into the space of capabilities (Sen 1985a) the 1998 Nobel Prize wanted to signal that development is a crucial aspect of the interactions between the individual and society, and poor individuals are disproportionately present in backward economies. On the one hand, society should feel committed to set up the appropriate conditions to warrant the person’s right to “being and doing”. The cost of social inclusion consists in overcoming not only limited consumption opportunities due to low income, but also precarious health, poor education, inadequate housing, insecure work, deprivation of social identity, and deficiency of political power (Sen 1992). On the other hand, this social responsibility does not freed, but on the contrary magnifies, the person’s responsibility to pursuing his own substantive freedom (Sen 1999).

To establish a poverty line entails translating the absolute notion of capabilities in a relative approach in the spaces of income and commodities (Sen 1983). Empirical evidence supports this methodological approach. Research work conducted on data of developing countries found that a high percentage of people are deprived of essen-
tial capabilities while not being income-poor (Franco, 2004). Objective non-income determinants of social exclusion are represented by the deprivation of the educational level needed to get a permanent job, as well as of some social rights—such as the lack of participation in the national system of health care, and/or of a public pension due to the failure in means-testing (Chakravarty and D’Ambrosio, 2010). Subjective non-income determinants of social exclusion consist in the perception by the individual either of his lack of access to the community’s functionings, or of his exclusion from fundamental aspects of social life (Bourguignon and Chakravarty, 2003).

The research line on multidimensional poverty has much contributed to the improvement of development theory, in particular by providing the basis for the design of anti-poverty policies. To identify the multi-dimensional poor two approaches have been proposed. At one extreme, the “union approach” identifies the poor as the individuals who are deprived at least in one dimension (Atkinson, 2003; Duclos et al., 2006). At the other extreme, the “intersection approach” identifies the poor as the deprived in every dimensions (Alkire and Foster, 2011a). The arbitrary number of dimensions—as well as their quality—are decisive for the assessment of which between these two approaches leads to precisely detecting the poor. Cases of mismatch between uni-dimensional and multi-dimensional poverty manifest in the comparison between non-poor and poor countries. The failure in identifying the households below the multidimensional poverty line—known as the “exclusion error”, consisting in the percentage of people who are not income poor but “multidimensionally” poor—is higher for poor countries. The same results apply with the wealth indicator (Alkire and Santos, 2010).

Alkire and Foster (2007) put forward the $M_0$ methodology, in order to generate more informative multi-dimensional indexes being mid-way between the union and the intersection approaches. As a fall-out of this research work, in 2010 the UNDP Human Development Report Office and the Oxford Poverty and Human Development Initiative (OPHI) have released a Multidimensional Poverty Index (MPI) for developing countries. This index, covering 109 countries since 2011, combines the number and the intensity of overlapping human deprivations in health, education and standard of living. On the theoretical ground, this MPI is more informative than the HPI, as the $M_0$ allows the evaluation of multi-dimensional deprivation across dimensions for the same individual. The joint distribution of deprivations is a very relevant information, which is crucial to the assessment of the success of anti-poverty programmes (Alkire and Foster, 2011b). The MPI indexes promise to become a valuable tool in devising special-purpose public policies to counteract a worsening quality of life caused by the cumulative cross-dimensional impact of multiple deprivations on poverty conditions (Stiglitz et al., 2009). All surveys show increasing shares of population enjoying a better health and a higher education the higher is per capita GDP in the country.

For the devising of development policies, the MPI has to abide by two important characteristics: (i) the computability of intensity of deprivation, as the poorest of the poor could be targeted; (ii) the decomposability by regions and population subgroups, as each dimension of poverty acquires a different weight in different socio-economic contexts and for each different aggregate of individuals, and also modifies
across time as the process of economic development evolves. However, there is a trade-off between constructing a multidimensional measure sensitive to the distribution of deprivations and also allowing for decomposability by dimension; similarly, substitutability and complementarity between dimensions cannot be simultaneously taken into account.

The so-called “welfarist approach” to relative poverty is conceived in the perspective to implement the social norm of a decorous life prompting the above mentioned sentiment of dignity of the person in society. The tenet is that the exit from relative poverty corresponds to rendering the social cost of inclusion negligible. A “weakly relative poverty” threshold has also been proposed, where an objective appraisal of “equal treatment in consumption” complements the varying measure of the minimum cost of social inclusion in different countries (Ravallion and Chen, 2011).

Development theory has recently attempted to widen the temporal scope of poverty conditions. The recent research field on “vulnerability to poverty” points to analysing—from the vantage point of human behaviour under uncertainty—how a hostile social and/or natural environment could activate impoverishment. The concept of vulnerability naturally refers to individuals suffering from exposure to macroeconomic and microeconomic risks to a much higher degree than the median individual—e.g., a remarkable probability to be hit by a negative shock heading to deprivation, the excessive length of spells of income deprivation, a high frequency of severe diseases and natural disasters, the everyday dramatic problems of living in areas with criminality and inadequate social capital in general. Hence, the measurement of vulnerability is at the cross-road of the contribution of a variety of research fields, ranging from biophysics, to epidemiology, anthropology, sociology, natural resources and environmental studies.

A fundamental achievement is that international organizations fighting famine, diseases, under-nourishing, illiteracy, as well as governments and NGOs, are now endowed with sophisticated indicators, pointing to a global relative poverty measure for the less developed world, similarly to the “1 US dollar a day” absolute measure in the dimension of income.

5 The theoretical debate on growth, inequality, and poverty

A massive series of economic models strive to investigate the causality nexuses among the growth rate, per capita GDP growth, income inequality, and poverty, in order to identify which linkages prove to be robust. Further complications stem from the measurement of poverty reduction, as consumption from household surveys increases less rapidly than consumption computed in national accounts, particularly for large countries such as China and India (Deaton 2005). However, the improvement in data availability (in particular, regarding national poverty lines, representative samples of household consumption, and prices) indicates that the incidence of absolute poverty the developing world has fallen since the early 1980s (Chen and Ravallion 2010). International organizations fighting famine, diseases, under-nourishing, illiteracy, as well as governments and NGOs, are now endowed with sophisticated indicators, pointing to a global relative poverty measure for the less developed world, similarly to the “1 US dollar a day” absolute measure in the dimension of income.
Let us commence by analysing the relationship between GDP growth and poverty as mediated by an increase in per capita income. An influential “free-market” view highlights that one-half of reductions in both absolute and relative poverty has to be traced back to a lift in the average income of a country. Since “a rising tide lifts all boats”, one should come to the conclusion that “growth is good for the poor” (Dollar and Kraay, 2002). Given that the free functioning of markets is credited to boost GDP growth, the deregulation of the economic system is considered the precondition for the result of a decrease in poverty. In this perspective, any pro-poor growth strategy should point to the protection of property rights and to liberalization reforms opening developing economies to international trade (Kraay, 2006).

A caveat to be moved towards this cavalier view is that the cross-correlation among the other drivers of well-being matters probably to a greater extent in the developing world: poor health, low education, lack of infrastructure and corrupted government are highly detrimental to work and investment, thus hindering growth. Also because of the ideological presumption of a positive influence of free market policies on poverty reduction, anti-poverty programmes have been exposed to many sources of failure ever since their inception. The tenet that the diffusion of market relations would have delivered a harmonious exit from underdevelopment, together with the “catching-up” view of neo-classical growth models, led to an excessive emphasis on advancement of industrialization as such. The actual natural, social and political conditions in which the industrialization process was deployed were largely ignored. This flawed approach found its formalization in too narrowly-conceived development models. Economic history indicates that courageous agrarian reforms in developing countries, redistributing the land to peasants and agricultural workers, are effective in reducing also income inequality and poverty, thus constituting a growth-strengthening factor (Alesina and Rodrik, 1994). An important “political economy” problem, underrated by the literature on “poverty traps”, is “policy inconsistency”. Redistributive policies are badly needed in areas where the incidence of extreme poverty is high, and then wealth and income dispersion are high as well. Policy inconsistency stems from the high tax rate implied by the huge amount of the funding of redistributive programmes, which is harshly opposed by most powerful and well-off social groups.

The Dollar and Kraay interpretation, which is reminiscent of the “trickle down” view of development mentioned in Section 2, is still under scrutiny, as the empirical evidence on which it is built appears to be fuzzy. By proposing a new methodology to track low incomes, Foster and Székely (2008) find that the income of the poor does not increase one-for-one with the mean income, as the estimated growth elasticity is not significantly different from zero. An initially low per capita income does not seem to entail an “advantage of backwardness” for developing countries, as it may instead hold back the process of poverty reduction (Ravallion, 2012). The other way round, due the low consumption of the poor weakening aggregate demand, a high initial poverty rate gravely dampens GDP growth, which in turn is bound to procrastinate a low level of per capita income, probably keeping acute the incidence of absolute poverty.

Therefore, the question is: why should a higher mean income, triggered by a raise in the growth rate, instead of a reduction in the index of income inequality,
the most prominent tool to defeat poverty?

The answer of the ‘free-market’ view contends that a higher—and not a lower—income inequality is conducive to poverty reduction. Granted that the propensity to save of the rich is higher than that of the poor, the larger is the income share accruing to the rich, the higher the saving ratio and capital accumulation. Yet, this narrative is not confirmed by statistical estimates. The “absolute” Gini index—which is based on absolute differences in incomes, not normalized by the mean—enlightens the presence of a trade-off between income inequality and poverty reduction (Ravallion 2005). Empirical evidence extensively confirms the hypothesis that the more right-skewed is the income distribution, the stronger will be the impact of a fall in income inequality in terms of poverty reduction (Ravallion and Chen 2007). For example, when the Gini falls from a value as high as 0.55 to the value of 0.45, a drop in poverty of more than 15 points in ten years ensues (Bourguignon 2003). According to household surveys, whatever the impact of GDP growth on income disparities, the higher is the initial income inequality of a country, the lower the percentage of growth which trickles down to the poor (Ravallion 1997, 2007). In fact, at the turn of the millennium, the Chinese provinces with initial relatively high inequality have experienced a much slower increase in the incomes of the poor, due both to lower growth and a lower growth elasticity of poverty reduction.

Let us then turn to the relationship between GDP growth and poverty as mediated by income inequality. Since income inequality is very much correlated with essential drivers of economic growth—the incentives to trust and to cooperate—that are very weak in developing countries (Ravallion 2007), a GDP expansion triggered by wide income disparities could not promote a decline in poverty conditions. Moreover, an initially high growth rate could not reduce income inequality, but provoke a higher Gini coefficient, due to widening absolute income distances at the two income tails (an upward hike in top incomes and/or a fall in the incomes of the poor) and some “churning” in the middle of the income distribution. In fact, in spite of per capita income growing on average of 6.7% per year, income inequality has risen in China between 1990 and 2009, due to the relative decline in the average income of the poor (the growth rate was only 5% per year in the bottom 40% of population, so that the income share of the bottom 40% declined from 20.2% to 14.4%).

Therefore, poverty seem to be positively correlated to variations in income inequality, but the crucial role played by the level of income inequality makes the causality link going from growth to poverty difficult to assess. The main message conveyed by the literature is that the impact of growth on poverty reduction is severely hampered by a high level of income inequality. The empirical evidence showing that the initial level of income inequality is a good predictor of a low growth-elasticity of poverty reduction, gravely undermines the Dollar-Kraay interpretation. Due to the limited direct impact of growth on poverty, no “trickled down” effect can be taken for granted. Economic growth is then not always “good for the poor”.

Since any strategy aimed at lowering income inequality by targeting the purchasing power of a large number of deprived people should be effective in improving the standard of living, many schools of thought, both in economics and in social theory, advocate public policies directly orientated towards poverty reduction (Bardhan et al. 2000; Banerjee and Duflo 2005; Wilkinson and Pickett 2009).
Also the causality nexus going from income inequality to the growth rate could influence the exit from poverty. Regressions conducted on the cross-section data show a negative correlation between income inequality and growth, whereas the difference-based estimates conducted on time-series present a positive correlation (Forbes, 2000). These opposite results are mainly driven by the too many omitted variables which cannot find a place in the regressions, also because of the “endogeneity problem”. Recent research work fruitfully puts forward the hypothesis of non-linearity in the nexus going from the income distribution to the growth rate. This important finding comes out both in cross-section and in within-country quantitative estimates. As for the first, Banerjee and Duflo (2003) found no relationship between inequality and growth for their whole bunch of countries, but breaking up the sample a negative relationship emerged for the poor countries, and a positive relationship for the rich countries. As for the second, empirical estimates investigating the impact on the growth across deciles rate (instead of just looking at the impact of the aggregate income distribution) indicate that the sign of the correlation depends on the decile of reference. The sign is positive for the top incomes—as a raise in “high incomes” boosts the incentive to invest. The sign is negative for the “low incomes” and the poor—as a falling low income tends to dampen consumption demand more than proportionally (Votchovsksy, 2005).

The finding that each different portion of the income distribution exerts its own specific influence on GDP growth has been bonded with the timing of development policies (Halter et al., 2011). A positive correlation between income inequality and growth points to the short or medium run, as income concentration boosts start-ups and innovation prompting the take-off of development. Instead, a negative correlation between income inequality and growth points to a long run development strategy aimed to overcome the negative influence on the growth rate of a high distance from the median income at the bottom-end of the distribution. The implication is that the design of anti-poverty policies has to cope with the presence of multiple equilibria along the development process: at every initial level of income dispersion seems to correspond a different impact of GDP growth on poverty.

The Welfare State typically represents the long-term economic institution which under appropriate conditions, by enhancing growth through the redistributive impact of public education and health care, can shield the middle and low income individuals—in particular in LDCs—from falling in poverty and deprivation. The message as for the influence of the bottom of the income distribution upon the growth rate is that in the long run a negative correlation between income inequality and growth prevails: the less distant is the income level at the bottom from the middle class, the higher GDP growth. The previous hint of a positive relationship between income inequality and poverty is then confirmed as for the bottom portion of the distribution: a higher income level of the poor is good for growth.

Another important aspect of the link between economic growth and poverty stems from empirical evidence showing the lack of further GDP expansion exhibited by the overwhelming majority of middle-income countries during the second half of the past century. The World Bank estimates that of 101 middle-income economies in 1960, only 13 became high income by 2008. Though this paradoxical finding is still to be fully understood, once the developing countries reach middle-income
levels, in the light of the Lewis two-sector model the pool of rural workers drains, wages begin to rise, productivity growth from sectoral reallocation and technology catch-up reduces, and competitiveness is dampened. Therefore, the concept of vulnerability—that is a high exposure to job uncertainty and income volatility in case of negative macroeconomic shocks—looms crucial for the middle class of developing countries. When these economies come across the “middle-income trap”, income insecurity is bound to undermine well-being and aspirations of mean and low income individuals. Due to the mutual reinforcing among a series of factors of risk, these people suffer from a rising exposure to lowering multidimensional well-being.

The exposure to poverty of the middle class is then not only indicated by the increasing polarization in advanced countries, as manifested in the recent turn to bimodality of the kernel of income distribution for countries such as the United States and the United Kingdom, but is a severe problem also for developing countries. Since the income vulnerability of the middle class of these countries could easily turn out in episodes of poverty, eventually making more and more difficult to restore their previous stage of well-being, risk exposure is definitely a central component of poverty \cite{Morduch1994}. In the light of the “fundamental laws of capitalism” put forward by Piketty \cite{Piketty2013}, the trend of the last decades towards an increase of wealth inequality in advanced countries, even larger than the increase in income inequality, represents a gloomy signal for the future income convergence by developing countries. The possible fall in income levels of the middle income people of developing countries could be also aggravated by the virtual absence of the safety net represented, for the middle class of advanced countries, by the stock—albeit declining—of real estate and financial wealth.

6 Recent views on institutions and poverty in developing countries

In 2012, considering an international poverty line of $1.25 a day (at 2005 PPP), still 1.2 billion people in the world live in poverty. The uni-dimensional and the multidimensional poverty indexes hand over similar results for the middle-income and the low-income countries. Though more poor people live in middle-income than in low-income countries, the incidence of both income poverty and multidimensional poverty is much higher in low-income countries \cite{Alkire2013}. Developing countries distinguish with respect to advanced countries for their much higher ratio between personalized and impersonal (market) transactions, where the former are less likely to be supported by the “rule of law”.

A large strand of literature argues that the cultural heritage of the colonial period and the poor quality of present political institutions is the main obstacle to developing countries reducing poverty. However, this agreeable remark is hardly a blueprint for devising the most appropriate political organization to sustain a development process. In India, the largest democracy worldwide, poor peasants have been benefitting from limited programmes for insurance against disastrous shocks (famine, floods, etc.). In the authoritarian China, anti-poverty programmes and extensive market-oriented agrarian reforms, such as the decollectivization of agriculture since 1978, have been privileged by the Communist regime \cite{Ravallion2010b}. Therefore, empirical evidence is inconclusive about a democratic or an
authoritarian regime being better in making fast poverty reduction in countries with a high percentage of poor. A sensible hypothesis is that in sustaining the catching-up by backward economies a democratic regime is more fitting to foster innovation, which is based on individual attitudes to risk and invest, while an authoritarian regime more fitting for the diffusion of technology, which requires a well-organized social environment (Sachs, 2006). However, it is wise to forecast that the advance of the poor’s well-being in backward countries will depend upon the difficult task to improve the functioning of democratic political institutions. In many LDCs the representative roles are occupied by politicians who use political power for their self-interest (in particular, for the appropriation of foreign aid and the transfers of international charities), while it is small the size of the middle class committed to reforms, which is often also excluded from political power. Especially in former-colonial countries, the political institutions are not “inclusive” (i.e., oriented to the upgrading of the population standard of living), but essentially “extractive”, as they are plagued by corruption (Acemoglu et al., 2002; Acemoglu and Robinson, 2012).

The fragility of governmental institutions in developing countries is detrimental to the industrial take-off, with the start-up of small and medium enterprises on which the growth process fundamentally relies. While an increase in the employment rate among the low-skill labour force is the most valuable policy to reduce the intensity and the ratio of poverty in LDCs, the missing or inefficient defence of property rights determines a low incentive for entrepreneurs to invest and risk (Abed and Gupta, 2002; Nallari and Griffith, 2011).

The neo-classical formula for economic development, that is the creation of a full-fledged market economy, has the limit of downplaying the need to set up an adequate system of social protection. Given that the interaction between the poor’s low income and a low provision of in-kind benefits severely hinders economic development in poor countries, a “pure” free-market economy is inadequate to guaranteeing that an autonomous process of development would start and accelerate the exit from poverty. The view is increasingly shared that the emergence of more sound social norms and cultural values is more effective in boosting socio-economic development of any creation of formal laws by top political leaders (Ravallion, 2013). In non-poor countries, public institutions render the low incomes not deprived in some dimensions of well-being, so that the incidence of the multidimensional—but not income—poor is relatively lower than in poor countries. In developing countries, the lack of State provision of public and merit goods compels the poor to use their limited savings to cope with basic non-material needs, thus also hindering both the financing and the incentive to invest.

Which one between the two opposite development strategies aimed to the poor—“perfect targeting” or “basic income”—is the best? Should some kind of intermediate solutions, for example “conditional cash transfers”, be preferred? Are special instruments needed to fight child poverty? The answer to these questions first of all depends on the expected effectiveness of monetary transfers to cope with the consumption needs of households, and with their ability to finance their children’s health and schooling. Indeed, cross-country comparisons indicate that people with the same income achieve a lower well-being the more unequal is the income distribution in their country (Wilkinson and Pickett, 2009). The fact is that income inequality and
the magnifying impact of inequality of opportunity on poverty reinforce each other. The higher is income inequality in a poor country, the more “multidimensionally” deprived is the poor. A too unequal income distribution procrastinates inequality of opportunities, in turn impeding the improvement in capabilities by the poor.

The design and the implementation of development policies also depends on which equilibrium, among multiple social equilibria, society is stuck in (Dasgupta, 1993). The question is much debated about whether a sustainable development process could rely on domestic private and public sectors forces alone (Sachs, 2005). The World Bank has recently underlined that economic and social development progresses mainly through the evolution of mental models. Development policies should then take issue with the circumstance that backward societies are stuck mainly because the poor are too stressed people, who are short of the capacity to make correct and far-sighted decisions (World Bank, 2015).

It is now clear that the strategies build up by development theorists have to be implemented in tight connection with the real experience of the international agencies working on the territory. Provided that appropriate instruments are deployed in order to counteract corrupted governments in countries receiving the foreign aid, the role of international organizations emerges as decisive for the market economy in poor countries be backed by institutions of social protection fostering socio-economic development. A big-push centred on a huge increase in development aid to poor countries is certainly needed. The key question is that a clear method of governance is still lacking about the coordination of aid programmes of international organizations with the anti-poverty policies organized by the governments of backward economies. The proposal has been set off that in developing countries aid agencies should behave as venture capitalists and fund start-up companies progressively, in order not to jeopardize the incentive to the profitability of private investors (Sachs, 2006).

The World Bank approach to aid programmes promoting the poverty-reducing growth points to negotiations between advanced and developing countries in order to strengthen the participation of the latter to international markets and, more generally, to further the respect of the “rule of law” as the inescapable condition for the implementation of investment projects (Collier and Dollar, 2002). In order to avoid that anti-poverty programs could be captured by the elite groups of the central government, the decentralised organization of aid may be preferred even at the cost of the efficiency of interregional resource allocation (Bardhan, 2002). Aid programmes should aim at financing the poor countries’ investment in human capital, so to help them accomplishing the achievements of a higher education among the young population, and of free health care to the poor (Klugman et al., 2011).

Many progresses have already been done. The Millennium Development Goals launched by the United Nations in 1990 have been the most successful global anti-poverty push in history. The world reached the poverty reduction target five years ahead of schedule. In developing regions, from 1990 to 2010 about 700 million fewer people lived in conditions of extreme poverty, and the proportion of people living on less than $1.25 a day fell from 47% to 22%. However, one in eight people worldwide remain hungry; too many women die in childbirth; more than 2.5 billion people lack improved sanitation facilities, of which one billion continue to practice open
defecation, a major health and environmental hazard. Indeed, in fighting poverty the road ahead is still long and uncertain.
References


