LUISS Guido Carli
LIBERA UNIVERSITÀ INTERNAZIONALE DEGLI STUDI SOCIALI

Department of Political Science
Major in Politics, Philosophy and Economics
Chair in Political Economy of Development

# Education Policy and Development: An analysis of the policy design for the promotion of sustained growth

Supervisor
Prof. Francesco Ferrante

Candidate
Guido Miani
Matr. 070692

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The dissertation takes into account the causal relation between education policy and economic development. Three main issues come about. First of all, there is no trade-off between equity and efficiency in education. Secondly, in the absence of appropriate education policy, poor educational outcomes can persist through generations. Therefore, the correct way to foster sustained growth through education policy is to target investments, very early in the schooling process, to the most disadvantaged groups in society. Finally, the emphasis on excellence in global education policy governance could foster social polarization in the learning outcomes that may preclude long-term growth.

## Abstract

The aim of this dissertation is to shed light on how policy may influence educational outcomes and, through them, the development of a country. The analysis is brought forward by taking into account the drivers of education and the policies to address them. First of all, the importance of both quality and equity in education is made clear. The focus is on free access to primary schooling and measures to improve its quality. An important aspect is the adverse influence that comes through the educational delay of the family. Kids' school achievements are directly affected by their families and the social environment. Education policy should primarily address such situations by investing a larger amount of money on these groups, thus promoting more equality in educational outcomes. If not, education will just reinforce the existing differences in the socioeconomic outcomes. Moreover, high inequality in education at national level is deemed a potential inhibitor of growth. Nonetheless, an overview of the global education policy shows a trend in the polarization of outcomes within and between countries. Neo-liberist policies that favour privatization and homologation, without taking into account distributional issues and local conditions, can exacerbate inequality in the socioeconomic outcomes. The educational process can be an important factor for the fostering of economic growth if it has the ability of promoting more equality and intergenerational mobility. The formulation of the correct education policies is the mean through which development is brought about.

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## Introduction

The relation between education and development has been an important subject in the academic literature on economic development since the post-WWII. Nevertheless, it is still an evolving field where a big debate is taking place. The aim of this dissertation is twofold. First of all, is to give an overview of the effects of education on growth. Secondly, given the existing literature, is to detect the fundamental drivers of educational outcomes and how policy should address them in order to promote development.

Both the concept of education and the concept of development can take on different meanings. Starting from the former, it can vary according to the means through which and the time at which it is performed. Normally, in international practice, it is divided between formal education and informal education. The first refers to the education received at school, at all levels, from kindergarten to university. The second refers to the one received informally in the family, and in the social and cultural environment in which the subject is living in. In this dissertation both the aspects of education will be addressed, analysing on the one hand the role of schooling, and on the other hand the role of family and society and their interactions.

As already mentioned, also the concept of development can assume different meanings. Starting from a minimal definition, development can be viewed as a process of positive change over time, in a country or a society as a whole. Because of its inclusive nature, it can be addressed to all the realms of society, but most of the time this heterogeneity is difficult to measure. That is the reason why, in this dissertation, reference will be made to the economic development of a country. At the same time, it will be necessary to make reference to some other important aspects of development: rights, freedoms, capabilities and equity. The reason for this inclusion does not entail a value judgement; on the contrary, it lies in their possible positive effect on economic development.

The dissertation is divided into three chapters.

The first chapter is itself divided into two sections. Firstly, an overview is given on the role of education in the various theories of development. Reference is made to Neoclassical theories, Endogenous Growth theories and Human Capital theories. Secondly, an analysis of the different methodologies, used for addressing education, is made. Attention is dedicated to the debate between the use of school attendance data against the use of cognitive skills measurements as indicators for education. Special notice is given to the works of Hanushek and Woessman, who have been drawing the attention on the relation between cognitive skills and economic growth. Their contribution is one of the cues that mostly inspired this dissertation.

The second chapter concentrates on what are the major drivers of educational outcomes. The first section analyses the important aspects of quality and equality, within the realm of schooling. Talking about the former, reference is made to the importance of structural changes in schooling for the promotion of educational outcomes. Instead, talking about the latter, reference is made to the multidimensionality of inequality and to the contrasting role that education may have in reinforcing or eradicationg the differences in society.

The second section considers the role of external factors, namely family and society, in affecting educational outcomes. Special attention is given to the issue of educational delay, within and across countries, and the role of education in promoting better intergenerational mobility.

The third section discusses the case of the East Asian miracle. The analysis concentrates on the role of education in the economic development of this region of the world and, more importantly, on the education policies that fostered the increase in human capital of these countries.

The third chapter, instead, gives an overview of the framework in which the education policies are carried forward globally. Reference is made to what has been called Global Education Policy and the main actors around it. At the same time, also the consequences that this network has on the national and local level are taken into consideration.

The overall aim of the dissertation is to understand how policy should address the different factors that influence educational outcomes, in order to promote sustained and inclusive growth.

In this dissertation education is taken into consideration for its instrumental value. So, the attention is directed toward its role for the economic and social advance of a country. But, what is important to recall is that education owns an intrinsic value. Education is concerned with the development of virtues of the mind (Reid, 1998) and the ennoblement of the individual. Education enables a person to learn values and to exercise his freedoms. This more philosophical aspect is not taken into account in the next pages, but it is important to always maintain this idea into the background in order to put things in perspective.

# 1 – Education and Theories of Development

## 1.0 – Brief overview

This chapter has the objective of setting an introductory framework for the analysis. It is important to set a platform for the discourse so that the reasoning has a solid base. First of all, the attention will be drawn to the role of education in some of the major development theories. The aim is to understand how the broad field is structured, in order to get more and more specific through the subsequent sections. In the second section, in turn, an overview of the various methodologies to address the concept of education will be made. This is of major relevance because different ways of describing the concept result in very different outcomes, so it is better to explain in a clear way the set up before moving on.

## 1.1 - Theories of development addressing education

The relation between education and economic growth can find explanation in two different realms: the realm of the individual and the realm of society as a whole.

In this section three approaches to economic growth, that take into account education as a driving factor, will be analysed. Both the Neoclassical Theories and the Endogenous Growth Models consider education as a factor for society as a whole, mainly as a driver of technological advancement. On the contrary, the Theories of Human Capital take into consideration also the individual side of education, drawing the attention on the individual costs and benefits of receiving a better education, jointly to the cost benefit analysis of society as a whole.

In the next paragraphs the dissertation will focus more deeply on each of the three approaches, in order to better define what is the theoretical framework that lies at the base of this review.

### 1.1.1 - Neoclassical theories

The neoclassical theories of development have their origins in the counterrevolutionary movements of the 80's, when the rise to power of republican governments in the US coincided with a revival of free market and laissez-fare thoughts in the field of development.

The theories draw on the macroeconomic theories of Solow from the late 50's, which highlight the importance of investments and technological change. More specifically, the standard Solow model defines the production function in these terms:

$$Y = K^{\alpha}(AL)^{1-\alpha}$$

where Y is GDP, K is the stock of capital, A is productivity, L is labour, and α is the elasticity of output. As we can se from the equation, the Solow model doesn't directly address education, but still can find some place in the theory. First of all, when talking about capital, the model doesn't specify whether it is physical or human capital. Education, as it will be shown in the next sections, accounts for a big part of the human capital. So, both investments in machineries and in education, according to the model, will lead to higher productivity, and in turn to higher gross domestic product. Still, the model implies diminishing returns to capital. In the short run, growth could also take place thanks to higher savings (which by definition are equal to investments) and to an increase in population (in this case GDP per person would diminish), which results in an increase of labour. In turn, sustained growth can only be reached through continuous technological change, which is considered exogenously driven.

Summing up, it is possible to say that if on the one hand the Solow model gives some importance to education, on the other, some major faults are made. Firstly, it values the returns to education for productivity equally to the returns to machineries. Secondly, it doesn't take into account the effect of higher overall education on the technological change. Thirdly, it considers all workers having the same productivity, irrespective of their education and skills. In effect, it also doesn't

take into account the fact that is very probable that new machineries require more skilled workers that are able to use them.

For Neoclassical theories, in general, education stands on the side of the picture, because the protagonist is the free market and the fact that underdevelopment is driven by the misallocation of resources by interventionist governments. The invisible hand would do a lot better job in fostering development. Still, a branch of the Neoclassical thoughts, represented by the World Bank in the '80s, encouraged market friendly investments by the governments, which also included investments in educational institutions.

The other two theories that will be reviewed in the next paragraphs will solve some of the problems we have noticed, also by accounting directly for the value of education. Still, Neoclassical theories are a good standpoint from which to start.

### 1.1.2 - Endogenous growth theories

Also called new growth theories, they made their appearance in the development literature in the late 80's. They were born because of the dissatisfaction with the ability of the Solow model, and neoclassical theories making reference to it, to explain long-term growth. As it is just been explained, Solow model only explains growth in the long run through exogenous technological changes. In turn, endogenous theories want to internalize the effects of investments, especially in human capital. So, according to them, the returns to investments are not diminishing anymore, but are increasing in the aggregate production, with a special focus on the role of externalities for determining the rates of return.

For what concerns the field of interest of this dissertation, what the new growth theories want to say is that, first of all, investment in education are in their nature very different from the investments in physical capital, because people have the ability to learn. Moreover, there are positive externalities from the process of education, because not only the productivity of the subject increases, but also the one of people surrounding him, because of learning and knowledge spill-overs. The two factors lead to increasing returns to scale in output production.

There are a number of very important implications to this framework. The first implication, because of the fact that these theories consider education in the realm of society as a whole, is that most of the time individual returns to education are way lower than social ones. It follows that the government should incentivise the investments in human capital in order to reach the optimum level, because the free market forces would not be able to do so. The second implication, in turn, given the fact that returns are increasing, is that the people who are in front will stay in front. Developing countries, in order to narrow the gap that separates them from developed ones, should invest a whole lot more in human capital, because, even by investing the same amount, they would continue losing ground. What follows is a third implication, which is that the potential high rate of returns of foreign investments in low capital-labour ratio countries are eroded by low levels of complementary investments, namely education, infrastructures and R&D.

If these models hold true, than the destiny of developing countries would always be to close the line. Fortunately, to date, endogenous growth theories found only limited support in the data. The major fault is that they assume that there is only one sector and all the sectors are symmetrical, fact that does not reflect reality. Moreover they do not take into account the institutional factors, which play a large role, especially in developing countries in shaping incentives.

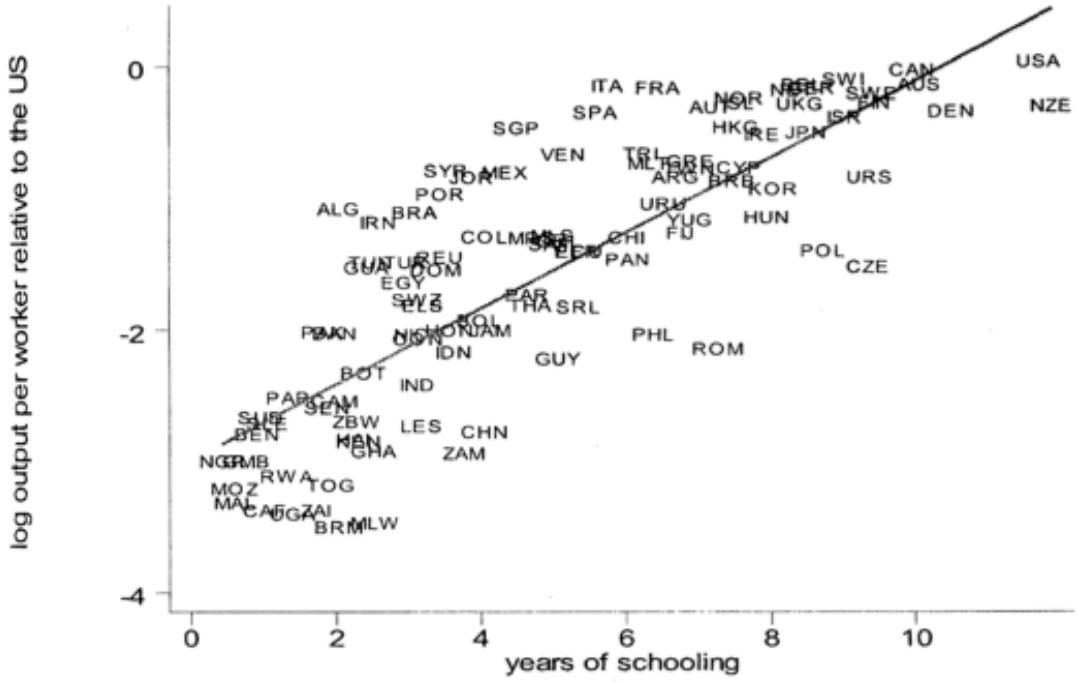
Still, for the purpose of the argumentation, the endogenous growth theories give an important framework for interpreting the macroeconomic effects of the investments in human capital at the social level. It will be very useful to keep it in mind during the analysis that will follow.

### 1.1.3 - Theories of human capital

Turning now to the individual realm, human capital theory was formulated in the 60's by Becker, and focused on the assumption that people with larger human capital are also more productive. The direct consequence of this assumption is that, by being more productive, these people will earn more and their wellbeing will augment. So, the final simple reasoning is that, if everyone is better educated, then

they all will be more productive, leading to better earnings for everybody and economic growth for society as a whole. As Figure 1 shows clearly, also statistical data support the assumption. In fact, there is a quite strong positive correlation between years of schooling and productivity ($R^2$ is 65%).

**Figure 1 - Log output per worker and years of schooling across countries**




**Source: Acemoglu and Angrist, 2000**

What has to be taken into account is that human capital is not affected just by years of schooling, but a whole lot of other factors, such as school quality, training, personal predispositions, and family, play a big role too. This is a very important matter, which will be largely discussed in the next chapter. Human capital theory, concentrates most of all on the rate of returns to education. First of all, it performs cost benefit analysis at each stage of the educational career. The standard equation that describes the trade-off between studying one year more and going to work is:

$$\sum \frac{E_t - N_t}{(1+i)^t}$$

which is the summation over the total years of work of the difference between income with extra education (*E*) and income without extra education (*N*), at year *t,* divided by one plus the discount rate *i* in the same year. The result of this calculation should in theory tell the individual if it is worth to continue school. The costs of additional years of schooling would not only be direct (fees, books, transportation, etc.) but also indirect, that is the opportunity cost of earning from work. Still rates of return will vary consistently according to the level of education the individuals have. Table 1 shows that rates of returns are a lot higher for primary education than for higher levels of education (the data come from the 1989 household survey in Venezuela).

**Table 1 - The returns to education, full discounting method (percentage)**

| Educational Level | Private Returns | Social Returns |
|---|---|---|
| Primary | 29.4 | 19.5 |
| Secondary | 10.2 | 7.9 |
| University | 12.4 | 7.1 |

**Source: Psacharopoulos, 1995**

It is possible to see that the table accounts not only for individual returns, but also to social ones. This calculation has similar implications to the ones of the endogenous growth models. That is, states should at least incentivise primary education for all, because social returns, even if lower than private ones, are still very high.

The human capital theory is the model that best fits the purpose of this dissertation, because it accounts specifically for education and its effect on economic growth. Still it is only a partial framework, which is very weak in explaining overall development of society. As a consequence, it will be supplemented by some important insights of the other two theories, in order to have a balanced framework in which to work.

## 1.2 - Methodologies to address education

The attention will now be drawn to a second important methodological aspect of the analysis. While analysing the impact of education, it is also important to take into consideration the fact that it can be measured through different indicators and statistical constructs.

The indicators that have mostly been used, throughout the literature on the topic, are school attendance and cognitive skills. The former is usually measured as years of schooling, while the latter are measured through standardised tests performed by young pupils around the world, measuring their performances in literacy, mathematics and scientific knowledge.

The following two paragraphs will highlight the pros and cons of the two methodologies, trying to understand which one fits best for the analysis of this dissertation.

### 1.2.1 - School attendance

The famous Mincer earning function has been a cornerstone of labour economics since the middle of the last century. According to this function, the earnings of an individual are determined by his years of schooling and his training, where the two together are labelled human capital. The equation and the core concepts that it represents are at the base of the human capital theory, which has been analysed before. This holds true to the point that, until few years ago, school attainment has been considered in education economics as almost a synonym of human capital. Obviously there is a reason for that. Years of schooling are probably the easiest way to measure education, because it needs basic records of people registered in schools. When school attainment is taken in to account, what is under observation is the cause of human capital, but this, may not be the only one. As it has been noted before, a series of other factors have an important influence, so this causality is in a certain way fallacious.

### 1.2.2 - Cognitive skills

From the late 90's a number of standardised tests have been introduced in order to measure basic skills of kids around the world. The aim of these tests goes in opposite direction from the one of the measures of school attainment. If on the one hand, the latter is focusing on measuring the causes of human capital, the former has the task of providing direct measures of human capital. This big difference has many methodological implications, because the two cannot be considered perfect substitutes. The three most widely diffused tests are the PISA (Programme of International Students Assessment) measuring literacy, maths and since skills, the TIMMS (Trends in International Mathematics and Science Study) measuring maths and science performances, and the PIRLS (Progress in International Reading Literacy Study) concentrating on reading performances. They all are cyclical tests that are performed by people of the same age (ex. 15 years old) every few years (ex. every four years). The group of skills measured by these tests are called by researchers cognitive skills. The most famous promoter of the use of this kind of data is probably Erik A. Hanushek, who carried out a large part of his research around the concept of cognitive skills. What he has been looking for are both the consequences of differences in cognitive skills, which can be understood as differences in human capital, and the determinants of cognitive skills themself. The former objective is in a certain way a new take on the old human capital theory (Hanushek and Woessmann, 2008, 2010, 2011). Hanushek and Woessmann claim that the main factor that can produce long-term growth is the increase of human capital, measured by growing cognitive skills. Their theory can be outlined by a simple equation (Hanushek and Woessmann, 2011):

$$growth = \alpha_1 human\ capital + \alpha_2 other\ factors + \varepsilon$$

Such formulation suggests that a greater amount of human capital will continue to stimulate growth over time. The other factors, instead, include initial levels of income and technology, economic institutions and other systematic factors. This

approach draws on all the major models reviewed above, implying a relation between human capital and technological advance (endogenous growth) and, because of the presence of the initial income level, also allows for conditional convergence (augmented neoclassical). They find evidence for their intuition in the analysis of the standardised tests results, which, according to them, are able to explain long-term growth better than the institutional and regulatory features of a state. It has to be said that their work refers mostly to OECD countries, which have similar institutional setting to one another, so this may weaken their explanatory power. Moreover, analysing data, they also find out that basic skills (elementary education) are way more important for growth than top ones. It is an interesting feature of the accumulation of skills that will be reviewed in greater detail in the next chapter.

Conversely, going back to their latter objective, it opens a new discussion analysing the very primary causes of human capital growth. This second field of research is of fundamental importance for policy making. If the various determinants and their direct or indirect effects are individuated, than policy makers can concentrate their intervention, avoiding the loss of already scarce resources. This is a big step forward from the idea that more years of schooling give better results. In fact, the objectives of this kind of policies didn't get much support from empirical data (Hanushek and Woessmann, 2010, 2011).

This dissertation will concentrate mostly on this second stream of research, because it wants to take the point of view of policy makers, understanding the effect of different policy designs. As a consequence, the concept of cognitive skills will be considered as almost a substitute of education (and human capital), and will be widely used throughout the analysis. Reference will be made most of the time to the PISA test, both because of its comprehensiveness and because of its high frequency and diffusion. So, in the next chapter, attention will be drawn to the various determinants of education, baring in mind the concepts explained so far.

# 2 - Main drivers of educational outcomes

## 2.0 - Brief overview

This central chapter will try to clarify what are the main drivers of educational outcomes. As it has already been highlighted, education has not to be considered as an input; on the contrary it has taken as an output, whose causes have to be analysed very carefully. By taking into account the singular causes, it will be possible to get a clearer view of the path that policy makers should follow.

In their paper "The technology of skills formation", Cunha and Heckman (2007) give a powerful explanation on the way skills and abilities of people can be influenced. By doing so, they describe the process with a cumulative function, which can give some useful hints. Their equation has the subsequent form:

$$\theta_{t+1} = f_t(h, \theta_t, I_t)$$

where $\theta$ is the stock of human capital (which can be understood also as skills, abilities, or more broadly education), $h$ denotes the parents characteristics, and $I$ is the quantity of investments that are made. The cumulative character of this function is represented by the fact that the stock of capital at time $t+1$ will be an addition to the quantity at time $t$, and that it will be influenced by the quantity of investments that have been made in a previous time. This equation highlights two important characteristics of the process of skills accumulation. The first is that skills acquired at one stage of formation, for example time *t,* persist also at successive stages. The second is that skills produced previously augment the impact of later investments, which holds true also the other way round, so if some skills are missing later investments will be a whole lot less productive. The paper goes in deeper details of the mathematical aspects which lie behind their explanations, but for the sake of this dissertation those are not of big importance, so attention will be drown directly to their main conclusions in the next sections (Cunha and Heckman, 2007).

The above equation doesn't really describe what are the single components, because they are considered as implicit. It is necessary to unfold it and find out what those are. It is possible to distinguish between two realms: the domain of schooling and the domain of family and society. The two can clearly overlap in some situation, such as the contribution of the schools as social places, but this is just a marginal example, which is not of big importance for the argumentation. The former realm hides three issues: quality in schooling, quantity of investments and the big issue of equality. The three are interconnected and, as it will be shown in the next section, their trade-off is source of a big debate. The latter can be distinguished between family and society in general, which can be also called environment or culture. It will be argued that the influence of the family does not come only from the parents, but also from the previous generations, through a an educational delay that perpetuates across generations.

This chapter will be analysing in detail each of the components highlighted above (quality, investments, equality, family and society). The aim will be to review the weight that each one has in influencing the human capital, at the individual and aggregate level and find out which policies would be suitable to address them. After this core analysis the dissertation will turn, at last, to the salient example of the East Asian miracle in the 90's. An overview of what kind of education policies were implemented in such successful context will be useful evidence for the theoretical framework previously analysed

## 2.1 - The issue of schooling

The schooling component, in the formation of skills, is the most relevant one. This is not because of its contribution, but more because it is the one that can be more easily influenced by policies. The context of the family and society are most of the time driven by strong path dependence, which requires a big effort to be modified. On the contrary, the interventions on schools, as it will be shown, are easier to conceive and implement. There are two questions that the policymaker has to ask himself while reasoning on a schooling policy: What aspect of the schooling

process are to be addressed? How are they to be addressed? While answering, two important points pop up. The first is whether the policy is directed at ameliorating the quality of the process, while leaving the budget fixed, or whether the intention is to put a bigger effort of investments into the process. The second is whether the policy has an elitist objective, so it addresses only the most competitive section of the population, or whether is an inclusive policy, which wants to intervene on the biggest possible number of kids. In the next section not only these aspect will be analysed separately, but also the trade-off between them will be taken into consideration.

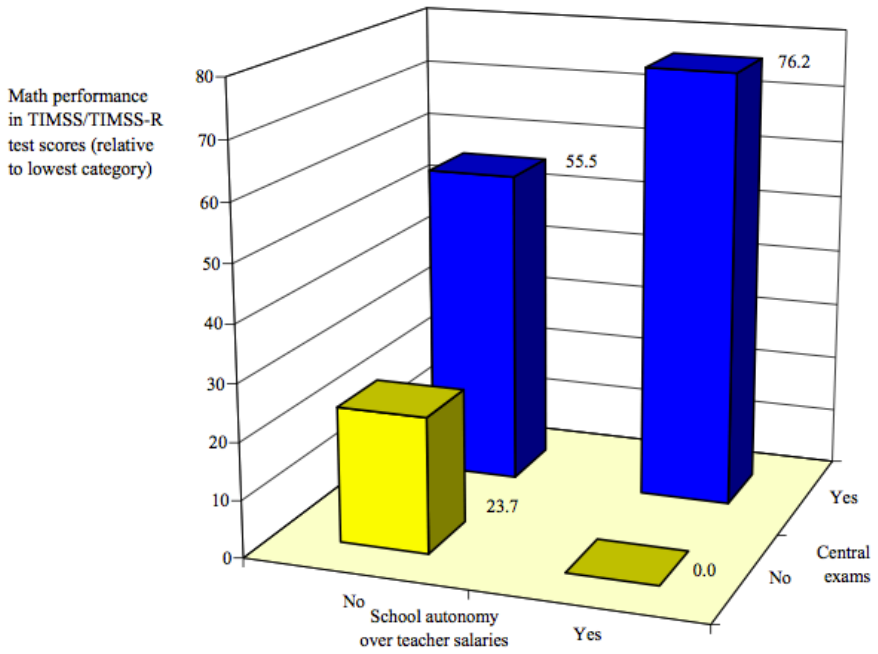
### 2.1.1 - Quality

The issue of quality comes about from data observation, where it is easy to spot the fact that the same number of years can give very different results in term of learning outcomes. As a consequence, a large number of authors started accounting for quality of schooling while analysing its effect on development. Most of them consider it an issue of effectiveness (Lockheed and Levin, 1993; Psacharopoulos and Woodhall, 1985; Hanushek and Woessmann, 2007), valuing quality a substitute of quantity, issue that will be overviewed in better detail in the next section. What they deem necessary to look at is the cost-effectiveness of investments in schooling. They try to conceive how policy can intervene, given limited resources, in order to improve achievement of students, which are quantitatively evaluated through standardised test scores.

The connection between schooling quality and development is well explained by Hanushek in a number of works (Hanushek and Woessmann, 2007, 2008, 2010). He does a reverse reasoning, going from development to schooling quality, and not vice-versa. His main theory draws on the explanatory power of standardised test scores in addressing individual and macroeconomic development. The second and more complicated passage he does is from test scores to actual schooling policy. It has to be said that, as we will do, he doesn't argue that only quality education can affect outcomes, but he believes that it has a big role. School

quality is deemed to be the aspect of the educational process that can be affected in the most efficient way. Hanushek is not a pedagogue, so he doesn't go in too much detail of how the policies should be structured. What he points out is that any reform should change the whole system of schooling, not only adding bits and bobs here and there. Moreover he identifies three characteristics of quality schools that summarise in a good way what are the policy direction for improving school quality, namely *choice and competition*, *decentralization and autonomy of schools*, and *accountability for outcomes*. He wants to point out that if the schooling system proves to have certain characteristics, which can be grouped under the label of school quality, the outcomes will be consistently improved. The graph below shows some evidence in support to his approach. This example testifies how the results in standardised tests (TIMSS/TIMSS-R) are strongly correlated to autonomous schools that are held accountable for their results.

**Figure 2 - External exams, school autonomy, and student achievement across countries**



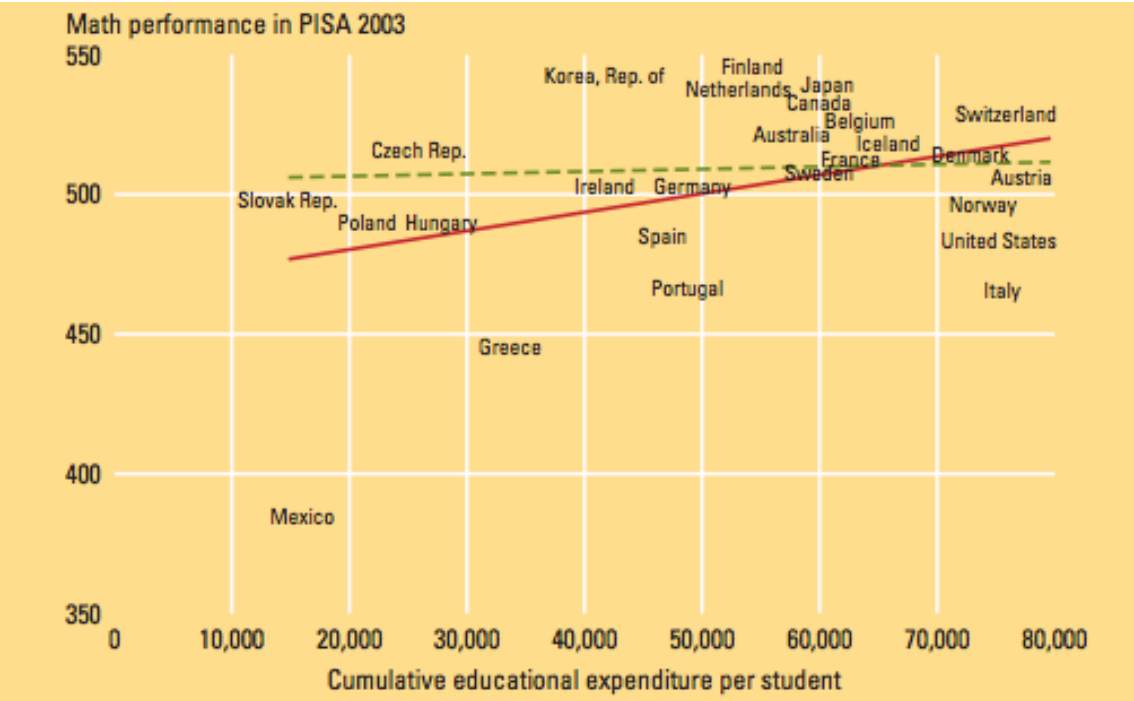

Notes: Performance difference between the four categories relative to the lowest category which is set equal to zero. Based on a cross-country student-level multiple regression using the combined TIMSS and TIMSS-Repeat micro databases that extensively controls for family background, school inputs, and other institutional features.

**Source: Hanushek and Woessmann, 2010**

So, trying to put this idea in a simple form, what Hanushek wants to say is that if the state wants to invest money in schools to improve their quality, a whole new structure, following the three overstated principles, should be built. The focus is not on how much is invested but on how it is invested.

There is some additional evidence that sustains his thesis. In fact, as it is possible to see from the graph below, if Greece and Mexico are taken out from the sample, the regression line is almost horizontal. This entails that the correlation between expenditures and test scores achievement is very low, almost zero. In fact, South Korea is among the highest scoring countries in the 2003 PISA math test, even if its expenditure per student is almost half of the one of Austria. Furthermore, the latter has a considerably lower performance in the standardised test. What is entailed by this analysis is that Korean performance is attributable to an institutional setting that promotes school quality.

**Figure 3 – Association between average math performance (PISA 2004) and cumulative expenditure on education per student (PPP)**




**Source: Hanushek and Woessmann, 2007**

Nevertheless, the above evidence may be considered in some way approximate, because there is no clear reason why Mexico and Greece should be taken out of the sample, apart from the fact that there are three countries that are doing better than Greece spending less. Furthermore, only OECD countries are taken into consideration. This last matter is clearly a problem of data, which are missing or are unreliable for a large number of developing countries. Anyhow, the analysis of this dissertation should go beyond, and try to understand what are the implications of greater investments in schooling. Hanushek gives a very useful prospective on the matter, but at the same time some questions pop up, which will be answered in the next section.

In spite of this, it is important to overview in greater detail which policies may efficiently affect the quality of schooling. Lockheed and Levin argue in their book "Effective schools in developing countries" that there is a large difference in the effect of schooling policies in the Western world and in Developing countries. (Lockheed and Levin, 1993) According to them, the policies that refer to problems of quality of schools in Developing countries have to be specifically tailored to the different needs of such environments. Some important differences distinguish them from the traditional western models. First of all, in very disadvantaged countries some basic instruction materials are missing. So, a basic stock of books, stationery and other teaching tools are fundamental. Secondly, an important variant is the time that the kids have for learning. In developing countries, when kids go home from school, there is an interruption of the learning process, mostly attributable to other duties that the kids have to perform (work at home helping parents) and to the wrong set of motivations in the family environment, aspect that will be analysed in more detail in the next section. As a consequence, unlike in western countries, where in the majority of cases the time of learning is prolonged after school in the family environment, in developing countries schools have to be a substitute. So, prolonged school-time, or time spent at school during the "free" hours (early in the morning and late in the evening), have a substantial effect on the achievement of the pupils. Thirdly, the school curriculum in developing countries lacks often

connection to the environment in which it is thought. Standardized curricula should be modified in order to suit better the skills that the society requires. Fourthly, teachers often lack a sufficient preparation in order to perform their duties, aspect that may have some serious repercussions on the learning process. The situation is often exacerbated by the very high degree of teachers' absenteeism in rural areas. According to recent surveys, more than one on four teachers on average is absent on for unjustified reasons in rural India schools (Narayan and Mooij, 2010).

These differences, although being important to spot, are not of crucial relevance. In fact, as it will be explained hereinafter, it is possible to find some fundamental drivers of quality, and education in general, which differ in their proportions of incidence (higher in developing countries, lower in developed ones), but are central in the majority of cases all over the planet.

As well as the input problems just mentioned, there are some important conditions and practices that have a strong influence in facilitating the learning process of students.

The first one is the involvement of the community, which should happen at two levels. At a larger level, a community-school relationship should be established, where the two are mutually benefiting from each other through the monetary contribution of the one for the necessary knowledge contribution of the other. It is important to establish a degree of coordination in order to have positive externalities in both directions. At a smaller level, also the parents' involvement is very important. It is fundamental for kids, in order advance well in their learning process, to have the support of their parents and family in general. An excellent way of reducing their scepticism on the utility of education, especially in developing countries, is to involve them in the process, so that they take an active part in their children's learning.

The second practice can be labelled school-based professionalism, and it entails a number of structural features. First important aspect is the principal leadership, which means that he has a central role in the organization, administration and innovation of the school. He should not only implement the directives coming from

above, instead he has the direct responsibility of ameliorating schooling outcomes. Secondly, the teachers' collegiality and commitment plays an important part. The teachers' body should act as a team in coordination with the principal, following a set of shared value and objectives. They have to go beyond the mere academic side and become the backbone of the system. A third aspect should balance all this autonomy granted to the professional figures inside the school, that is accountability. The teachers and the principal should be assessed for their work, in order to see if they are producing the outcomes that they are expected to, in terms of improved performance of their students.

The third practice that should characterise effective schools is a general commitment to flexibility, which should feature a number of practices. First of all, for what concerns curricula, fragmentation and discontinuity between life at school and life at home should be avoided, and the two spheres should be integrated through the teaching of more practical skills, suited for the outside world. In second place, flexibility has also to apply to the level and the pace of the teaching. Too much demanding, or too less demanding, standardised programs could provoke a substantial drop in the teaching efficiency. The third aspect that should be characterized by flexibility is the organization. In a situation of a fixed budget that has to be allocated in an efficient way, some organizational expedients can be of grate help. An example is the use of school clusters, which are very useful in rural areas in order to cut the common administrative expenses and to perform more efficiently. The fourth important practice is pedagogical flexibility. Especially in contest of overlapping language use, this would mean that the school could offer lessons in the native language in the first years of study, and then switch to the official one when students grow older, in order to avoid discontinuity between the family and the school environment.

So far, some concrete conditions have been taken into consideration, but there is a last universal feature without which it is difficult to achieve effective schools: the will to act. In the absence on a general commitment to change it is almost impossible to reach an objective imposed from outside. Especially in the

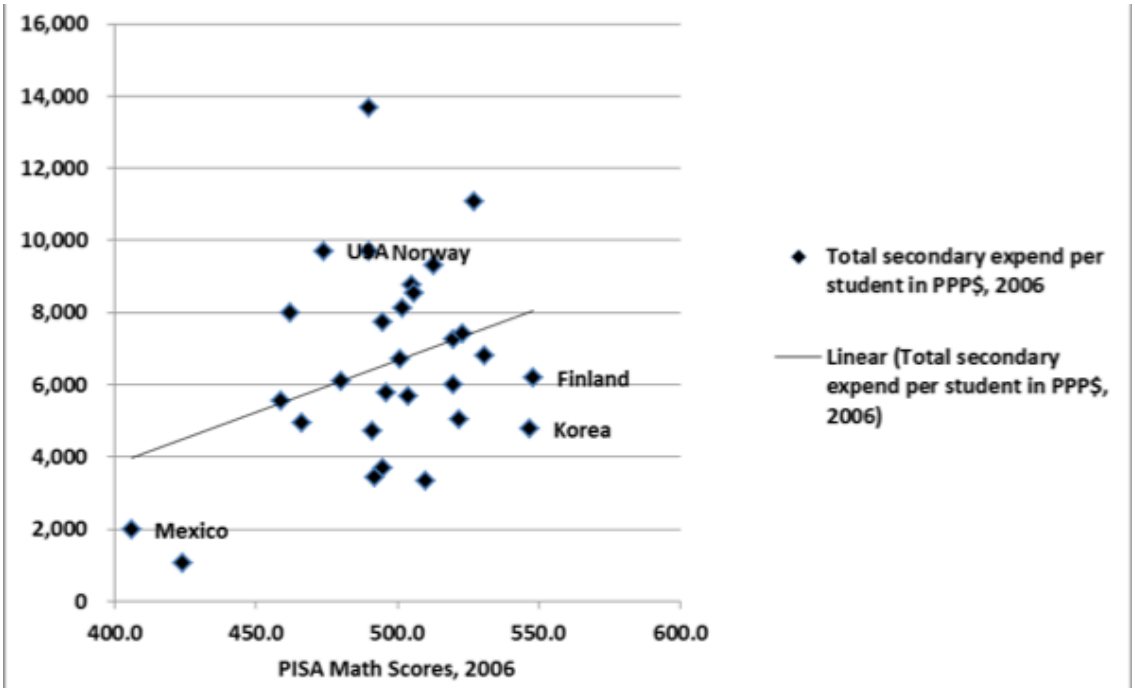
context of developing countries, before getting quality schools, teachers and society in general should want it. This psychological aspect is an essential one, without which any policy can be effective.
The next section will try to answer to some of the questions that have come out while discussing the issue of quality against bigger investments.

### 2.1.2 - Investments

Until now the focus has been on how money is spent, but what about how much money is spent? A growing corpus of literature is incentivising the creation of private schooling system in developing countries: is it correct? Or should the state be responsible for the delivery of education? What about the equality? Is it correct to leave someone behind or should all kids be taken to a certain levels?
The next two sections will try to deal with some of these very important questions.

The first point that has to be discussed relates to the graph highlighted above. The idea behind the graph makes reference to an alleged paradox, analysed by Gundlach, Woessmann, and Gmelin (2001) among others, according to which spending in education, in OECD countries, have been growing, while the results in standardised test scores have been remaining flat. The theory that lies behind this observation is the so-called 'cost disease', theorised by Baumol (1967), which highlights the phenomenon of growing cost and stagnating productivity within an industry. Obviously, it can be also applied to the industry of education. Wolff (2013) re-examines the model and comes about with a new formulation and a different price deflator for educational expenditures. This renewed theoretical framework leads to results that go in the opposite direction from the one descripted before. As it is possible to see from the graph below, he finds a positive correlation between spending per person in secondary education and PISA results.

**Figure 4 - PISA math scores and total secondary educational expenditure per student in 2006 (PPP)**




**Source: Wolff, 2013**

Moreover, he finds that the correlation between investments in primary education and PISA results is even stronger. The same pattern holds true if labour productivity is directly taken into consideration, instead of PISA results. So, overall, taking into consideration the cost disease hypothesis he suggests that growing expenditure is correlated with better learning outcomes.

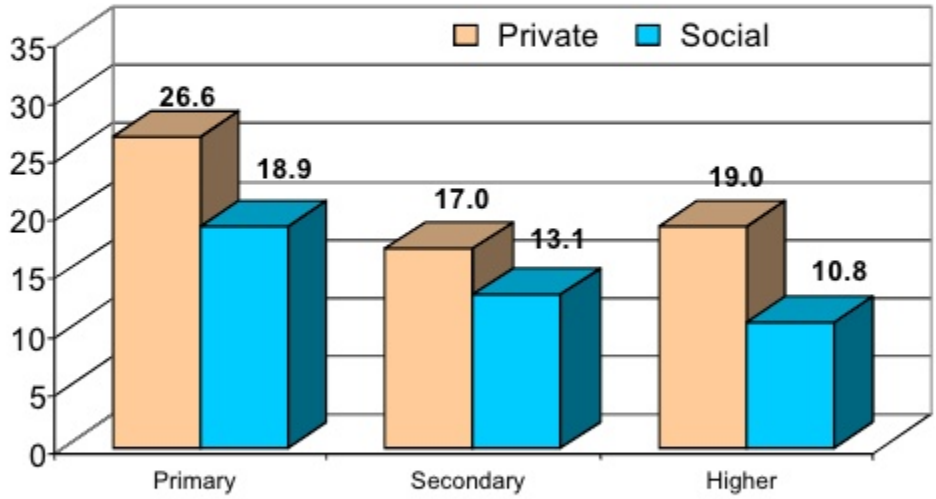
There is a second point that has to be made. As it has been noted before, there is a certain threshold of investments that is essential for the schooling process in any circumstance (studying material, structures, prepared teachers). When talking about investments reference has not only to be made to public investments in education, but also to the money that families put in it, given the fact that, especially in developing countries, free education is not always available. The burden, which stands on families, is not only the mere price of sending kids to school, but also the opportunity cost of it. Children may instead take care of their younger brothers or help in the family activity. The issue of private-public schooling will be discussed

later, but an important consequence of the cost of education is the very high drop out rates in developing countries. So it is not a matter of bad education, where quality is the only variable. It becomes a matter of no education, where the only solution seems to be a bigger investment by governments directed to the groups that most need it. It becomes an issue of equality of opportunities, a topic discussed in the next section.

It is also important to understand that what matters is not only how much you invest, but also when you invest. Going back to the cumulative function of skills of Cunha and Heckman, it is clear how the time schedule of investments is central. Earlier investments have a strong influence on the efficiency of later ones. This is what they call *dynamic complementarity* (Cunha and Heckman, 2007). What follows, from the policy maker perspective, is that there should always be complementary investments along the life cycle of pupils, and that missed opportunities are very difficult to recover. When the discourse will turn on the topic on family, this concept, which will be labelled *educational delay*, will be reviewed in deep.

It is easy to see that some important variables are entering the reasoning, which make it go beyond the pure issue of quality. A further insight is the one given by Psacharopoulos when he analyses investment choices (Psacharopoulos and Woodhall, 1985). After looking at investment choices at various levels of education (primary, secondary, tertiary) and discounting them for their individual and social returns, he draws some important conclusions. First of all, as it possible to see from the graph below, returns to primary education, whether private or social, are the highest among all. Secondly, that private rate of returns exceed social one at all levels. This observation implies that people should invest in education more than society wants them to. Some problems of access to finances and motivational structure, which will be discussed later, play a major role in shaping private investments. Thirdly, returns are higher in developing countries than in developed ones. This implies that developing countries should invest a lot more in education than developed ones, but in reality this is a pattern that doesn’t hold true.

**Figure 5 - Returns to education by level**




**Source: Psacharopoulos and Patrinos, 2004**

Some scholars, one on all McMahon, suggest that by computing more comprehensive accounts, considering also non-market externalities and indirect effects of schooling, the resulting macroeconomic effects are a lot higher than previous calculations. The direct implication is that a higher amount of investments on schooling should be made, in order to foster economic development (McMahon, 2010).

The studies of Psacharopoulos and others, which had demonstrated the profitability of investments in primary education, were the academic base on which the Education For All initiative was brought forward by UNESCO and supported by all the other major agencies of the sector (UNICEF, World Bank). Among the 2000 Millennium Development Goals, the second goal was to "Achieve universal primary education" by 2015. Moreover, still in the same years, the Dakar World Education Forum was held, and a new document, specifying the six EFA goals was drafted.

Those six goals are the following:

- Expand early childhood care and education
- Provide free and compulsory primary education for all
- Promote learning and life skills for young people and adults
- Increase adult literacy by 50 per cent
- Achieve gender parity by 2005, gender equality by 2015
- Improve the quality of education

It is possible to see that this document delineates the main topics that have been touched so far. First of all, it focuses on early childhood education, which is of fundamental importance if we take into account Cunha and Heckman's considerations on dynamic complementarity of early investments. This topic will be discussed further while talking about the role of family. Secondly, the document sets the objective of providing free and compulsory education. It has to be free in order not to burden on the scarce resources of families. It has to be compulsory in order to avoid that families keep their children working at home. Both the reasons perfectly match the Psacharopoulos' argument. Thirdly, it also focuses on the improvement of quality, topic that is considered as central by Hanushek. Moreover, the document also wants to promote life skills, which is something that has already been highlighted while talking about the flexibility of the curriculum to the local environment. The topic that this dissertation is not going to touch is adult education, because it would require an additional, very different, analysis. But, an issue that the document takes into consideration, and that will be analysed in the next section, is inequality.

It is clear from the line-up of the EFA goals how primary education should be dealt with. What is not clear is whether secondary and tertiary education should be subsidised by the state, or, if not, in which proportion should education be privately funded.

Psacharopoulos highlights three important reasons why education should be publicly subsidised (Psacharopoulos and Woodhall, 1985). First of all, the state

should provide public education in order to avoid underinvestment by the families, which would lead to a lower educational level than the social optimum. Secondly, it is a matter of equality of opportunity, where tuition fees could act as a deterrent for equal education. Thirdly, he suggests that there might be economies of scale in the education provision, although this point is said to be debatable (Jallade, 1973).

Conversely, what Hanushek and Woessmann suggest is that a differentiation has to be made first, between funding and management. They show that where the funding is private and the management is public standardised test scores are worse. On the contrary, they find a positive association in the case where there is public funding and private management (Hanushek and Woessman, 2010). It implies that state should finance private schooling because it can give better learning results. They also suggest that in mixed clusters of public and private schools there might be positive spillovers, from the latter to the former, given by higher competition.

These observations may be true, but two problems pop up. The first is whether, in the context of developing countries, it is realistic that the state would finance private education. The second is whether the financing of private schooling may have a positive feedback on the already big inequality in such countries. Answering to the first one, in a context of scarce resources it is more likely that states leave private initiative on their own, because for them is already difficult to cope with the basic needs of the public schooling system. The observation made by Hanushek and Woessmann are, without any doubt, realistic, but they refer to rich western countries where subsidizing is possible and to be hoped. They give a hint also on the second problem. They say that the smaller the share of government funding to private schools, the higher is the correlation to the socio-economic background, which stands for low mobility and high inequality. This observation may be questionable, because other variables may be hidden in this correlation, such as the overall wealth of the country. It is a consideration that is difficult to apply to developing countries, given their financial situations.

The alternative they face, in order to reduce inequality, are two: subsidize private schools, neglecting the public system, which is not advisable, or concentrate on public schools, trying to deliver free education of high quality.

### 2.1.3 - Equality

The number of children out of school has declined in a dramatic way during the last fifteen years. The 2014 EFA Global Monitoring Report declared that the number had dropped from 107 million in 1999 to 57 million in 2011. School participation, in general, have been increasing at all levels, still the distribution of these positive results has not been uniform. Big inequalities can be found both between countries and within countries (or specific regions).

The different percentages of school participation, or of school output, can be attributed to two categories of social dividends: vertical and horizontal. The former comprises the divisions given by the amount of a certain resource that a person has. It may be wealth, food or years of schooling. This category is normally characterised by the recognition of socio-economic groups and classes, to which a person belongs. But this is not the whole story, some very salient divisions, categorised under the label of horizontal inequality, come from different aspects of the social life. They are dictated by different religious beliefs, cultural and political values, or simply aspirations. So, inequality may arise between groups defined by their race, ethnicity, gender or location.

While accounting for inequalities it is important not only to understand how a certain resource is distributed, but also to whom it is distributed (Stewart, 2002). If these different kinds of inequalities combine together, they may have a reinforcing effect on each other. The interconnection between horizontal and vertical inequality may result in multidimensional ones, which are highly diffused in the real world. For example, motivation and expectations for the educational career may be influenced by differences in the cultural background. In turn, the learning performance will be crucial in determining the future incomes and, as a consequence, also vertical differences, giving rise to multidimensional inequalities.

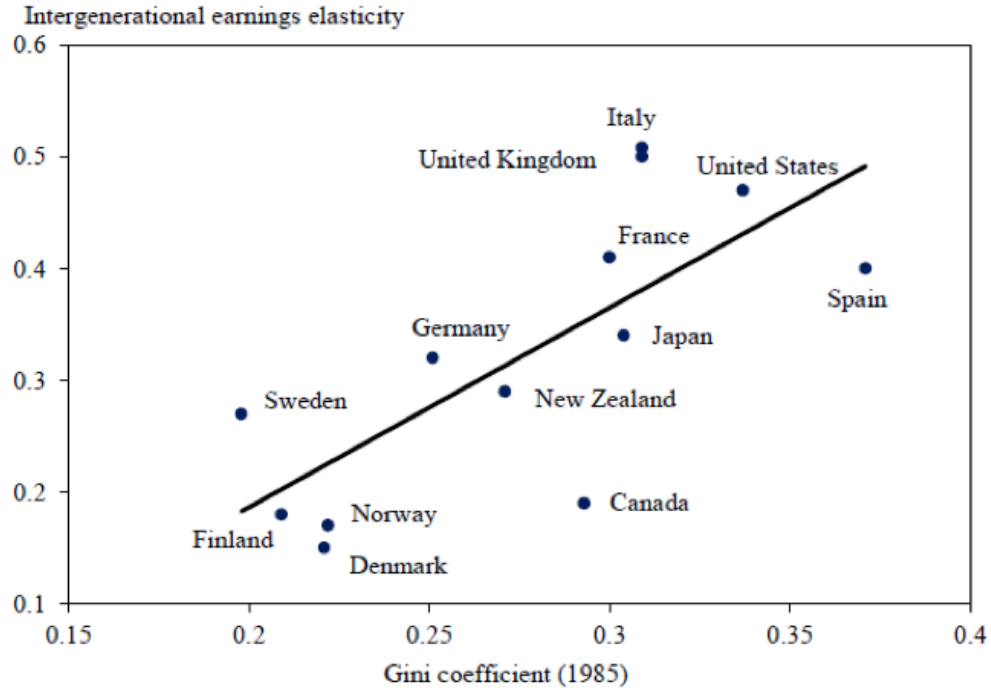
When talking about education, the above-mentioned divisions have a big influence on the inequalities within the field.

There are three categories o inequality in education (Unterhalter, 2015). The first is *inequality of opportunity*, which stands for the discrimination of certain groups for what concerns their access and participation to education. The second is *inequality of experience*, which refers to differences both in the learning process and in the quality of the school in general. The third one is *inequality of outcomes*, which comprises all the inequalities that arise from different attainment at school, which can be easily spotted through standardised test scores.

It is easy to understand that there is a strong effect of the vertical and horizontal divisions in society on the divisions in the education realm. The educational process can have two contrasting effect. On the one hand, it can be the promoter of social mobility, eradicating the divisions posed by society. On the other hand, it can enhance the already existing inequality, exacerbating the situation. This latter effect that education may have can be linked to the issue of intergenerational mobility.

According to the widely cited Great Gatsby Curve the countries where income inequality is more pronounced are the ones where social mobility is lowest (Heckman, 2013). The graph below plots the Gini coefficient of a number of countries, which is a good measure of income inequality, against their intergenerational income elasticity, which represents well the degree of intergenerational mobility. The regression curve that shows the positive correlation between the two sets of data is exactly the GGC.

**Figure 6 - The Great Gatsby Curve: cross-national link between inequality and intergenerational mobility**




**Source: Jerrim and Macmillan, 2014**

Also Corak (2013) highlights in his work this direct relationship between high inequality of income and low intergenerational mobility. He highlights how the influence of unequal family backgrounds spreads throughout the educational process, which in turn is a decisive step in the determination of future economic outcomes. So, the process that widely known as the 'American Dream' is no longer taking place, given the high inequality of income throughout the country.

The recurrent pattern shown above testifies that it is a duty of the policymaker to address education in order to make it a driver of social mobility and equality.

Nevertheless, the patterns of discrimination and inequality are not always the same, they easily change according to different regions in the world.

A simple example that can be extrapolated from data is the drop out percentage of females and males after primary education. As it is possible to see from the table below, there are divergent results. A general pattern might be that the richer the country, the more equal is the treatment of boys and girls. But, this might not

always hold true, because some diversified variables, which go beyond the income, may affect the pattern of decision. They may include aspects of the labour market, customs of early marriage, household division of labour according to gender and social development policy.

**Table 2 - Proportion of male and female progressing between primary and secondary education by region (2010)**

| Country or territory | Total | Male | Female |
|---|---|---|---|
| | | Median | |
| World | 95 | 93 | 96 |
| | | | |
| Countries in transition | 99 | 99 | 98 |
| Developed countries | 99 | 98 | 100 |
| Developing countries | 90 | 89 | 92 |
| | | | |
| Arab States | 94 | 92 | 96 |
| Central and Eastern Europe | 98 | 99 | 97 |
| Central Asia | 99 | 99 | 98 |
| East Asia and the Pacific | 93 | 92 | 94 |
| East Asia | 92 | 91 | 93 |
| Pacific | ... | ... | ... |
| Latin America and the Caribbean | 94 | 95 | 93 |
| Caribbean | 93 | 92 | 94 |
| Latin America | 94 | 95 | 93 |
| North America and Western Europe | 99 | 99 | 99 |
| South and West Asia | 93 | 89 | 96 |
| Sub-Saharan Africa | 71 | ... | ... |
| | | | |
| Countries with low income | 73 | 76 | 70 |
| Countries with middle income | 93 | 93 | 94 |
| Lower middle | 91 | 90 | 91 |
| Upper middle | 96 | 97 | 95 |
| Countries with high income | 99 | 99 | 99 |

**Source: UNESCO 2014**

The multidimensionality of inequality could make the task of eradicating it very difficult, but different kinds of strategies have been brought forward with different results. The first and most diffused policy is the *free primary education*. It has demonstrated very effective in heightening the enrolment rates. For example, in Kenya, the number of kids entering the primary school went from 6.06 million in

2002 to 7.16 million in 2003, after the implementation of the new policy, and the number continued growing until reaching 8 million in 2007 (Nugu, 2010). If on the one hand, these data highlight a big success by the policy; on the other hand, the increasing enrolment has not been complemented by the hiring of a growing number of teachers. The result was a big drop in the quality of the service delivered, which may have had consequences on learning outcomes. So, it is important to take into consideration also the side effects of policies that at first sight seem very advantageous. The second type of policy, which concentrates not only on access to education but also on the progression, is *cash transfer* (conditional or unconditional). It concentrates on the direct transfer of money to families that wouldn't afford to send their kid to school. Overall it has been a successful policy, but some drawbacks may arise, as the differentiation in treatments of pupils within the family, most of the time in reference to their gender role at home. Some other types of policy that concentrate on increasing the number of pupils in the schooling system are the *provision of free meal at school* and the establishment of *primary schools close to where the children leave*. The latter was implemented in India where the aim was to give a school within a kilometre to every child, through the use of mobile schools, teachers and learning material.

The problem with all the policies listed above is not only one of unexpected side effects, but also may be one of bad implementation, which may cause inverse results. For example, in the case of free primary education, if the transfer of money from governments to school is not prompt, the schools, which have very small finances, are obliged to ask fees in order to run the business. This situation has the opposite effect than the one desired, forcing newly enrolled kids to drop out from school. Moreover, the drop in quality due to free schooling has caused, in many countries, the rise of private institution and the increase of supplementary tutoring. The actors of this initiative go from local entrepreneurs to NGOs and teachers association. As it has been noted above, the general effect of private schools on inequality in the long run is not easy to estimate with precision. What has been noted, instead, is the growing inequality arising within the familiar context. Driven

by gender discrimination, families send only some kids to private schools and the rest to public ones (Woodhead et al., 2013). What have been recognized as efficient are low-cost private schools, which allow families to get a quality education for their children, paying affordable fees (Pinnock, 2013).

A further consideration has to be made. All the policies mentioned above concentrated on granting the entering and the pursuance of the schooling process. But, it is important to remind that quality, which has been largely discussed in the previous sections, has a major role. Having now a clearer picture in mind, what can be said is that policy has to be multidimensional in order to address inequality. The quantitative aspect of school participation is essential, but it is the superstructure that addresses the quality of schooling that makes the difference in terms of efficacy of the policy.

An additional point that should be emphasised is that all these policy are structured so as to address vertical inequalities. As a consequence, they may treat only one component of a more complex division between different groups in society. Horizontal inequalities are more difficult to spot and more difficult to be addressed.

An effort should be made not only by policy makers, but also by researchers and practitioners to better understand and evaluate such divisions, in order to intervene in an effective multi-dimensional way.

## 2.2 - The role of family and society

Until now, this dissertation has been treating only the sphere of schooling, without paying attention to the impact of the external environment. All the people and situation that surround the kid from his birth have a great deal of influence on his future life. This discourse ties in what has been said so far. The objective of this section is to better understand how and why differences arise from the familiar and social context, in order to find out how policy could address these patterns.

The ever-recurring Cunha and Heckman's equation highlights some important points. First of all, the accumulation of skills start from the very moment when child is given birth, or rather $t = 0$. Secondly, the equation accounts specifically for the

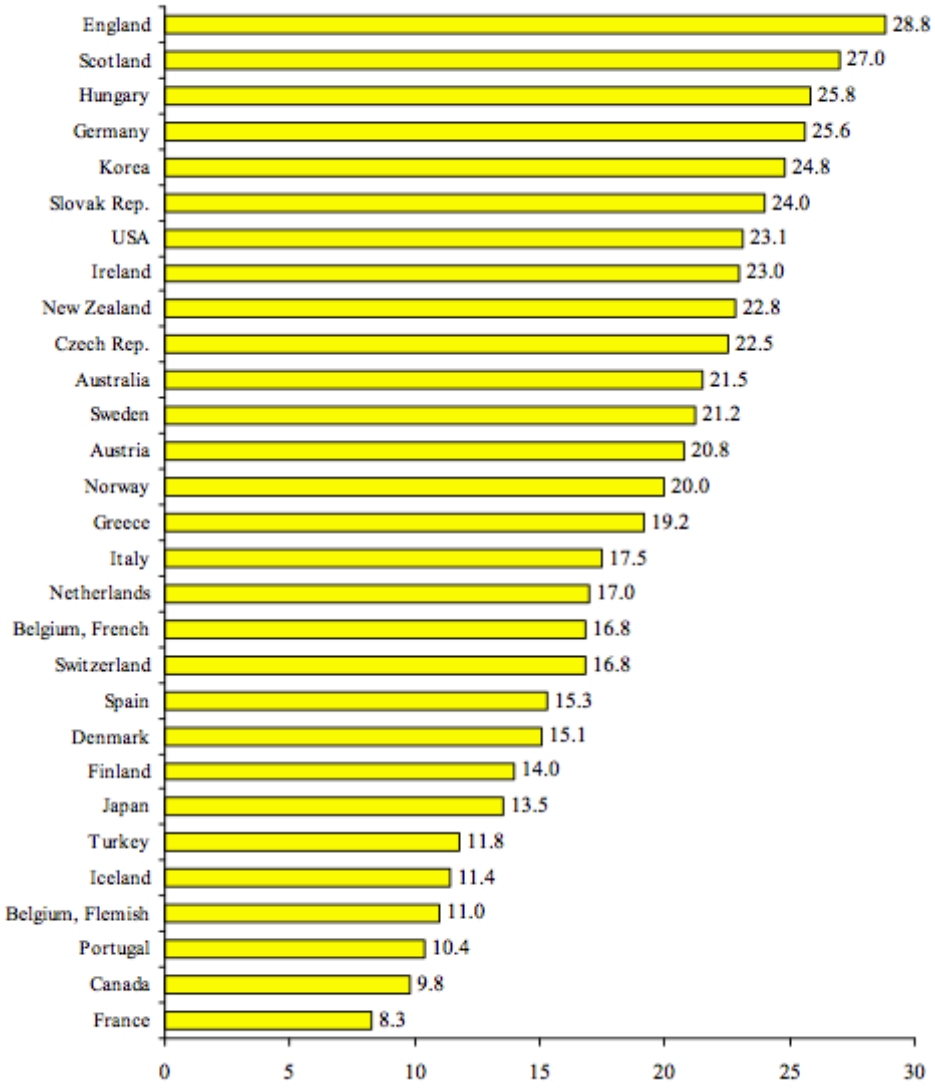
family condition *h*, which has a direct influence on how many skills are accumulated. Thirdly, Cunha and Heckman do a very useful distinction between cognitive and non-cognitive skills. This is helpful to understand how skills that relate to attitudes and dispositions, which are easy to be imagined as consequence of family education and cultural environment, are a substantial component of the set of skills that will lead the individual through his life path.

### 2.2.1 - Family

The context of the family has been considered by a large corpus of literature. The fact that family background has an influence on kids' future performances is undisputed. What is not so clear is how these influence work and what are the single salient components at stake. The analysis will be divided in to two stages. The first will be the study of influences on educational achievements within countries, while the second will concentrate on differences between countries.

While analysing the effects of differences in educational achievements, Hanushek and Woessman draw the attention to the role of the family background in influencing the results of standardised tests on learning outcomes(Hanushek and Woessmann, 2010). They take into account a survey analysed by Schuetz, Ursprung, and Woessmann (2008), called TIMMS. This data set allows to draw a correlation between the number of books at home and the performance in standardised test of single kids, analysing 325,000 students from 54 countries. The results shown in the graph below illustrate by what percentage the results in TIMSS test would change in each country if the number of books was changed by one category (the unit of measure is the number of bookcases), going from the condition where just few books are present at home, to the condition where there is at least one bookcase.

**Figure 7 - Family background effect in different countries**




**Source: Hanushek and Woessmann, 2010**

What the data show in qualitative terms is the magnitude of the inequality of opportunity in different countries. This enables to value the intergenerational educational mobility. So, looking at the various countries, it is possible to see how family background has a big influence in highly developed countries as England, Germany and the US. Surprisingly, also countries which rank first, second and third in the ranking of income GINI coefficient by the World Bank (World Bank Dataset), namely Sweden, Norway and Austria, show a discreetly high value of influence. This observation suggests that in these countries there is a big

redistribution of income the goes beyond the distribution of skills across the population. In any case, this has to be considered in relative terms, because such countries are among the ones that do best in standardised test scores, with little inequality of outcomes (Hanushek and Woessman, 2010). Finally, countries such as France and Canada account for the lowest correlations between family background and skills performance, suggesting high mobility between educational levels. Anyhow, the fact that this dataset accounts for the number of books in the family should not be misunderstood. It does not mean that the mere presence has a causal impact on the performances of kids. On the contrary, it entails that such estimates well represent the socio-economic status of the family and its attitudes toward culture.

This dataset is not the only one that tries to evaluate the influence of family background on the performance of kids in standardised tests. A number of other statistical constructs take into account other variables. The table below shows some examples, differing from one another both for the test scores used and for the variables taken into consideration. For example, Ammermueller, Heijke, and Woessmann (2005) took into consideration also the immigrant status of the family, its economic status, the parental education and the location of the community. They found a positive association of this bundle of characteristics with the test scores. The same holds true for Wolter and Coradi Vellacott (2003), who took into account also the number of siblings within the family. The point is that whatever the feature taken into account, there is a positive correlation of family background and educational outcomes.

**Table 3 - Within-country studies on student background and educational achievement**

| Study | Dataset | Countries | Topic of investigation | Measure(s) of student background | Measure of achievement | Estimation method | Results |
|---|---|---|---|---|---|---|---|
| Zimmer and Toma (2000) | SIMS | Belgium, France, New Zealand, Canada, U.S. | Peer effects in private and public schools | Peers' mean test score, share of high-/ low-ability students in classroom | Math, age 13-14 | Value-added, country and school-type fixed effects | Positive peer effect; gains from high-quality peers stronger for low-ability students; mixed results on school types |
| Ammermueller, Heijke, and Woessmann (2005) | TIMSS | Czech Rep., Hungary, Latvia, Lithuania, Slovak Rep., Slovenia, Romania | Educational production in transition countries | Immigration, family status, parental education, books at home, community location | Math + science, grade 7+8 | Cross-section WCRLR | Substantial effects of family background; larger in more (Czech Rep., Slovak Rep., Hungary, Slovenia) than in less advanced group (Lithuania, Latvia, Romania) |
| Woessmann (2005a) | TIMSS | Hong Kong, Japan, Singapore, South Korea, Thailand; France, Spain, U.S. | Educational production in East Asian countries | Immigration, family status, parental education, books at home, community location | Math (+ science), grade 7+8 | Cross-section WCRLR | Strong family-background effects in Korea and Singapore; more equitable outcomes in Hong Kong and Thailand |
| Woessmann (2008) | TIMSS | 17 West European countries + U.S. | Educational production in West Europe | Books at home, parental education, immigration, family status, community location | Math (+ science), grade 7+8 | Cross-section WCRLR, quantile regression | Strong associations; aggregate size similar in Europe and U.S.; France, Flem. Belgium most equitable; Britain, Germany least; equity unrelated to mean performance |
| Bedard and Dhuey (2006) | TIMSS, TIMSS-R | 10 for grade 3+4, 18 for grade 7+8 | Effects of relative school starting age | Relative age | Math + science, grade 3+4 + 7+8 | IV (instrument: age assigned by cutoff date) | Significant and sizeable effects of relative school starting age on performance at ages 9 and 13 |
| Wolter and Coradi Vellacott (2003) | PISA | Belgium, Canada, Finland, France, Germany, Switzerland | Sibling rivalry | No. of siblings, ISEI, parental education + employment, immigration + family status | Reading, age 15 | Cross-section WCRLR | Effects of number of siblings relevant in all six countries, but to a different extent; effects concentrated in sub-group low-SES families |
| Schuetz, Ursprung, and Woessmann (2008) | TIMSS, TIMSS-R | 54 countries | Equality of opportunity | Books at home | Mean math + science, grade 8 | Cross-section WCRLR | Significant family-background effect in all countries; considerable variation; large effects in Britain, Hungary, Germany; relatively small effects in France, Canada |
| Peterson and Woessmann (2007) | PISA | France, Germany, Great Britain, U.S. | Equality of opportunity | Books at home, parental job + employment, immigration status, family status | Math, age 15 | Cross-section WCRLR | Family background strongly linked to educational performance; largest in Germany and U.S., slightly smaller in Great Britain, even smaller in France |

**Source: Hanushek and Woessmann, 2010**

Switching now to the family influence between countries it is important to highlight a further consideration. In all the literature reviewed, when accounting for family background, only the condition of the parents is taken into account. For example, Cunha and Heckman, while describing their equation, say that the total time of life '$2T$' can be divided into two equal parts. The first $T$ is the period of time when the family is investing on the individual. Instead, the second $T$ is the time when the individual invests on his kids.

This division is, without any doubt, very useful for mathematical purposes, but still misses something in terms of causality. The family gives two different kinds of contributions to the cognitive and non-cognitive skills of the pupils. The first kind is physical contribution, in terms of material investments (school fees, books, material support…). The second kind is non-physical contribution, which includes both the skills which are developed at home, thanks to the free contribution of the family,

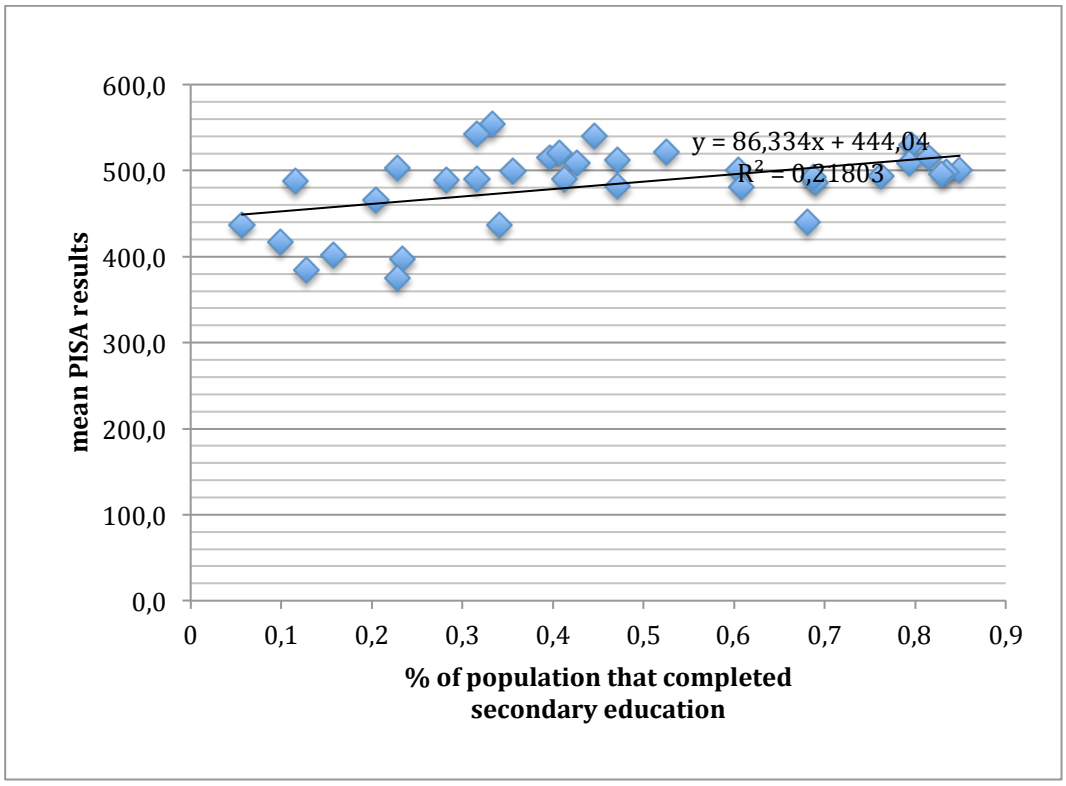
and the set of values and motivation that the kids internalizes while living in that context. For both of the kinds, it is not correct to stop the analysis at the attitudes of the parents, instead it would be crucial to observe the features of the grandparent. They may have a direct or an indirect influence on both material and non-material contributions. For example, taking into account the material ones, an important hint is given by Piketty in his latest best seller (Piketty, 2014). What he suggests is that, because of the fact that people now live longer, the sons don't inherit the capital of their parents until they are approximately in their fifties. Nevertheless the grandchildren will be very probably subsidised by the grandparents for their education. So, accounting for the income of the parents would tell only a part of the story, not taking into consideration the investments coming from the capital still owned by the grandparents. Furthermore, it is easy to imagine how the parents' values were easily influenced by their own parents. So the kid ends up absorbing a set of non-material contribution rooted in the family legacy. Moreover, he will easily be directly influenced by his grandparents, while sharing a large amount of time with them.

So far the argument has been focusing on the effects that grandparents have on the pupils. What would happen if also negative contributions were taken into considerations, that is the lack of material investments and not incentivizing values and motivations? This second point of view highlight an important phenomenon, which can be called *educational delay*. It can be understood as multidimensional path dependence of skills. Putting it in simple words, it is highly likely that the grand children of low-income poorly educated couples will end up having a tinier set of cognitive and non-cognitive skills than the grandchildren of high-income well educated ones. This observation doesn't want to promote any deterministic assumption, entailing that poor will always be poor and that it is their fault. On the contrary, it wants to draw the attention to some recurring trends in society, which have to be addressed with more focused and effective policies.

Turning back to the different influences that family background has across countries, an analysis of the data may show how the pattern described above are

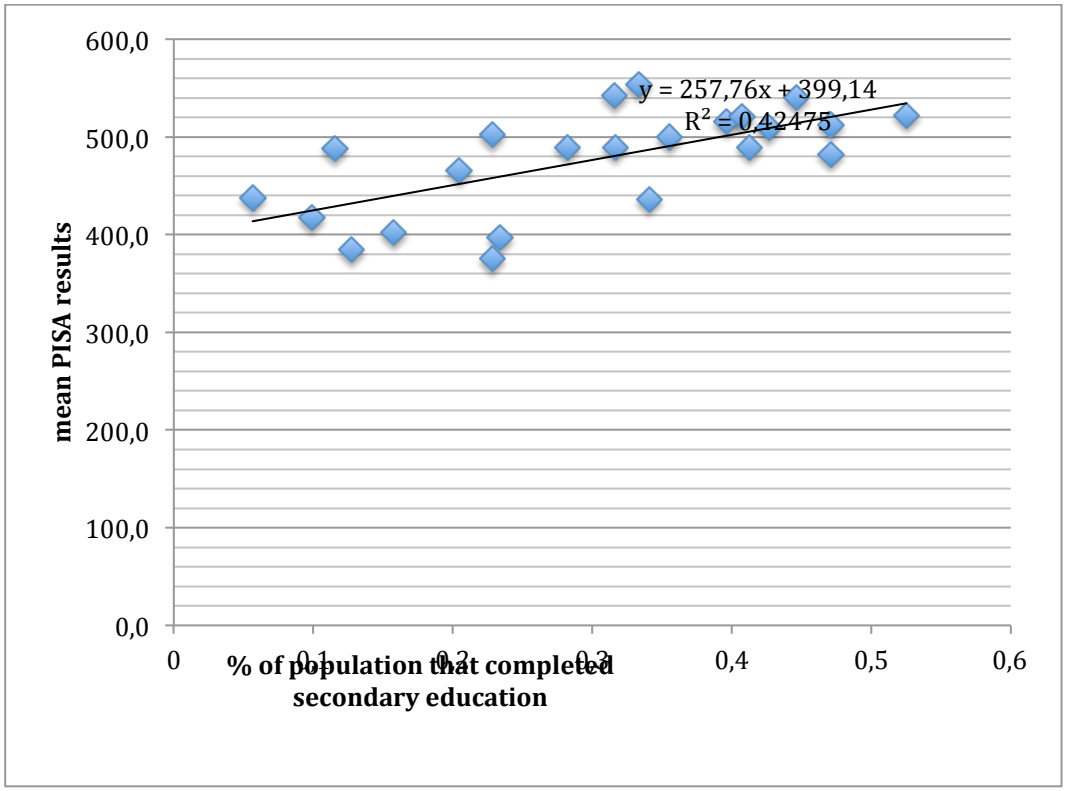
reflected on the real world. It is important to find some evidence in the real world in order to testify the presence of the above-mentioned educational delay across countries. Such evidence would imply important changes in the policies that are deemed suitable to address differences in educational outcomes across countries. To give proof to this intuition, two dataset have to be taken into consideration. The first is the set of PISA scores at country level. More precisely the mean of literacy, numeracy and science test scores for 34 countries that performed in the 2012 PISA test. The second is the dataset of the percentage of people over 65 years of age that, in 2010, have completed secondary education. Simply by crossing this two data set an interesting plot comes about. The graph below shows how there is a positive correlation between the two variables across countries. This finding supports the idea of educational delay, because in countries where the generation of the grandparents is less educated kids have worse performances in the PISA test overall.

**Figure 8 - Mean of PISA results (2012) and percentage of over 65 that have completed secondary education cross-country**



Still, in the graph above, the data is quite dispersed, and $R^2$ is 0.22 (sig. 99%), which means that the education of the over 65 explains the 22% of the test results at the country level, so the correlation is not extremely strong. Nevertheless, let's think for a minute about the condition of a single family. For each family it is possible to assume that there are four grandparents. Starting from the case where all of them have not completed the secondary school, probably both the parents of the kid won't be highly educated, and so will be the kid. In a second case, there might be one grandparent who has a high educational attainment, which will reflect on the education of his son/daughter, and will have a grate influence on the grandchildren. It is reasonable to imagine that the net effect of each additional highly educated grandparent will be diminishing. There should be no difference in the set of material and non-material contribution between a family with three and a family with four highly educated grandparents. The significant threshold should be around two out of four. It is possible to bring back this qualitative reasoning to the quantitative sphere of national data. It might be assumed that the meaningful quote should be slightly higher than 50%, because of the possibility of loss of one of the grandparents or the fact that some people over 65 may not have children. If only the countries, where less than 60% of the population over 65 have completed secondary education, are taken into consideration, the correlation becomes stronger.

**Figure 9 - Mean of PISA results (2012) and percentage of over 65 that have completed secondary education (only < 60%) cross-country**




So, if the analysis is slightly corrected, following some qualitative reasoning on how the educational delay spreads across generations, the results become less dispersed. A $R^2$ of 0.42 (sig. 99%) is quite high because it means that the 42% of the results can be explained by the educational level of the grandparents, bearing in mind that test scores should be influenced by a whole number of factors that have already been reviewed in the previous sections. This simple analysis not only gives empirical support to the concept of educational delay, but is also has some strong implication for education policies.

The scenario faced by the policy maker is one of multidimensional inequality, widespread across all the phases of the process of education. The path dependence of very early inequality analysed above implies that more disadvantage kids should have an even bigger amount of incentives for their education. If equality of opportunity is what a country wants to pursue, than policy must be specifically

targeted to those groups in society that face an educational delay. Countries should spend a whole lot more on those kids, and do it as early as possible. Only after a massive initial incentive, the system would work in an equitable way. So, all the measures addressing equality mentioned above would become a lot more effective in terms of homogeneous final outcomes. The implementation of this kind of policy may be more difficult in developed countries than in developing ones. In the former case, the intervention should be targeted to small groups in society that may be difficult to spot and to address efficiently. On the contrary, in the latter case, the intervention would be easier to structure, because the widespread educational delay of such countries implies that policies could act almost on universal scale, reducing some of the operating costs. Nevertheless, if developing countries wanted to engage in a policy that would allow them to converge to developed ones, in terms of human capital, they should invest a very big amount of resources on the education of an entire generation, in order to escape their path dependency.

### 2.2.2 - Society

The problems that have been analysed at the family level may have corresponding ones in the realm of society. The kid is not only influenced by its family, but also by the external environment that surrounds him. Society is not an empty box, it is a space of crossing networks and institutions. Fore example, the set of values and motivations of kids are highly influenced in spaces of aggregation, such as the parish (especially in Italy), or in civil associations in their teenage years. In the aftermaths of WWII, in Italy, both the church and communist/socialist parties have been promoters of education in the lowest classes of the population. Society, as family, may also have a negative impact on the values and motivation. A pattern that may arise is one of adaptive preferences. It entails that the individual will adapt his beliefs to the ones of the people surrounding him, because he hasn't been in touch with any different set of values. So, if the individual is in contact just with poorly educated people, he will believe that a small education is enough. This phenomenon may be particularly dangerous in the rural areas of developing

countries, where the yardstick for kids is very low. The implications for policy-making are the same as the one for family, because the two dimension may be seen as reinforcing each other.

Until now attention has been given mostly to he theoretical ideas that lie behind the structuring of education policies. What the next section will do is the analysis of a successful case where the policies that addressed human capital had a strong effect on the overall development of the country. Such example is the East Asian miracle.

## 2.3 - The East Asian miracle

In the period that goes from 1960 to 1990 the East Asian region has been the fastest growing area on the planet. The so called High Performance Asian Economies (HPAEs), namely Japan, Hong Kong, South Korea, Singapore, Taiwan, Indonesia, Malaysia and Thailand, accounted for the big part of this miracle. This case is of particular interest for this dissertation because some important education policies where implemented across the eight countries during this period. Given the fact that a multitude of factors affect development, it is difficult to understand a clear pattern of causality. The growth of the HPAEs has probably been influenced by some exogenous circumstances peculiar to the area, still it is widely recognised that the developmental policies enacted by their governments had an important role in this trend. The policy making was necessary, but probably would not have been sufficient.

Economists have identified some basic factors that have shaped this process. First of all, high domestic investments and rapidly growing human capital are seen as the major engines of growth, which in turn were supported by high levels of domestic financial savings. Moreover, agriculture, while loosing relative importance in the economy, had been growing as a sector and registered improvements in productivity. Third important factor was the decline in population growth rate, pattern that didn't take place in other developing economies during the period. Finally, an additional factor that has been deemed meaningful was the highly

efficient public administration (World Bank, 1993). Those aspects can be identified as an overall better capacity of accumulation of physical and human capital.

It is important to understand the general framework in which development took place, but still, for the sake of this dissertation, it is crucial to focus on the policies that characterised human capital accumulation.

With the exception of Thailand, development in education in HPAEs has been stronger than in any other economy with similar income levels. Not only universal primary education was achieved by 1965 in Korea, Singapore and Hong Kong, the expansion went on at the secondary level in the subsequent years. The gap between female and male attendance was thereby eliminated across the different stages of the educational cycle. The focus of quantity was subsequently supplemented by the attention to quality of education i.e. learning outcomes, witnessed by results in standardised test scores that have been well above the mean.

These important achievements in the educational process are not only the result of carefully and efficiently planned public policy, they also have been supported by a number of background conditions. Three important socio-economic phenomena, peculiar to the HPAEs, created a structure of incentives that enabled an effective development of the policy objectives.

The first one is *rapid economic growth*. Not only, as it has been noted above, the causality link goes from higher human capital to higher growth, but also the other way around. Rapid economic growth affects both the demand and supply of education. The former is influenced by the creation of new jobs, by the increase in real wages, and by the growing rate of return to higher working skills. On the contrary, the supply of education was affected by the continuously increasing amount of available resources within the economy. The growing wages of teachers might have been a problem for education costs, but the quick educational expansion brought on an upward pressure on the supply of professionals in the education sector, which in turn put downward pressure on their salaries. So, teachers' wages were growing, but at a slower pace than in other sectors of the economy, not affecting significantly schooling costs, which remained highly competitive

compared to the ones of other developing countries. The total cost of primary level of education was around 13% of per capita GNP in Malaysia, while roughly 29% in Sub-Saharan Africa.

The second important aspect is the *declining population growth*. More importantly there was a decline in the growth of the school-age population. As it is possible to see from the table below, the initial proportion of kids on the total population, in the 60's, was quite similar across different developing countries. In turn, the subsequent thirty years saw a divergence between the demographic trends in HPAEs and the other reference countries.

**Table 4 - Size and growth of school-age population**

| | *School-age (0-14) population as percentage of total population* | | *Growth rate of primary school-age (6-11) population (percentage)* | |
|---|---|---|---|---|
| *Economy/region* | *1965* | *1989* | *1965-75* | *1980-85* |
| *HPAEs* | | | | |
| Hong Kong | 40 | 22 | -1.1 | 0.3 |
| Korea, Rep. of | 43 | 26 | 0.7 | -0.3 |
| Malaysia | 46 | 37 | 1.9 | 0.2 |
| Singapore | 44 | 24 | -1.2 | -2.2 |
| Thailand | 46 | 34 | 2.9 | -0.1 |
| *Other selected economies* | | | | |
| Bangladesh | 43 | 44 | 3.3 | 2.9 |
| Brazil | 44 | 35 | 2.0 | 1.7 |
| Colombia | 47 | 35 | 2.3 | 0.9 |
| Kenya | 47 | 51 | 3.8 | 4.7 |
| Nigeria | 46 | 48 | 3.8 | 3.4 |
| Pakistan | 46 | 45 | 2.9 | 1.8 |

**Source: World Bank, 1993**

This aspect of population growth was very helpful for the educational policies. In countries where kids population continued to grow, an ever bigger amount of

investments was required just to keep stable standards. On the contrary, in HPAEs, this trend allowed a growing expenditure on education for each pupil, with gains both in quantity and quality. The relative expenditures on schools as percentage of GNP even decreased between the '70s and the '80s (World Bank, 1993). Still at the absolute level, the finances invested grew enormously compared to the ones of other developing countries.

The third and last important socio-economic aspect was the *equality in the distribution of income*. Higher equality is statistically correlated to higher enrolment rates, both in primary and secondary schools (Clarke, 1992). Still the causality of these two trends runs in both directions. So, on the one hand, if a bigger proportion of people is educated, a growing number of them will obtain high salaries, diminishing inequality overall. On the other hand, if more people have finances at their disposition to send their kids to school, the enrolment rates will be higher. As it has been highlighted in the previous sections, poor households will not invest in education because they have pressing needs for subsistence, which does not leave any additional money to be invested. By the way, the tendency of poor families in HPAEs was to give higher value to education, in fact their income elasticity of demand proved to be higher than the average (Schulz, 1988).

Switching now to the policies that were implemented, some problems of coordination failure may arise when considering private investments in education. These may take the form of failures in the capital market, where loans for profitable educational investments are difficult get, or failures in information, where poor people are not able to see the profitability of schooling, or even failures in accounting for positive externalities. The result is a gap between social and private returns, which have to be supplemented. The answer to such problems should logically be to subsidize the poor family and ameliorate the information system, but in HPAEs a simpler solution was adopted: free universal primary education. The specific attention to the lowest level of schooling is associated with the idea that social returns tend to diminish across the school levels, concept that has been reviewed in the previous sections (Psacharopoulos and Woodhall, 1985). This

approach to investments finds evidence in the proportion of investments in primary education as percentage of GNP, showed in the table below. It is possible to see that while the relative expenditure of a developing country like Venezuela, was in line with the ones of HPAEs (with the exception of Malaysia), the portion spent on primary education was considerably lower.

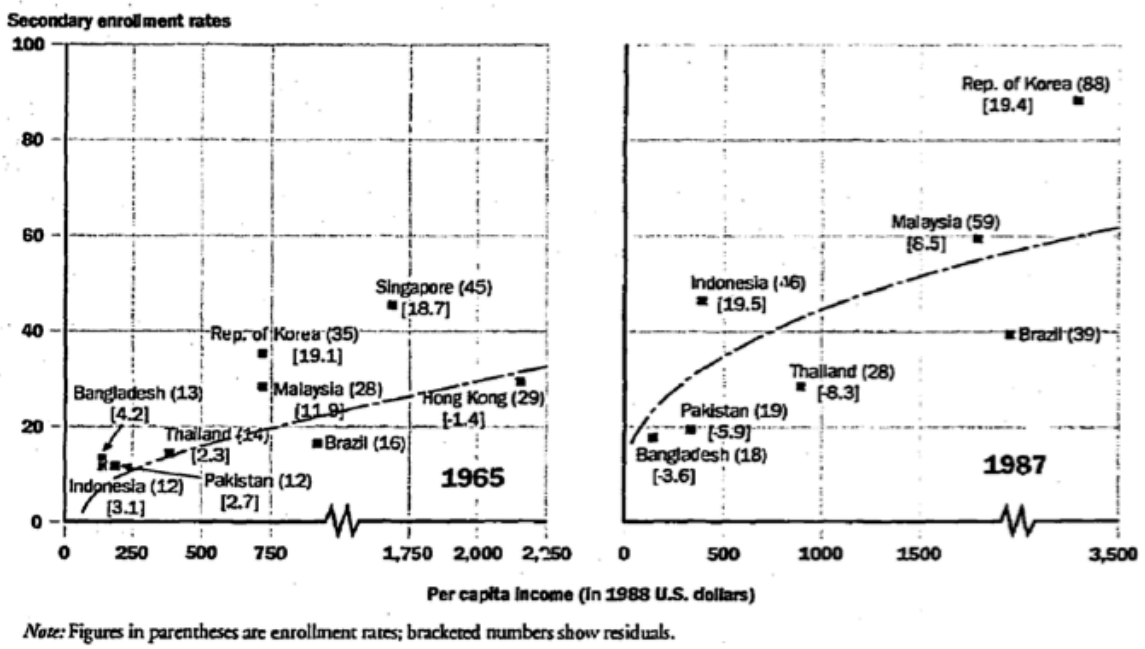
**Table 5 - Allocation of education budgets (1985)**

| *Economy* | *Public expenditure on education as a percentage of GNP* | *Public expenditure on basic education as a percentage of GNP* | *Percentage of education budget allocated to higher education* | *Percentage of education budget allocated to basic education* |
|---|---|---|---|---|
| Hong Kong | 2.8 | 1.9 | 25.1 | 69.3 |
| Indonesia | 2.3 | 2.0 | 9.0 | 89.0 |
| Korea, Rep. of | 3.0 | 2.5 | 10.3 | 83.9 |
| Malaysia | 7.9 | 5.9 | 14.6 | 74.9 |
| Singapore | 5.0 | 3.2 | 30.7 | 64.6 |
| Thailand | 3.2 | 2.6 | 12.0 | 81.3 |
| Venezuela | 4.3 | 1.3 | 43.4 | 31.0 |

**Source: World Bank, 1993**

The overall policy of these countries was to give priority to primary education and to a consistent part of the secondary one, leaving the remaining part and all the tertiary education to private initiatives. The effects on secondary education enrolment were of great magnitude. As it is shown in the graph below, Korea went form 35% to 88% in just a bit more than twenty years. This growth is not only impressive by itself, it is also well above the regression line computed from the data of 90 developing countries around the world.

**Figure 10 - Cross-economy regression for secondary enrolment rates (1965 and 1987)**




*Note:* Figures in parentheses are enrollment rates; bracketed numbers show residuals.

**Source: World Bank, 1993**

This trend, in turn, had a substantial effect on the number of people willing to go to university. A bigger number of people who had completed the secondary school entailed a growing number of people undertaking tertiary education.

An additional trend common to the HPAEs was the promotion of vocational training, which was of great utility for the growing exporting sectors. Training of human resources is widely recognised as fundamental for firms, but normally, if it is performed at school, is not cost-efficient. This is because some skills are firm-specific, so it is difficult to match them in advance. Still, in the case of the above-mentioned countries, especially Singapore, school vocational training was very efficient in delivering the skills needed. It was possible because the country foresaw that the IT sector would have greatly developed in the following years. Thanks to a strict collaboration between governments and firms, the country was able to train a large number of people in a small amount of time, both at school level and at the professional one (office workers, civil service) (Hon, 1992).

As the results of standardised test may testify, the educational reforms where not all about quantity of schooling. Starting from the 80s the attention has been directed toward quality of schooling. The previous reforms had caused, as side effect, a growth in the dimensions of classrooms and in competition. In Korea, to ease the pressure on the schooling system, distance education programs where introduced. Furthermore, to gain an improvement in quality, longer training and better incentives for teachers were established, and facilities in schools were improved (UNESCO, 2005). The objective of diminishing class sizes was not met in the subsequent years, still, in Korea, the efforts of creating a classroom climate that facilitates learning were paid off by the outstanding PISA results in the last years. This is not the only case, in fact many of the HPAEs are in the first places as well.
The policies enacted in this region proved to be of fundamental importance for the socio-economic development of the countries involved, still the presence of a number of complementary factors was crucial. It is a very useful example of how education policies should be developed in order to foster growth, however a copy paste would not necessarily work in other frameworks.

In the next chapter the attention will shift to some aspects of the political economy of education policy. There is a growing trend of globalization of education policies, with increasing importance of international organization. Is it better or is it worse for educational outcomes in developing countries? And for development in general?

# 3 - The global governance of education policy

## 3.0 - Brief overview

This chapter will concentrate on the recent patterns of education policy at a global level. The idea that lies behind this analysis is that the process of globalization has strongly altered the education policy framework across the world, particularly in developing countries (Verger, Novelli and Altinyelken, 2012). In such regions of the world the influence of external actors, such as IOs, donor agencies and NGOs, is so big that they are able to set their agendas and policy priorities. The aim of this chapter is to shed the light on this processes in order to understand if the existing framework is suitable for addressing correctly education policy. In the previous chapter the analysis has been focusing on what should be done. In this chapter, in turn, it will shift to what is happening and what are the reasons that lie behind these trends.

## 3.1 - Globalization

Starting from the concept of globalization, which is the one that is deemed to be the cause of this shift in policy governance, it is necessary to give it a broad definition. Globalization may have multiple meanings, but in this argumentation should be understood as a process of growing interdependence, between local, national and supranational bodies, in the economic, political and cultural domains. It is possible to delineate a number of interrelated processes through which education policy is influenced by the process of globalization (Verger et al., 2012).
First of all, it delineates *new problems* that policy makers must address. The labour market demand and organization has been highly modified. Most economies want to offer to the world market knowledge-intensive technologies and services, which in turn imply a change in the educational process for the promotion of new skills and competences. Furthermore, this trend limits the capacity of welfare states to provide and finance education in order to respond to new demands.

Secondly, as a consequence of the weak response of governments in delivering educational services, the role of *external agencies* has been enhanced. Among them there are IO's and NGO's especially dedicated to the issue of education (World Bank, UNESCO, OECD, UNICEF, Save the Children), but also new international players such as transnational corporation, consultancy groups and advocacy coalitions.

Thirdly, the intervention of such actors induces a *deterritorialization* of the policy process. The discussion, formulation and implementation processes take place through different dynamics and at a different scale than before. External actors use founding mechanisms and conditional aids in order to influence agendas and policies. Their power may go even beyond the policy making process, affecting directly the legal framework and changing the rules of the game. An example of such an extensive influence can be found in the role of WTO. The organization was able to modify some in-country legal barriers, through the GATS agreement, that altered the regulations with respect to cross-border trade in education (ownership, taxation, licensing). It means that multinational companies, according to this agreement, may set up a private school in a foreign country.

The fourth process entailed by globalization that had an influence on education policy is the development of *ICT technology*. It not only favours the circulation of policy ideas across the countries, but also enables the diffusion of distant learning, from one country to the other.

Fifth process is the creation of a *transnational private market for education*, which puts itself in direct competition with the national system. Its diffusion undermines a core aspect of national education, which is 'nation building'. This new liberalist approach also incentivises the adoption of management techniques and market-based mechanisms in the local education sector.

Finally, it is possible to observe the rise of *transnational social justice movements*. Education is now seen as a global public good to the point that it is endorsed as a human right. Those movements put themselves in strong contraposition to the neo-liberist approaches. An important organization that brings forward this issue is the

Global Campaign for Education. But the anti-liberist approach is not a prerogative of NGOs, in turn also nation states are forming alliances in order to promote a regional educational agenda that favours state intervention and decolonization of the curriculum (ALBA countries in Latin America).

These six processes highlight a changing environment of education policy, where actors are increasing in number and power. Globalization had a very big impact on the structure of decision-making across countries, still it is not clear what are its effect on education. This issue will be reviewed in the next section.

### 3.2 - The effects on education

Two main macro approaches that try to address the effects of the globalization process on education can be identified. The first is a neo-institutionalist approach that takes the name of 'World Society' theory. The second is an international political economy approach that is labelled 'Globally Structured Agenda for Education'.

The first theory suggests that the diffusion worldwide of a common ideal of modern nation-state has been giving an incentive to the creation of a common global model of education (Anderson-Levitt, 2003). The tendency is one of schooling expansion, which is motivated by the willingness of developing countries to demonstrate to international institution that they are in the process of building a modern state. This approach suggests that educational reforms are enacted for the sake of external reputation and not for their intrinsic value. Neo-institutional theorist find evidence of their ideas in looking at education policies enacted in African countries, which are deemed to be outsized, compared to the their financial capacity. Carney (2012) even introduces the concept of 'policyscape'. It stands for a shared bundle of policy practices and ideas, at different levels, which are commonly shared across the world. It is almost like a fashion trend to which reference is made globally. He argues that such policyscape had a strong influence on the shaping of education policies in countries as different as Nepal, Denmark and China. So, what World

Society's theorist want to suggest is that policy makers are looking outside for approval more than inside for effectiveness.

The second theory, in turn, shifts the focus from the cultural domain to the economic one. It is the global capitalist economy the driver of the changes in many policy areas, educational sector included (Dale, 2000). They suggest that education is influenced indirectly by the altering of the core conditions in which the policies are brought about. It is an institutional change, which modifies the rules of the game. An interesting example that constitutes evidence for this theory are the Structural Adjustment Programmes (SAPS) sponsored by the World Bank/IMF in African and Latin American countries. These economic plans implied not only the lowering of the amount of investments necessary for educational expansion, but also the raising of the levels of poverty, which in turn put higher opportunity costs on schooling. The effect on educational policy was the promotion of conditional cash transfers to poor families in order to allow the enrolment of their kids in schools (Bonal, 2002). In a global, highly competitive, economic environment, reforms that encourage privatization and decentralization are increasingly attractive. Governments are put under the external pressure of reducing spending in order to stay in the game, and the area that is more likely to be affected is education. Still it is increasingly conceived as an important driver of growth, both at the individual and at the social level. This idea has been spreading to the point that some regions of the world are aspiring today at becoming "knowledge economies". Such economies put education at the centre of the political agenda, developing an economic sector that has the aim of producing knowledge-intensive manpower, applied research and consequent knowledge to be transferred to other countries (Barrow et al. 2004). International Political Economy theorist find these trends very problematic, mainly because of the detachment created between the policy, which is elaborated within transnational networks, and democratically elected bodies, that are void of any decisional power. A salient example of this trends is given by Poppema (2012), who analyses the consequences of the School-Based Management initiatives in Central America, led by the World Bank and USAID. Among the

effects of these policies, she finds that they weakened participation, leading to the 'depolitisation of socio-economic relations' and to the incentive of private education.

These two approaches give a distinct, but in some way complementary, vision on the effects that the new globalized policy governance has on education, specifically in developing countries. Yet, a micro-level insight on how the global agenda is settled, and which are the main actors would give a better overview of the phenomenon. The next section will be deepening this aspect of the political economy of education.

### 3.3 - How education policies are set in global agendas

Although the World Society approach suggest that all the external multinational and international organization are setting a global agenda for education policy, this may not always hold true. On many topics different institutions will propose different approaches to the matter, differentiating their own agendas. One example given by Robertson (2005) is the different meaning that the World Bank and the OECD give to the concept of knowledge economy. In fact, the former concentrates more on market and individualism as key characteristics, while the latter recognizes the importance of a liberal approach embedded in the institutions. Moreover, Edwards and Klees (2012) suggest that this phenomenon of differentiated policy views is brought about by the competition between IOs, at different levels, to impose their idea on the issues. They reckon that a good example may be the competition between organizations as UNESCO and the World Bank, in order to dominate the field of education for development.

Furthermore, Roger Dale (1999) has been conceptualising the methods through which the IOs influence education policies at the local level, highlighting patterns that are deemed global. He outlines five such mechanisms. The first method is the *imposition*, which refers to the situation in which IOs impose some kind of educational reforms, which are conditional to credit from the organization. It is a method mostly used by the World Bank, IMF and other similar aid agencies. The

second pattern through which policy is influenced is the *harmonization*. In this case, a number of countries come to an agreement over the implementation of a common policy. An example could be the European Space for Higher Education (Bologna process). The third one is *dissemination*, which takes place when an external agent manages to influence countries for the implementation of a certain policy thanks to its persuasion and technical expertise. The tools that are used to stimulate this process are best-practices databases, annual reports and direct technical assistance. The fourth process is the *standardization*. In this case, the international community incentivises the adhesion of countries to a set of standards and policy principles, which in turn influence their behaviour. For example, the diffusion of the PISA tests has been promoting a standardization of curriculums, in order to be able to perform well. The fifth and last method is the *installation of interdependence*. It is the case of countries adhering to a set of policy in order to achieve a common objective at a higher level. An example of this pattern is the Education For All initiative, already reviewed in the previous chapter.

The power exercised by international organizations is not shaped by the preferences of all the countries that are part of them, neither it is the extension of the will of some powerful ones. IOs have a degree of autonomy, which they manifest through tree types of action (Barnett and Finnemore, 2004). First of all, they classify the world (e.g. standardised tests as PISA and TIMMS); secondly, they fix meanings in the social world (e.g. define what is educational development); thirdly, they articulate and disseminate new beliefs, principle and norms (e.g. spread what they conceive best-practices in education). Still is not always the case that the whole organization shares the same view, in fact Mundy and Menashy (2012), deeply analysed how the issue of the promotion of education privatization gave rise to a great ideological rift between experts within the World Bank.

It has been shown how International Organizations, and more generally external actors, behave in order to influence local policies, still, why aren't countries stepping against these trends? The reason why policymakers adopt the so-called Global Education Policy will be reviewed in the next section.

### 3.4 - The motivation behind the adoption

The adoption step is a key one, because it allows ideas to take form into reality. The reason why policymakers adopt GEP may be multiple. Four major ones will be analysed in this section (Verger et al., 2012)

The first "cause" of adoption can be labelled *framing*. The policy arena is highly competitive at the global level, so IOs' professionals put a lot of effort in the sponsorship of their policy ideas and frameworks. What matters for the effectiveness of their work is not the substance of the policy they are offering, instead it is the way in which the policy is framed and exposed that matters most. Professionals must be able to sell their product. They employ big conferences, reports, papers and workshop to spread their ideas worldwide. A growing number of resources and efforts are put by IOs in the dissemination. Although the tone of these events is always very neutral in appearance, they often advocate their ideas with greater emphasis. The credibility of the professionals is supported first of all by the repetition of concepts, simplifying reality and adopting argumentative shortcuts. Furthermore, they often make reference to evidence-based policies, which are widely considered as reliable even if they imply the transferability of policy, that is not always true, and can be easily instrumentalized to support one or another view. It is exactly what Rodrick (2007) disputes when he argues against the 'one size fits all' development idea, policies cannot be copy-pasted from one country to the other.

The second reason why local policymakers adopt GEP is because it acquires a global status through its *deterritorialization*. After a number of countries have acquired a set of policies, which often have Anglo-Saxon origin, it starts to be viewed as a global model (Steiner-Khamsi, 2010). More importantly, to acquire a global status the policy has to be sponsored by some widely recognised IO. Even if a scholar with the same knowledge background tries to promote it, the result will not be equally relevant.

The third reason can be labelled *GEP selectivity*. It describes the situation in which in order to answer to internal dissatisfaction and inefficiency it is felt reasonable to adopt a set of policies that are widely recognised as efficient at the global level.

Still, this awareness of the problematic nature of the situation may be induced by the same international institutional settings. Results in standardised tests, organised by IOs (OECD's PISA tests, EFA initiative) may act as a wake-up bell for local policymakers (Bieber, 2010). Neo-liberist approaches, thanks to this mechanism, have been taking a hegemonic position in the international discourse, being internalised by many policymakers and practitioners.

The fourth reason for GEP adoption is its *instrumentalization.* On the basis of intensive observations in Asian countries Steiner-Khamsi (2010) suggests that local policymakers make use of a double register in their policy discourse. They speak the language of international led reforms when they go to big donors in order to obtain funds, and they look at the most efficient way of implementing policies when they are in the local context. The implication of this observation is that what has been diffused worldwide is an education policy discourse, to which doesn't correspond a uniform Global Education Policy. The intent of local policy makers is to gain funds and legitimacy, externally and internally, but is not one of implementing international directives. This is indeed a sceptical approach, which still finds some evidence in several important countries (India, Asian countries).

In the next section how policy are re-contextualised will be analysed in better detail.

### 3.5 - Context-sensitive implementation

As the previous section has highlighted, the policy ideas that come from the international community are normally modified, indigenised or resisted in their process of implementation (Steiner-Khamsi, 2004). For example, Altinyelken (2012) analyses the implementation of the Child-Centred Pedagogy in Uganda and in Turkey. She fids out that on the one hand the result are similar at the superficial level, for what concerns the adoption of new rituals; still, on the other hand, the different students background and classroom realities have resulted in divergent practices at the local level, which persists over time. The deduction brought about is that the consequences of the contextualisation of external policy ideas are unpredictable. The reasons why the re-contextualization can be problematic are

four (Verger et al., 2012). First of all, *material* problems may arise. Those are the absence of relevant technical skills and material resources, and also weaknesses in the final design of the policy. Secondly, *political* problems, which arise from the local power structure and institutional setting, may be an obstacle. Government ideologies and national veto players are among those. Thirdly, *cultural* problems may have a role. Those include policy principles, sentiments and paradigms. An example may be the strong sentiment of education as a public good that is common in Latin America (Campbell, 2004). Fourthly, there might be a *scalar* problem. This happens when professionals at the local level (teachers, principals, local government officials) feel that the reform is imposed from above, so they try to resist the changes by making the implementation more problematic. This trend is most evident when the policy lacks any connection to the local level (Steiner-Khamsi, 2010).

These are four important sets of problems that have to be taken into account when designing policies at the global level. So, concluding, this chapter will try to identify what are the main issues that are at stake.

### 3.6 – Pressing issues

This chapter has tried to highlight the current trends in the governance of education policy. An insight has been given to the various level of policy making, trying to understand the effects of the new pattern of power. The growing importance of International organization has a two-fold implication. On the one hand, these big IOs are promoting a neo-liberist approach to education policies, which implies growing privatizations and decentralization. The direct consequence of this kind of policies is the growing polarization of educational outcomes. On the other hand, the globalised network has given the chance to a number of NGOs to advocate at the international level for the recognition of education as a fundamental right. Still, there is something missing. The use of moral judgements in order to defend the equality of educational opportunities is not a strong tactic, in order to fight neo-liberist ideas. The world we live in is moved by economic interests that

have to be addressed using their on language. An important contribution as such is given by Cingano (2014), who demonstrates in his paper two important facts. First of all, he suggests that income inequality has 'a negative and statistically significant impact' on the long-term growth of a country. Secondly, more importantly, reiterates a concept that has already been stressed in the previous chapter, namely that income inequality influences growth trough the lack of human capital that results from it, or educational delay, as it has been previously called.

Nevertheless, it is important not to generalise the work brought forward by International Organization. Some important objectives have been achieved thanks to their commitment in the global arena, one on all the growing enrolment rates of primary education worldwide (EFA initiative). The main focus should not be on how policies are implement, but on what policies are carried out and what objectives are accomplished.

The aim of the entire dissertation is to give significance to this link between better and more equal education, and long-term growth. But, looking at the evidence of how educational policies are brought about globally, still major changes are needed in order to give relevance to this idea.

## Conclusions

This dissertation had the aim of demonstrating the importance of educational outcomes for development. The analysis has been concentrating on the factors that influence learning achievements and how they have to be singularly addressed in order to increase human capital. The argument was developed in three different steps.

The idea that comes about from the first step is that education is a growth engine, especially in our epoch of knowledge-intensive technologies. Still it is not only an input, like it would be if only school attendance was taken into consideration. Instead it is an outcome to which a number of factors contribute.

In the second step, starting from Cunha and Heckman's formulation of technology of skills accumulation, the reasoning is organized into two macro categories: schooling, and family and society. The first category takes into consideration three aspect of the school process, namely quality, quantity of investments and equality. The quality issue is presented, first of all, by highlighting the ideas of the advocates of the topic Hanushek and Woessmann (2007, 2008, 2010). They recon that the best way to incentivise the growth of educational outcomes is the implementation of policies that modify the structure of the system. They do so by promoting decentralization, autonomy and accountability. Next, an insight is given to the specific issues that have to be taken into consideration at the school level in order to address quality (Lockheed and Levin, 1993).

The following section, sheds light on the importance of growing investments, issue neglected by the quality advocates. A new analysis of the so-called 'cost disease' performed by Wolff (2013) highlights some important evidence in favour of growing investments, plotting a strong positive correlation between PISA tests results and growing amount of money committed to education. Furthermore, the issue is also analysed for what concerns the timing of investments, observing the highest profitability in the period of primary education. Finally, the matter of schooling privatization is discussed, drawing the attention to the potential drawbacks that could arise in developing countries, one on all, growing inequality.

The last section takes into consideration this very same problem. The main message is that the schooling process may act both as an instrument to reinforce the divisions in society (vertical and horizontal) and as a process that eradicates them, promoting greater equality and intergenerational mobility. So, first of all, the attention is drawn to the multidimensionality of inequality in society, and how it can spread from one realm to the other through the educational process. Secondly, a number of possible policies are reviewed (free schooling, cash transfer, proximity of schools, free meals) and also their possible drawbacks are taken into consideration. The problems encountered are twofold. On the one hand the focus is mainly on the equality of access and experience, but not on the equality of outcomes, which means that some background effects are not compensated. On the other hand, they account mostly for vertical inequalities, but not for horizontal ones (gender, ethnicity, religion) that may still have very significant effects. As a consequence, more targeted policies are suggested, in order to grasp the complexity of divisions in society.

The following section takes into account the second category of aspects that influence education, which comprises family and society.

The impact of the former is analysed in great detail. First of all an overview of the existing literature is made, looking at the positive correlation between the number of books at home and the performance of kids in standardised tests. Next, a new approach is taken on the matter, by theorizing the importance of the education of the previous generations, that is to say grandparents, on the performances of grandchildren. This idea is taken into consideration both from a positive and from a negative point of view. In this latter case, the absence of the necessary set of skills, motivations and values that is transmitted through generation is labelled *educational delay*. A brief look is given to data in order to back the intuition with some evidence. By comparing the percentage of population over 65 years that has completed secondary education and the results of the pupils in PISA test, at national level, a significant positive correlation is found. This observation then leads to the suggestion that policies should account for these background disadvantages if they

want to utilize the educational setting for the promotion of equality within a country.

A similar set of problems is found also in the analysis of the effect of society. The issue of adaptive preferences is found to be a critical point, because it may significantly influence motivations and values of the kids during their education. As a consequence, the policies necessary to address the problems arising from the family and societal background should target the groups of society most in need and invest proportionally more finances on them.

The last section of the second chapter tries to sum up the analysis made in the previous one by looking at the case study of the East Asian miracle. The so-called High Performing Asian Economies have been relying heavily on the increasing human capital for their unprecedented economic growth during the '80s and the '90s. An insight of the education policies implemented is given in order to understand what worked for them. The data show a very strong will from the governments to implement a universal free primary education. Moreover, big investments were also made to broaden the enrolment rates in secondary schools, which were almost entirely subsidised by the state. Tertiary education, in turn, was left to private initiative, still there was a growing demand given the big number of people that completed secondary education. Finally, after the pursuing of bigger quantity of education, the attention was shifted to the improvement of quality. The effects of these types of policies, which were backed by a favourable context of economic growth and decreasing population growth rates, are still visible today. In fact HPAEs are still in the leading positions of PISA tests rankings.

The analysis of the policies that were enacted in East Asia gives additional support to the points previously highlighted. First of all, it supports the core idea, which is the importance of human capital for sustained growth. Secondly it sustains the significance of larger investments in primary education, and its free provision. Thirdly, it gives relevance to quality of schooling, for the improvement of educational outcomes.

The third chapter, in turn, seeks to shed light on the mechanisms trough which education policy is designed and implemented in the today's ever-globalized world. Its aim is to overview what are the forces in play, in order to understand if the current system is one that is able to address the most pressing issues, related to education, worldwide.

First of all, the implications of globalization are taken into consideration (Verger et al., 2013). Those are the rise on new problems that policymakers must face, the enhancement of the role of external agencies, the deterritorialization of policy frameworks, the development of ICT technology, the creation of a transnational private market for education and the contemporary rise of social justice movements that advocate education as a public good. Secondly two theories that analyse the reasons that lie behind these patterns are taken into account, namely the 'World Society' and the 'Global Structure Agenda for Education' theories. Next, the methods that are used to make education policy a global issue are reviewed (imposition, harmonization, dissemination, standardization, installation of interdependence) and also the reason why countries are keen to implement these international policy directions are taken into account (framing, deterritorialization, selectivity, instrumentalization). In the fifth section, some additional insight on how policies are implemented is given. The evidence suggests that each policy develops differently according to the contextual situations in which it is brought forward.

Some very important final considerations are made at the end of this chapter.

First of all, the current trend of neo-liberist policies is exacerbating the problems of inequality and intergenerational mobility, within and across countries. Secondly, sustaining the status of right for education is not powerful enough in order to convert the trends just mentioned. Thirdly, and most importantly, the turning point lies in the fact that inequality is dragging back potential growth, and the only way to address it would be the promotion of a more equal education pattern (Cingano, 2014). This last consideration is the point of arrival of the entire dissertation.

Human capital can be an important engine of development if its formation takes into account the equality of opportunity of everyone. It entails that education policies should concentrate their efforts in reducing the skills gap between the top and the bottom of the spectrum, within and between countries. In order to do so, a bigger amount of resources should be invested in the learning process of the most in need, trying to fill up the educational delay of their family and culture. The present trends in inequality of income and education are facing the opposite direction, with rich highly skilled people distancing themselves from poor unskilled ones. Still, the awareness of the need of new ways of approaching growth is rising. Hopefully, as Bob Dylan would say, “the times they are a changin’”.

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# Riassunto


**Politiche educative e sviluppo:**
**un analisi delle politiche per la promozione della crescita**

L'importanza dell' educazione per la promozione della crescita economica è stato argomento di studio per gli ultimi cinquanta anni. Ciononostante, vi è ancora grande dibattito su quali siano le strategie più opportune da perseguire. L'obiettivo di questa tesi è fare luce su come il disegno delle politiche dell'istruzione possa promuovere lo sviluppo economico o inibirlo. La tesi può essere suddivisa in tre sezioni, ognuna delle quali tratta un importante aspetto della questione.

Prima di tutto è necessario far luce sulla relazione tra educazione e crescita economica. Vi sono tre teorie dello sviluppo che prendono in considerazione il fattore educativo, sotto forma di capitale umano. Esse sono la teoria neoclassica, la teoria della crescita endogena e la teoria del capitale umano. Il capitale umano è per tutte un importante fattore di crescita: per la prima solo sul breve periodo, con rendimenti decrescenti, per le altre due, invece, ha un influenza sul lungo periodo.

Un'importante distinzione va fatta, dal punto di vista metodologico, tra livello nominale di istruzione e apprendimenti. Infatti, se da una parte il primo è una misura degli input educativi, dall'altra, la seconda è una misura degli output, molto più rilevante per l'analisi del contributo dell'istruzione alla crescita. Infatti, a ciò fanno riferimento gli importanti studi di Hanushek e Woessmann riguardo alla correlazione tra le abilità cognitive, misurate dai test standardizzati (es. PISA) e la crescita economica dei paesi.

Occorre dunque verificare quali fattori influenzino i risultati educativi e come si possa agire attraverso le politiche dell'istruzione per migliorare la qualità dei processi educativi. Traendo spunto dalla funzione di accumulazione di competenze di Cunha e Heckmann, si possono delineare due importanti aree di influenza del processo educativo, ovvero l'ambito scolastico e l' ambito socio-familiare, le quali vanno tenute entrambe in considerazione.

Per quanto riguarda la prima, innanzitutto è necessario valutare la qualità del processo scolastico. Hanushek e Woessmann, nei loro studi, trovano che le politiche che prediligono la decentralizzazione, l'autonomia e responsabilizzazione delle istituzioni scolastiche sono correlate a migliori risultati nei test standardizzati. Queste osservazioni li portano a verificare se ciò conta per il raggiungimento di risultati migliori, sia anche il livello della spesa, ottenendo una risposta negativa. L'intuizione che ne deriva è che il fattore fondamentale è come vengono utilizzate le risorse, non quante ne vengono investite. Uno studio di Wolff, però, rianalizzando la questione del "cost disease", smentisce questa intuizione, trovando una correlazione positiva tra maggiori investimenti e migliori risultati nei test. Il confronto tra questi due approcci si può riassumere dicendo che la quantità delle risorse e il modo in cui vengono utilizzate contano entrambi.

Un altro importate aspetto del processo scolastico è l'uguaglianza nelle opportunità di apprendimento. La scuola, infatti, può avere due ruoli molto diversi. Da una parte, se riesce a colmare le disuguaglianze iniziali può essere un grande fattore di coesione sociale. Dall'altra, se non prende in considerazione le differenze socioeconomiche e di apprendimento iniziali, non fa altro che trasferirle da una generazione all'altra. Quando si parla di uguaglianza nelle opportunità educative non bisogna prendere in considerazione solamente le cosiddette disuguaglianze verticali (reddito, classe sociale, istruzione), ma anche le disuguaglianze orizzontali (etnia, religione, sesso). Infatti, la maggior parte delle politiche che hanno il compito di promuovere l'uguaglianza educativa (istruzione gratuita, sussidi scolastici, pasti gratuiti, vicinanza delle scuole) prendono in considerazione solo la prima categoria.

Il problema della disuguaglianza è direttamente ricollegabile, nella funzione di accumulazione di competenze, al ruolo dell'ambito familiare. La famiglia ha un influenza molto forte sulla capacità di apprendimento dei bambini e, attraverso questa, sul processo di accumulazione di competenze. Ciò è dovuto prima di tutto alla quantità di investimenti che è disposta a fare per l'educazione del figlio; in secondo luogo è dovuto al fatto che i primi anni di apprendimento in ambito

familiare sono fondamentali per lo sviluppo delle "soft skills" necessarie per gli studi successivi; infine, la famiglia influenza enormemente i valori, le motivazioni e le ambizioni del bambino nel suo processo educativo. Questi tre fattori fanno sì che il ritardo educativo, se non si interviene con azioni compensative durante il processo scolastico, viene trasmesso alle future generazioni con forti elementi di persistenza intergenerazionale. Questa supposizione trova sostegno preliminare in alcune elaborazioni: mettendo in relazione, per un gruppo di paesi OCSE, i risultati nei test PISA con la percentuale di persone con più di 65 anni che hanno completato la scuola secondaria si ottiene una correlazione positiva con un $R^2$ del 42% e un coefficiente significativo al 99%. Ciò porterebbe a concludere che i risultati nei test standardizzati abbiano molto a che vedere con i livelli di istruzione delle generazioni passate e, quindi, con i ritardi educativi dei paesi.

Il contesto sociale svolge un ruolo importante anche attraverso la determinazione dei valori condivisi e delle motivazioni in una persona. Ad esempio, in presenza di preferenze adattive, una persona che è sempre vissuta in un contesto caratterizzato da bassa scolarizzazione sarà portata ad uniformarsi alle basse aspettative di chi gli sta attorno. In sintesi, una politica che voglia veramente ridurre le disuguaglianze e favorire la mobilità intergenerazionale deve tenere conto di questi fattori. Ciò che deve fare è concentrare le risorse sui gruppi più svantaggiati, investendo proporzionalmente di più sulla loro istruzione. Solo allora l'istruzione diventa un mezzo per la promozione dell'uguaglianza e uno strumento per favorire la crescita.

Il miracolo economico del Sud-Est Asiatico è un esempio di come l'abbondanza di capitale umano di qualità possa essere uno dei fattori chiave per la crescita. Quindi, è utile analizzare le politiche educative che sono state implementate in questa regione a partire dal dopoguerra. L'intento di queste politiche è stato, prima di tutto, quello di allargare la base di persone scolarizzate rendendo l'educazione primaria gratuita per tutti. Inoltre, si è voluto dare grande importanza all' educazione secondaria, anch'essa quasi totalmente sovvenzionata da fondi pubblici. Ciò che è stato lasciato all'iniziativa dei privati è l'educazione terziaria, la quale, però, ha registrato ugualmente un numero crescente di adesioni, data la sovrabbondanza di

persone diplomate. In un tempo successivo le politiche si sono concentrate sul miglioramento della qualità scolastica. Gli effetti di ciò sono presenti ancora aggi, infatti gli ultimi test PISA hanno visto un gran numero di paesi del Sud-Est asiatico in testa alle classifiche. Questo esempio sostiene alcune delle tesi proposte in precedenza. Ciò che esso evidenzia è sia l'importanza di un'ampia scolarizzazione primaria e secondaria, sia la qualità che essa deve avere e, soprattutto, l'importanza dell'uguaglianza di opportunità attraverso l'educazione gratuita.

Dopo aver identificato i fattori di cui deve tener conto una politica educativa efficace e inclusiva, è opportuno verificare se la governance delle politiche a livello globale, è in linea con quanto sino ad ora evidenziato. In un mondo globalizzato vi sono alcuni nuovi fenomeni che hanno modificato l'ambito delle politiche educative. Tra questi vi sono l' aumento di importanza delle organizzazioni internazionali, la deterritorializzazione delle politiche, lo sviluppo di nuove tecnologie di comunicazione e di informazione, la creazione di un mercato privato internazionale per l'istruzione e, contemporaneamente, anche la nascita di movimenti di giustizia sociale che sostengo il valore dell' educazione in quanto diritto a livello globale. Vi sono due teorie che cercano di spiegare le motivazioni che stanno dietro ad una diffusione a livello globale di direttive comuni per le politiche educative. Da una parte vi è l' approccio della "Società Globale", che attribuisce le cause di questo trend ad un interesse da parte dei paesi a ricevere il consenso delle autorità internazionali. Dall'altra parte, l'approccio dell' "Agenda Globale per l'Educazione", sposta l'attenzione sulle motivazioni economiche, sostenendo che le stesse regole del gioco vengono modificate dalla globalizzazione, e che ciò ha una diretta influenza sulla capacità dei singoli paesi di disegnare le proprie politiche educative. Roger Dale fa un' attenta analisi dei metodi che vengono utilizzati da parte delle organizzazioni internazionali per favorire l'adozione di determinate configurazioni di politiche educative. Essi sono l'imposizione, l'armonizzazione, la diffusione, la standardizzazione e la creazione di interdipendenza. Se si vede la questione dal punto di vista dei singoli paesi, vi devono essere delle motivazioni che li spingono ad adottare delle politiche

disegnate in ambito internazionale. Tra i motivi che si possono riscontrare vi è il fatto che la politica sia presentata in modo convincente dalle organizzazioni internazionali, oppure il fatto che la politica abbia perso qualunque legame con il suo paese di origine, venendo così considerata una ricetta universale. Inoltre, vi possono essere anche motivi legati ad un malcontento interno al paese o, ancor di più, legati alla volontà di ricevere fondi dall' estero per poi implementare politiche diverse a livello locale. Ognuna di queste motivazioni può essere valida, e talvolta esse si possono combinare. Ciononostante, andando ad analizzare quali sono gli effetti di una stessa politica in paesi diversi, si riscontrano alcune importanti differenze. Se da un lato, a livello pedagogico, le politiche implementate sono assolutamente simili, dall' altro, gli effetti vengono sempre mediati da una serie di caratteristiche circostanziali da cui non si può prescindere.

Da questa analisi degli effetti della globalizzazione sulla formulazione delle politiche educative a livello internazionale possono essere tratte alcune importanti conclusioni. Prima di tutto, l'approccio neo-liberista, fortemente sponsorizzato da un grande numero di istituzioni internazionali, le quali vogliono favorire la privatizzazione e la decentralizzazione dell' educazione, sta avendo gravi effetti. In particolare, sta favorendo l'inasprimento delle inuguaglianze e dell'immobilità sociale, non solo tra paesi diversi ma anche all'interno delle comunità a livello nazionale. In secondo luogo, l'azione portata avanti dai movimenti di giustizia sociale non è abbastanza efficace per poter portare ad un effettivo cambiamento. Il problema sta nel fatto che la difesa dell'educazione attraverso un approccio morale non è abbastanza forte per poter sovvertire i grandi interessi economici che sono in campo. Bisogna dire che l'azione delle organizzazioni internazionali ha portato anche a dei risultati molto positivi. Vi sono alcuni importanti esempi di azione congiunta, come l' "Education For All initiative", che hanno portato ad un notevole miglioramento della percentuale di bambini iscritti alla scuola primaria, a livello globale. In tutto questo, però, manca un nesso fondamentale. Cingano, in uno dei suoi ultimi lavori, ha ben esposto un concetto molto importante. La disuguaglianza interna ai paesi è un grande peso per la crescita sul lungo periodo e, come visto in

precedenza, l' unico modo per colmare le differenze tra i vari gruppi sociali è la promozione delle pari opportunità. Questa idea è il punto di arrivo di tutta la tesi. L'idea centrale della trattazione è che il capitale umano può essere un fondamentale fattore di crescita solo se nelle sua formazione viene tenuto conto delle disuguaglianze intrinseche nella società. Le politiche educative devono compiere questo importantissimo ruolo di regolazione. Per fare ciò devono concentrare l'uso delle risorse a favore delle fasce più svantaggiate, di modo da permettere una maggiore mobilità intergenerazionale.

Guardando, però, i trend socioeconomici a livello globale, si può vedere come il gap tra la fascia di persone ricche e altamente istruite e quella, molto più ampia, di persone povere e poco istruite si stia ampliando. Secondo quanto sostenuto da diversi osservatori, ciò avrà sicuramente un effetto significativo sulle opportunità di sviluppo economico dei prossimi anni. Fortunatamente, vi è una crescente consapevolezza che il modello di crescita attuale non è sostenibile nel tempo, e che alcuni importanti cambiamenti andranno apportati.