
Productive Skills, Positional Good, or Social Closure? Three mechanisms for the education effect on the labour market across structural-institutional settings

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Summary of research proposal

A theoretical approach is formulated that connects various theories of *why* education has an effect on labour market outcomes (e.g. employment, wages, and flexible contracts) with structural-institutional settings in which such theories would form the most likely mechanism. Three broad mechanisms are distinguished: productive skills, positional goods, and social closure. Conditions are formulated under which employers behave corresponding to the three mechanisms, leading to variations across industries and across countries in the extent to which mechanisms adequately explain the education effect. Importantly, rather than specifying between-setting variation in the *strength* of the effect of education, which has unfortunately been the dominant way of analysing between-setting variation, we will focus on the variations in the *mechanisms why* education pays off on the labour market. Furthermore, we will bridge cross-national and between-industry perspectives on institutions governing labour market behaviour. This will develop into a project that is not only concerned with the role of educational qualifications, but also with institutions relevant for actors in the labour market. Hypotheses will be developed and tested using various data sources: aggregate data at industry and country levels, existing employee surveys, and a new survey among HRM managers. A relevant aspect of this project is, lastly, to link mechanisms to legitimations of social inequalities. This political-philosophical element of the project pays attention to a highly relevant, yet largely vanished aspect of empirical-theoretical inequality studies.

Keywords: Education; Labour market; institutions; social legitimization of inequalities; new institutionalism

Research topic

Sociologists seem to have found their central explanatory variable for many of the things they investigate: educational attainment. Yet theories of what education brings to students are diverse. Although sometimes theories are compared in their predictive power, conditions are seldomly formulated under which certain mechanisms are more likely to prevail.

This proposal bridges this lacuna by focusing on one of the domains where education plays a central role: the labour market. We have four aims. First, we aim to classify theories explaining why education influences labour market opportunities (such as wages or employment) in *three groups of mechanisms*: education as indicator of productive skills, education as a positional good, and education as a means for social closure (see Glebbeek 1988; Hannan et al. 1990, Rosenbaum et al. 1990 for similar

distinctions).

A second aim is to formulate 'conditions' under which these three mechanisms are more likely to explain the impact of schooling. These conditions refer to structural and institutional characteristics, which are expected to differ across industrial sectors and countries. Thus, we aim to *connect mechanisms to institutional settings*. This advances upon "mechanism contest studies" that compare several mechanisms in their explanatory strength (e.g. Bills 2003; Groot & Oosterbeek 1994; Layard & Psacharopoulos 1974; Weiss 1995), by hypothesizing a *conditional* support for mechanisms depending on the institutional setting. So rather than analyze whether 'mechanism A' finds stronger support than 'mechanism B', our aim is to analyze the institutional circumstances under which it is more likely to find support for 'mechanism A', and under which (other) circumstances it is more likely to find support for 'mechanism B'. This way, our approach is not primarily aimed at between-setting variation in the *strength* of the effect of schooling on labour market outcomes – which has unfortunately been the dominant way of looking at variation in the effect of education across industries and countries – but rather in the *mechanism why* education pays off.

The third aim of this project is to examine the relationship between the mechanisms for 'the education effect' and issues of *social justice*. The dominant mechanism in each setting has implications for criteria for social justice. What are the justifications for rewarding qualifications if they reflect skills, trainability, or credentials? What are the implications hereof for legitimation of social inequality in the various industries and countries? Will people working in certain settings judge educational differentiations as more legitimate than people in other settings in public opinion surveys?

Fourth, after having created insight into the dominance of the three mechanisms on the basis of theoretically grounded structural-level indicators, we aim to *test the claims* that industries and countries vary in the dominance of the three mechanisms. This is done by developing a conditional understanding of the usefulness of mechanisms rather than just finding support for either one.

First aim: classifying mechanisms into three groups

The theories for the education effect on the labour market can be grouped into three classes. The *productive-skills perspective* is that education instils productive skills on students. Human capital theory is a well-known example. One important element is the assumption that an individual holding a job is connected to a certain productivity level (and that is why employers are willing to reward education).

The *positional goods perspective* starts from the premise that employers are uncertain about the productivity of people with a particular qualification. This uncertainty implies that employers assign estimated productivity levels to *groups* of job seekers on the basis of their observed characteristics of which education is an important one (e.g. signalling and screening theories; Arrow 1973; Spence 1973). According to Thurow (1976) education indicates training costs to make job entrants productive (trainability). Education does not instil *instant* productive skills to students, but only *indirectly* indicates (future) productivity through their learning capacity. These approaches have in common that education is seen as a positional 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; Weiss 1995; Wolbers 1998). An important element of this perspective is that, according to Thurow's job queue theory, the job that someone holds determines his/her productivity, rather than the individual him/herself (unlike human capital theory).

The *social closure perspective* includes theories arguing that the value of

credentials is not related to the productive capacities that have been incorporated, or the trainability indicated by credentials, but instead argues that education functions as a legitimized means for social inclusion and exclusion. Theories about social closure originate from conflict theory and have a strong Weberian influence. Human capital theory and the positional goods perspective (including their sociological allies in functionalist modernization theories) start from the idea that selection and allocation on the basis of qualifications is beneficial for the productivity and efficiency of the organization. The social closure perspective questions this reasoning. Theories of this perspective are the credentialism theory of Collins (1974; 1979), cultural reproduction theory (Bourdieu & Passeron 1977; Bourdieu 1984; Halsey et al. 1980; Lamont 1992), and the correspondence principle of Bowles and Gintis (1976; 2002). Despite some differences, these perspectives share the view that skills obtained in schools are not relevant, or even arbitrary, from a productivity viewpoint. Also, there is great emphasis on formal qualifications as prerequisites to enter advantageous jobs, because diplomas are the mechanisms through which closure is legitimately organized.

Second aim: formulating conditions for individual behaviour in line with the assumptions of the three mechanisms

We aim to formulate a theory on how the structural-institutional setting within which employers and employees operate, influence the mechanism by which education is utilized in the selection and allocation process. The basis for this theory will be formed by the new institutionalism (e.g. Brinton & Nee 1998). From this perspective we borrow the aim of "integrating the assumption of purposive action with comparative institutional analysis" (Nee 1998). In our case, a particular structural-institutional constellation affects employers and employees to behave in a way that corresponds to a particular mechanism more than another constellation.

Our sociological theory of education and the labour market formulates *conditions* under which skills, positional good, or social closure becomes a more likely mechanism explaining labour market behaviour. During the first stage of the project, an extensive list of structural-institutional factors that are expected to be related to the three mechanisms will be developed. Here, we can give a first impression of the factors that may be relevant, ordered by supply-side and demand-side factors. We envisage that empirical indicators of many of these factors can be found at industry and country levels.

Supply-side factors: educational institutions

A structural-institutional aspect on the supply-side of the labour market is the structure of the educational system. More specifically, the extent and system of vocational schooling is influential on the extent to which employers can incorporate directly productive skills into the organization by hiring someone with such a type of schooling. This aspect of educational systems has earlier been connected to cross-national variation in the strength of the impact of schooling on occupational outcomes (e.g. Shavit & Müller 1998; Müller & Gangl 2003). This line of reasoning can be extended in two ways: first, it can be extended to cover between-industry variations; as vocational programmes are more strongly connected to some product markets than to others (within countries). Second, it can be extended to move beyond the original claim that the *strength* of the education effect varies across settings (e.g. industries or countries). Rather, we can formulate that it is not only the strength but the *mechanism* itself that varies across settings: In structural-institutional settings (countries or industries) where detailed vocational programmes are available, and where many students are trained in the dual system, productive skills will be a more important mechanism than in settings where such a type of training is hardly

readily available. If, however, an employer in a particular industry or country depends on an 'educational source' that is more generically qualified, it is harder to use educational qualifications to bring productive skills into the organization. Additional training (formal or informal) needs to be offered in order to increase productivity of workers.

Demand-side factors

With respect to the demand side of the labour market it is, first, important to acknowledge variation among *product markets*. In some industrial sectors of the labour market most work consists of the production of goods. For these kinds of labour it is, conditional on the provision of industry-related vocational schooling, more straightforward that hiring on the basis of qualifications contributes directly to the functioning of workers within organizations than it is for work aimed at the production of services (cf. Wynn & Mueller 1998). Also countries differ in the extent to which their production is oriented towards services or goods.

A second important demand-side factor follows from the foreseen duration of the employment relation within the organization. Selection on productive skills is more important when employers need instant utility from new workers. If workers can be offered a longer-term contract it is less evident that employers need productivity immediately, but can be trained on the job. More concretely, employers in a strong *internal labour market* (Doeringer & Piore 1971), like found in big bureaucratic organizations and banks, are less inclined to select on the basis of productive skills, but rather select on the basis of the relative position that job seekers take. Due to standardization of career lines, returns to the invested training costs can easily be foreseen. Additionally, standardized career lines often include standardized training programs, so that a clear picture exists of the (formal) training costs to be made. This argument is applicable to both between-industry variation and cross-national variation, as countries vary too in the dominance of the internal labour markets.

Also the *technological forerunner position* is a characteristic that makes it attractive for employers to select on the basis of trainability. Organizations that closely follow modern technology, or develop technology themselves, cannot rely on the supply of ready-to-use skills from the educational system. They need to train their workers in order to be able to shape modern technology. An important part of careers of ICT professionals, e.g., consists of on-the-job training. Not only industries vary in technological advancement, but also countries.

Also the *public versus private sector* distinction is relevant. In the governmental sector, more rules exist when it comes to formal qualification demands for vacant positions. This means that, *ceteris paribus*, formal credentials play a more important role here than in the private sector. Additionally, it is more difficult to monitor productivity in the public sector, so that the potential loss in productivity caused by selection on the basis of social closure cannot easily be observed. This may encourage employers to select workers who 'fit well' into the organizational culture without focusing too much on productive competencies.

Another characteristic that may be influential on social closure selection is the degree of *organization* of workers and employers. In industries or countries where union density is high, labour unions may try to enforce formal qualification demands to protect their members from the threat of unqualified competition and foreign workers (Weeden 2002; Bills 2003). Through institutional networks organized employers may find new employees, again fostering social closure mechanisms (Rosenbaum et al. 1990; Western 1998). Relatedly, a strong organization of employers and employees in representative bodies often culminates into broad coverage of collective agreements, so that collective

agreement coverage can be expected to foster social closure mechanisms, in particular with regard to formal qualification demands.

Third aim: Connecting to issues of social legitimation of inequalities

When it comes to the question *why* educational qualifications are so important for labour market outcomes, we cannot ignore issues of the social legitimation of educational differentials. Moreover, if indeed structural-institutional settings *differ* in the reasons why education is used in the selection and allocation process, we must realize that educational differentials may be legitimized on different grounds between settings. This also implies that, depending on the prevailing mechanism explaining the education effect, educational differentials in labour market outcomes (such as employment relations, wages, flexible contracts) may be *difficult* to legitimize on accepted criteria for social justice among the population, whereas in other settings differentials are much easier to legitimize.

Even if individuals have started from an equal opportunity structure (which is highly contested by stratification sociologists) not all inequalities can easily be legitimized. Important criteria for social justice for our present purposes are merit, desert, and entitlement. Educational differentials can be legitimized from the concept of *desert* if people have deserved their social position. When employers select and reward on the basis of the mechanism of productive skills, settings can be most clearly connected to the principle of desert – i.e. reflecting the fact that more educated workers deserve to have better employment prospects than low-educated workers (at least more than the other mechanisms). They deserve so because their skills are directly productive for the organization.

Although desert is often grouped together with the concept of merit, some political philosophers argue that these criteria are slightly different (Miller 1999). In settings where education is used as a screening/signalling device of productivity or training costs (the positional good perspective), the concept of *merit* as a legitimation for social inequalities may be more appropriate than desert. People have merits that can be made productive (through training) but are not readily so, according to the positional good perspective. This makes it unsure whether people really deserve their position if it is based on their relative position, even if they have the right 'IQ plus effort'.

Educational differentials resulting from social closure (e.g. formal credentials) are much more difficult to legitimize on the basis of merit and desert, but here there are some connections with the criterion of *entitlement*. This criterion starts from the unquestionability of property: owners are legitimized to do whatever they want with their possessions (Nozick 1974). 'Jobs' may be seen as a possession of employers: employers 'own' jobs and it is entirely up to them whom to hire, and which formal criteria to initiate to keep their social circles closed. In so far as the social closure mechanism is connected to the concept of entitlement, there is a legitimation problem because entitlement is hard to reconcile with equality of opportunity (Marshall et al. 1997).

An important aspect in this regard is to undertake empirical research on the popular opinion of fairness of education-based wage differentials. It can be expected that people working in industries and countries scoring low on productive skills selection report more unfairness than people working in industries scoring high on productive skills selection. Also, in settings where closure is more dominant, legitimation of educational differentials may be lower, or more diverse between the working and non-working populations.

Approach

Fourth aim: derivation and testing of hypotheses

We will first develop the theoretical argumentation of the conditions affecting the likelihood for employers to behave in correspondence to the behavioral assumptions of the three mechanisms. Then, we will collect aggregate data (at industry and country levels) on empirical indicators closely related to these conditions. We will examine on the basis of multidimensional scaling techniques whether the various conditions covary in such a way that industries can be placed in a three-dimensional space, of which the three dimensions correspond to the dominance of the three mechanism groups. The same will be done for countries. This is expected to lead to three macro-level variables at the industry-level and three at the country-level, usable in multilevel models: measures of the dominance of each of the three mechanism groups. These aggregate data will be matched with three types of micro-level data:

- (i) Existing cross-national survey data among nationally representative samples (European Social Survey 2002, 2004; ISSP various years; EU Labour Force Survey ad hoc module on the From school to work transition). These data are aimed to test cross-national variations;
- (ii) Existing survey data for one country, e.g. School Leavers Surveys for the Netherlands, Aanvullend Voorzieningengebruik Onderzoek, Enquêtes Beroepsbevolking; for Britain General Household Surveys 1972-present; for the USA Current Population Surveys of various years; General Social Surveys 1973-2004. These data are aimed to study between-industry variation as well as trends across time;
- (iii) New data to be gathered among 500 human resource managers in the finance & insurance industry in four countries (Netherlands, Germany, Sweden, USA), in order to examine the employers' hiring practices. We thus control for industry-level variation and focus on country level variations (e.g. vocational/dual education; collective agreement coverage). We'll run a pilot survey among employers in Amsterdam through the Statistical Office of the Municipality of Amsterdam.

We formulate hypotheses in the following domains. We will analyze models that interact crucial variables with the three aggregate variables derived from the aggregate statistics. Although 'mechanism contest studies' have examined the impact of the crucial educational variables per se, interacting them with aggregate variables is completely new and necessary to reach a *conditional* understanding of the importance of mechanisms.

- The impact of unfinished years of schooling (i.e. years not leading to a diploma because of drop-out) on employment opportunities and wages should be *larger* the more dominant the productive skills mechanism is, because years of schooling without a diploma would still increase skills, and *weaker* the more dominant the other two mechanisms are, because no credential has been acquired and a bad signal has been achieved;
- Over-schooling is *more likely* the more dominant the positional good mechanism is, because employers select the employee with highest possible qualification to reduce training costs. At the same time will the wage returns to over-schooling be *lower* in positional good settings, because productivity (and thus wages) is connected to jobs rather than to individuals (Thurow 1976). The reverse is true for settings strong on productive skills selection; here over-schooling should be observed *less often* because employers need to pay according to personal skills rather than to the job level.
- Matches between educational fields of study and types of job will be found *more*

often in settings strongly selecting on productive skills; and matches should lead to higher wages there. Educational fields of study will function as a more general indicator of trainability (i.e. also in jobs outside the realm of one's field) in settings strongly selecting on the positional goods mechanism;

- Formal job-related training is *more likely* the more dominant the positional goods mechanism is; and *less likely* the more dominant the productive skills mechanism is;
- Employers report a *smaller education-based skills shortage* the more dominant the productive skills mechanism is; a *larger need for training* the more dominant the positional good mechanism is; and a *stronger limitation by formal qualification demands* the more dominant the social closure mechanism is;
- Jobs are more often found by employees and personnel sought by employers through formal (institutional) networks in settings strongly selecting on the basis of the social closure mechanism.
- Rewarding on the basis of educational qualifications should be found *more legitimate* by the population the more dominant the productive skills mechanism is; and *less legitimate* the more dominant the social closure mechanism is.

Innovation

This proposal is innovative in at least five ways. First, 'conditions' are formulated under which mechanisms offer the best explanation. This implies that we advance on existing dominant theories about the role of education on the labour market. The various theories all have their merits, but these merits are limited by the structural-institutional surroundings. This makes our project not only a project on the role of education, but moreover on the institutions that govern behaviour of employers and employees.

A second innovative aspect of this project is that our approach is strongly oriented towards structural-institutional variation in the *reason why* education is relevant for labour market outcomes, rather than that the *strength* of the effect of education varies. Between-setting variation in the strength of the education effect has thus far been the dominant object of study within institutionally oriented social science (e.g. Müller & Gangl 2003; Shavit & Müller 1998; Soskice 1994; Culpepper & Finegold 1999). Our approach encourages a new line of research in institutional perspectives in labour market studies and stratification sociology focusing on social mechanisms linked to institutions.

Third, our perspective allows us to bridge industrial and cross-national perspectives on the role of institutions on matching educational achievements with labour market outcomes such as finding (matching) employment, wage attainment, occupational social class attainment, and employment conditions in terms of flexible contracts. This makes us able to test hypotheses on industrial variations that build upon studies on cross-national variations, and vice versa.

Fourth, I will seek connection to the literature on social justice. The question which mechanism is most adequate in certain settings has direct implications for criteria for social justice in contemporary societies. It is relevant to seek the connection to the political-philosophical field for social scientists studying social inequality, like has been done in the past.

Fifth, we are innovative in that (existing) surveys among employees and a new survey among employers will be studied within the same framework. This brings together both sides of the labour market, rather than that they are studied separately – if at all.

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