

EMPLOY State-of-the-art Report

Productive Skills: Positional Good or Social Closure?

Mechanisms for the education effect on labour market outcomes

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In this part of the State-of-the-Art Report we will focus on the literature that provides insight into the various mechanisms why education pays off on the labour market. First, we shall highlight different fundamental viewpoints regarding the role of education. Second, we focus on the few studies that have compared different perspectives.

Three groups of theories for the education effect

Why are employers prepared to pay higher wages and give better employment prospects to people of higher educational levels than to people of lower qualification levels? At first sight, these kinds of questions easily lead to many possible answers. Highly educated have learned more, can be employed in more responsible jobs, have greater cognitive capacities and learn more easily, fit better in the culture of management positions in organizations, etcetera etcetera. The theories of why education is important can be grouped into three classes, a distinction more often found in the literature (e.g. Carroll and Mayer 1986; Hannan et al. 1990; Rosenbaum et al. 1990). A more fine-grained discussion of different theories can be found in Bills (2003).

First, there are theories arguing that education provides *productive skills* to individuals. Particularly economists in the human capital tradition subscribe to this approach (see Becker 1993 [1964]). The core of human capital theory is that education provides knowledge and skills that have a direct influence on the productivity of workers. Employers are willing to pay higher wages to highly educated workers because of this differential in productivity. It is useful to confine the human capital tradition to being concerned with its principle mechanism, namely the *productive* competencies that students acquire during the schooling period. Weiss (1995) calls this the learning model.

The second approach, the *positional good perspective*, argues that there is uncertainty and unawareness among employers concerning the marginal productivity of potential employees. Employers do not know very well which knowledge and skills employees bring with them to the labour market, let alone how these competencies affect productivity. That is why employers look for crude signals that are associated to groups of applicants (Spence 1973). Certain characteristics of groups of employees form a signal towards the employers about the potential value of an employee. One of these characteristics is education: a college degree gives broad information about the plausible productivity of anyone holding such a qualification. Employers use educational qualifications to screen workers (Arrow 1973).

Employers do not only make an estimation of productivity but, and this is crucial in this second perspective, this is translated into an estimation of training costs that are associated to hiring a worker with specific characteristics (Thurow 1976). Thurow has developed the job competition model in which two queues exist. The first queue comprises the available vacancies; the jobs to be taken by applicants. The order of this queue is determined by the complexity of the vacant jobs. The second queue consists of the potential employees, or applicants. This queue is ordered on the basis of the educational attainment of applicants. Selection and allocation on the labour market consists of bringing the two queues together; the first (most complex) job is filled with someone with the highest qualifications to reduce training costs. This model implies that education is a positional good (also called a relative good); to obtain a complex job (and thus receive higher incomes) one's position in the queue *relative to others* is crucial (cf. Hirsch 1977; Ultee 1980; Wolbers 1998). For this reason, Weiss (1995) talks about sorting models of education. It must be noted that education can be used as a sorting device on characteristics that individuals already had *before* entering schooling (e.g. intelligence; perseverance), as well as characteristics that they have obtained *in* schooling (e.g. learning skills). Both elements imply, however, that education functions as a positional good.

The positional-good perspective differs from the productive skills approach in that it does not start from productivity-enhancing knowledge and skills obtained in education. More emphasis is placed on the relative position that people occupy on the labour market and the training costs that are associated to hiring a person with a certain qualification level. In the job competition model of Thurow, applicants do not compete for wages they are willing to work for, but for 'training slots'. This implies that, in the productive skills approach the *individual* holding a job is connected to a certain productivity level, whereas the positional-good perspective sees productivity connected with *jobs*. Or, as Thurow (1976: 77) puts it: "[T]he

marginal product resides in the job and not in the man. The individual's earnings depend upon the job he acquires and not directly upon his personal characteristics". The similarity in both approaches is, however, that both focus on the productive aspects of qualifications, either directly (productive skills) or indirectly (positional good)¹.

This perspective on education as being a positional good includes theories that argue that education moulds people into being better learners (Thurow), as well as theories that presume that individual differences already existed before schooling (e.g. intelligence) (e.g. Arrow 1974). Spence's signalling approach falls in between these viewpoints. On the one hand he makes a distinction between signals ("alterable attributes" such as schooling) and indices (unalterable attributes such as gender), that both could indicate trainability and productivity. This focus on *alterable* attributes may suggest that people change during schooling. However, Spence is not very clear on this. Moreover, in Economics Spence's signalling theory is assumed to overlap strongly with Arrow's screening theory, who is more on the side of the pre-existing variation among the schooled and unschooled populations.

The third approach, labelled here the *social closure* perspective, includes theories arguing that the value of credentials has nothing to do with the productive capacities that have been incorporated, or the trainability indicated by such credentials, but instead argues that education functions as a legitimized means for social inclusion and exclusion. The basis of social closure theory is that elites monopolize "access to resources and rewards" by closing off opportunities to less advantaged groups (e.g. Murphy 1988: 10; Parkin 1979; Weber 1968 [1921]). Educational qualifications, more often called credentials in this literature, provide a widely acknowledged form of exclusion; by demanding formal qualifications for access to jobs, employers can control access to privileged positions. Moreover, such behaviour of employers is usually not an individualistic action, but rather comes in the form of collective behaviour, leading to *institutions* that govern the regulations regarding the requirements for formal qualifications (Brown 1995).

The productive skills theory and the positional-good perspective start from the idea that selection and allocation on the basis of qualifications is beneficial for the productivity and efficiency of the organization. Moreover, through technological developments education has become even more important than before for the selection process and through this for

¹ Another difference between the two perspectives, on which the positional good approach seems most acceptable, is that human capital theory assumes that the market will be cleared automatically and unemployment will disappear (equilibrium). The positional-good perspective allows a labour market to move from an equilibrium to a situation of imperfection (Weiss 1995).

productivity and efficiency. So says the functionalist modernization theory, which is strongly related to neoclassical Economics and human capital theory in particular (e.g. Davis and Moore 1945; Parsons and Shills 1951; Treiman, 1970). The social closure perspective questions this (functionalist) rationality. Theories on education that belong to this perspective are the credentialism theory of Collins (1974, 1979), cultural reproduction theory (Bourdieu and Passeron 1977; Bourdieu 1984; Halsey et al. 1980; Lamont 1992), and the correspondence principle of Bowles and Gintis (1976, 2002).

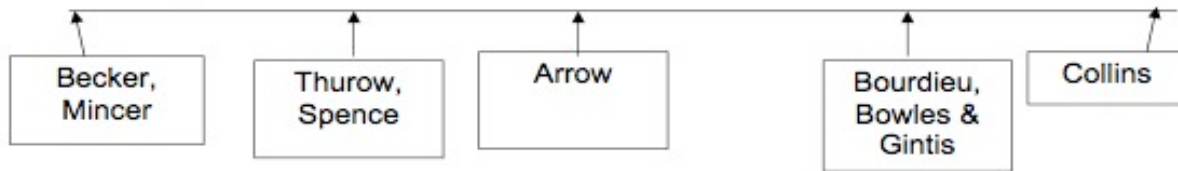
Economists usually do not distinguish between the positional good and closure perspectives. What economists call ‘sheepskin effects’ (Heywood 1994) refers to the fact that diplomas (made of sheepskin) give access to well-paying jobs, just like the credentialism theory of Collins (1979). However, in the economic perspective these sheepskins serve as a screening device for productivity, something the social closure perspective denies. For this reason it is relevant to separate the two ideal types, although there are some hybrid perspectives (see below).

Despite some important overlaps, there are some differences between the various approaches headed under the social closure perspective as well. For example, the correspondence principle of Bowles and Gintis (1976, 2002) has, through the school-based transmission of cultural norms, clear connections to cultural reproduction theory as well as some differences. Similar to Bourdieu and Collins, Bowles and Gintis argue that productive, cognitive capacities are not the crucial reason why highly educated persons have a more successful employment career than less educated persons. A more important aspect of the educational system is that it produces workers with “incentive-enhancing preferences”: attributes that contribute to the authority of the employer, such as compliance, subservience, and an orientation towards the future (Bowles and Gintis 2000). Moreover, different levels of education produce different incentive-enhancing preferences, depending on the (hierarchical) labour market position that these prepare for.

An important difference with cultural reproduction theory is that cultural capital can be seen as a scarce good, a ‘possession’, whereas the correspondence principle puts more emphasis on the roles that are instilled on workers. It may also be argued that, in preferring workers with such incentive-enhancing preferences, there is an indirect productivity argument involved, making the Bowles and Gintis approach to fit in between the closure and positional good perspectives.

As said, the theories vary greatly in the productive capacities that are associated to schooling. If the various perspectives are put on an axis of ‘reliance on productive capacities’ we would get the following picture:

Figure 1: Education as productive capacity



Comparisons of mechanisms

The literature that has compared mechanisms have done so primarily in a “mechanism contest” for single countries. The aim of this research is to find out which of a few different mechanisms gives the most accurate predictions as to the value of different elements of schooling, or of schooling on different areas on the labour market.

In Economics, human capital theory has often been compared with the signalling/screening theories. Andrew Weiss (1995) has written an extensive summary of this literature, so there is no need to be exhaustive here. However, a few of these studies are exemplary of the different ways in which contrasts between the two theories are sought.

A well-known paper that compares human capital and screening theory is a paper by Layard and Psacharopoulos (1974). They use several methods to assess the validity of human capital and screening theory, as well as discuss others’ findings, all on the United States. First, they examine the extent to which education affects earnings because of the certificates obtained. This is done by comparing earnings of holders of educational certificates with people with an equal amount of schooling who dropped out before obtaining the certificate. The empirical studies that they surveyed were in favour of the human capital theory: years of education count, and certificates contribute not much in addition to years of schooling (controlled for ability, as this may affect drop-out).

The second way in which Layard and Psacharopoulos (1974) examined the two theories is by looking at the changing effect of education on earnings across the career. Following the screening theory it is assumed that the impact of education gets much weaker with experience, as employers have other sources of information regarding the productivity of workers. Here too, the results are more in favour of human capital theory than of the screening hypothesis.

Thirdly, the two mechanisms are contrasted by looking at the value of education if other (cheaper) sources of information on productivity are available to employers. Alternative sources of information are available, so the argument goes, in relatively cheap aptitude tests (rather than expensive schooling). The fact that the labour market has not overwhelmingly transformed to a system in which cheap testing is utilized rather than expensive schooling, favours human capital theory.

Another exemplary study is the one by Groot and Oosterbeek (1994) on the Netherlands, in which they decomposed the total number of years of schooling into effective years (nominal length of study), repeated years (i.e. repeating classes), skipped years (skipped classes), and years in education without a diploma (drop-out years). Following screening theory, they expected that repeated years would lead to lower earnings (a more rapid completion signals greater ability), whereas following human capital theory repeating classes should lead to higher earnings. Furthermore, years spent in school without obtaining a diploma should not lead to higher wages according to screening theory, but they should according to human capital theory. Their empirical results are more in favour of human capital theory.

However, Weiss (1995: 150) is much more positive about the sorting models of education (including signalling, screening theories): “sorting models do an especially good job of explaining why rates of return to education far exceed returns to any of the cognitive skills taught in schools or even returns to courses taken in secondary school; why the variance of wages increases with education; why wage changes after involuntarily dismissals are strongly related both to previous tenure and to whether the dismissal was due to a plant closing or a layoff; why wage gains associated with reported on-the-job-training are absent from jobs for which there are no probationary periods, and why training on previous jobs has no effect on current wages”.

The studies in Economics mentioned above compare two mechanisms that both follow arguments of productivity associated to schooling. Others have compared the theories seeing education as productive (either directly as human capital theory does, or indirectly as screening/signalling theories do) on the one hand, and theories that deny the productive aspects of education on the other. Most famous is Collins (1979) in this regard, who argues that school-based knowledge only remains in the heads of students for a very short time; occupationally-relevant skills are not learnt in schools, and highly educated workers are not more productive than people with lower levels of schooling.

Bowles and Gintis (2002) analyse to what extent education pays off because it generates cognitive skills, the basic assumption of neo-classical micro-economic theories including human capital and screening theories. They meta-analysed numerous American studies that include earnings equations with education, both with and without a control for cognitive ability. The ratio of the regression coefficients of schooling between the two models indicates to what extent the effect of education is non-cognitive. They conclude that, on average, around 80 percent of the education effect is non-cognitive in the studies that they surveyed. This non-cognitive element of schooling can be explained by the incentive-enhancing preferences of employers: Employers favour employee attributes that increase their own authority; and each level of occupation requires its own level of schooling in order to optimize the authority of the employer.

More from a social policy perspective, Wolf (2002) questions whether education fosters economic growth by making people skilled. She discusses much literature that denies the productivity-enhancing aspect of schooling, and argues that the impact that educational expansion could have on economic growth is a myth in which employers and politicians are very willing to believe.

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