Why education matters to employers: a vignette study in Italy, England and the Netherlands

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Citation for published version (APA):
Chapter 8

Conclusions
8.1. Why education matters to employers in Italy, England and the Netherlands?

8.1.1. Research contributions

While education is touted as the gateway to employment, social mobility and the good life, it is important to point out that we, in fact, hardly understand how the gatekeepers, i.e. employers, actually interpret and understand the hard-earned and often expensive investment that these degrees represent. In making hiring decisions, employers rely on qualifications and other types of information related to the educational attainments of job applicants. Although the importance of education is undisputed, surprisingly little is known about the reason why education matters to employers. Adding to the debate on the education payoff on the labour market, this monograph has shown that the motives underlying employers’ hiring behaviour vary across countries and organizational contexts. With its focus on employers, its comparative approach and the attention paid to various facets of educational attainment, this research provides a unique assessment of employers’ hiring behaviour that fills a gap in the field of social stratification. The innovative combination of an employer survey and a vignette study proved useful to capture the mechanisms why education matters for employers’ hiring decisions in varying institutional and organizational contexts. To recall, a randomly selected sample of recruiters and HR professionals employed in the Information, Communication and Technology (ICT) sector took part in a simulation of a hiring process. Highly comparable data on employers’ hiring preferences, obtained from profiles of hypothetical job applicants, were used to answer three core research questions, namely: 

i) which facets of educational attainment (e.g. level of education, field of study, grades, study duration, completed degrees, etc.) do employers consider important when hiring prospective employees in three markedly different institutional contexts? And which are disregarded?
ii) which explanatory mechanisms can account for employers’ responsiveness to the various education components?
iii) are there (complementary) institutional and organizational arrangements that render one mechanism more plausible than others?

This study contributes to the fields of comparative social stratification, sociology of education, as well as organization studies in several ways. First, it offers a more comprehensive look at the role of education at entry into employment that breaks down the education effect into a series of educational components (e.g. fields of study, grades, study duration, internships) whose importance during the hiring process has been underexplored. Second, it bridges two important lines of research that have traditionally developed separately: a very extensive scholarship that focuses on the influence of institutions on the strength of the education effect and a well-established literature that explores
the mechanisms why education is rewarded by employers, without paying close attention to the context in which employers operate. Third, it gathered highly comparable data from employers in three countries, providing the first quantitative assessment of the importance of education for employers’ hiring behaviour from a comparative perspective. Fourth, it makes an explicit effort to capture the mechanisms underlying employers’ interpretation of educational qualifications, and the way employers’ beliefs about the role of education in the labour market are acted upon at several stages of the hiring process. Finally, it merges economic and sociological perspectives about employers’ behaviour at the micro-level, with a focus on both the meso-level of analysis typical of organization studies and the macro-level of analysis typical of comparative institutional research.

8.1.2. Contextualized answers: an overview of the main findings

This monograph started off with the observation that, while the reason why employers reward education is widely debated, ample evidence is available about the positive relationship between education and successful outcomes in the labour market, both in economics (e.g. Weiss 1995; Card 1999; Heckman and Rubinstein 2001) and in sociology (e.g. Breen and Jonson 2005; Mayer and Solga 2008; Hout 2012). Two separate lines of research have been outlined in the theoretical framework developed in chapter 2. On the one hand, a literature that originates from economics and compares alternative mechanisms by means of specific designs (e.g. the sheepskin design or various tests for employer learning) to identify the one mechanism that best explains the payoff of education in the labour market (Riley 1979; Groot and Oosterbeek 1994; Weiss 1995). On the other hand, a strand of literature in the field of social stratification that charts the transitions of youth from school to the labour market in different institutional contexts (Shavit and Müller 1998; Müller and Gangl 2003; Mayer and Solga 2008). Limitations of both approaches were discussed: the former type of studies searches for the mechanism with the largest explanatory power assuming that it would be universally applicable, whereas the latter focuses on variation across contexts in the extent to which education pays off but is oblivious of the mechanisms underlying the matching choices of employers and job-seekers. In this book, I made the case for a synthesis of both literatures and tested whether the reasons why education matters at entry into employment vary across institutional and organizational settings.

To complement the wealth of existing studies based on supply-side data, the research focused on the demand side of the labour market. A series of hypotheses was formulated about employers’ use of education as a criterion for screening in the three countries. A preference for one or the other aspect of the educational pedigree was related to three explanatory mechanisms for the effect of education in job matching processes. According to these matching
mechanisms, employers reward education because it is: a) *productivity-enhancing*, as argued by human capital theory; b) a *signal of expected trainability*, as proposed by sorting models; or c) *a means for social closure*, as implied by the closure (by degrees or by networks) arguments. In chapter 3, a rich description of the institutional framework that characterises school-to-work transitions in Italy, England and the Netherlands led to the broad working hypotheses of the project. The productivity-enhancing mechanism was expected to be more plausible in a country like the Netherlands, where the education system is vocationally orientated and there are strong linkages between schools and firms, sending clear information to employers about job applicants’ skills. The trainability-improvement mechanism should be more applicable in England and Italy: as the low vocational orientation of the educational offer has to be compensated with on-the-job training, employers should try to estimate the expected trainability of prospective hires. Finally, closure processes should prevail in the Netherlands - where occupational entry and career progression are based on the possession of a given qualification - but also in England, due to the high share of tertiary degree-holders, which devalue the labour market currency of unfinished schooling.

In line with expectations, the empirical chapters made clear that the importance of education as a criterion for screening systematically varied across countries, depending on the matching mechanism at play. The main findings are summarized in the following sections.

*Results from the vignette study*

In chapters 5 and 6, the three matching mechanisms received a conditional support from the analyses of employers’ rating and ranking behaviour. For each country, the importance attached by employers to particular attributes (and the neglect of others) was interpreted as evidence that a given matching mechanism was at play in that specific context. As hypothesised, the type of signals rewarded or penalized by employers varied considerably across countries. A strong stratification by educational credentials was found in the Netherlands, where qualifications represent a badge for entry into a labour market segmented by qualifications that was barely accessible to non-tertiary school leavers. In contrast, in Italy and England the labour market was permeable to school leavers from upper secondary education, provided they had obtained good grades (both Italy and England) or followed an internship at the employers’ premises (England).

England, on the one hand, and the Netherlands, on the other hand, stand out as very different systems of school-to-work transition. Employers in England can gain limited information about applicants’ vocational skills purely on the basis of educational qualifications, as school curricula are not intended to give students job-relevant knowledge that can be immediately put to use in the organization. Therefore, English employers were rather
unresponsive to fields of study and gave applicants from non-matching fields a fair chance. Once shortlisted, applicants from matching and non-matching fields of study did not even significantly differ in the likelihood to be invited to a job interview (chapter 6). In the absence of specific information about applicants’ skills and subject-specific knowledge, English employers turned to academic achievement to identify the best performers, and strongly relied on grades as a screening criterion with the expectation that applicants with an excellent track record would be more easily trainable. Compared to low-performers, applicants with a high grade point average were more likely to receive higher ratings on all three dimensions (propensity to hire, expected trainability, expected fit with the corporate culture). They were also more likely to be shortlisted, to be assigned higher ranks and to be invited to a job interview. Opposite patterns were observed in the Netherlands, where employers attached great importance to fields of study but were not responsive to grades at the curricula screening and shortlisting phase. Grades mattered only in the ranking task, once the shortlist was already created (chapter 6). While in the Netherlands 90% of the job interview offers were targeting applicants with a background in informatics, this was the case for only half of the offers in England.

Results for Italy were less straightforward. Somewhat unexpectedly, employers strongly relied on fields of study, in spite of the low vocational orientation of the education system. At the same time, however, they were also responsive to signals that are typically related to the mechanism of expected trainability, such as grades and study duration, and this was true at any stage of the hiring process. Chapter 6 also showed that two thirds of the applicants invited to the job interview in Italy were overeducated. It is interesting to observe that in the Italian context job-education mismatches were only vertical, due to a discrepancy between the level of education attained by the applicant and the level that was considered necessary to enter the organization. In contrast, horizontal matching was very frequent: the alignment of field of study and occupational domain was roughly the same in Italy and the Netherlands.

The mediation analyses presented in chapter 5 gave further support to the idea that grades and study duration are used by employers as screens to identify the most easily trainable applicants in England and Italy, but not in the Netherlands. In England, the payoff of grades was almost fully mediated by employers’ perceptions of expected trainability, suggesting that employers’ higher propensity to hire high-performers was due to the fact that they were perceived as more easily trainable. In the Italian context, with regard to study duration, the penalty of study delays was fully mediated by employers’ perceptions of expected trainability. In the Netherlands, after controlling for the indicator of expected trainability, the coefficients for fields of study were greatly reduced (relatively more than in the other two countries) and the payoff of work experience almost turned non-significant. This finding
nuances existing interpretations that commonly associate expected trainability uniquely with grades and study duration (e.g. Breen, Hannan, and O’Leary 1995; Bernardi 2003) and suggests that fields of study can also be informative of the learning capacities of students, as found by Waslander and Glebbeek (1996) in a Dutch study.

With regard to closure theories, school-firm linkages mattered especially in the Netherlands, for both the rating and the ranking tasks. Closure by networks found some support also in England: the effect for school-firm linkages and internships at the employer’s premises were positive and significant in the analyses of ratings (chapter 5), whereas only internships mattered for the creation of a shortlist (chapter 6). In the ranking phase, closure by networks only occurred in the Netherlands, where both internships and school-firm linkages increased applicants’ likelihood to be ranked ahead of other candidates. No evidence of closure by networks was found in Italy.

With regard to closure by degrees, the role of credentials as entry requirements (closure by degrees) was especially strong in the Netherlands, in line with expectations: not only unfinished schooling was more heavily penalized, but the likelihood that vertically matched applicants would be invited to a job interview was significantly higher than in Italy (the comparison with England was in the expected direction but only weakly significant at p<0.1).

Results from the employer survey

Several questions from the employer survey directly captured the matching mechanisms of productivity-enhancing skills and expected trainability. Results, also discussed in chapter 5, indicate that English employers were the most likely to associate education with one’s capacity to learn quickly and to undergo training effectively. At the same time, they were the least likely to consider education a provider of job-specific skills. The opposite was found among Dutch employers, with Italians scoring somewhere in between.

Chapter 6 revealed that only in the Netherlands formal qualifications would be preferred over work experience in a situation of information scarcity, a sign that education is considered a reliable indicator of skills that can readily contribute to the productivity of the organization. In Italy and England, employers would rather have information about applicants’ work experience and job history data. In chapter 7, it was shown that the country differences between England and the Netherlands captured by the direct indicator of the mechanisms remained significant even after controlling for characteristics at the level of the organization (e.g. firm size, sector of activity, recruitment strategies). Findings for Italy were more ambiguous. Italian employers seem to associate education with the provision of job-relevant skills as much as they relate it to expected on-the-job trainability. Indeed, they were not significantly less likely than Dutch employers to reward education for its productivity-enhancing effect but at the same time they were also not significantly less...
likely than English employers to believe education delivers more trainable employees. The positioning of Italy in between the Dutch and the English cases is also reflected in the importance given by Italian employers to both specific and general work experience for their most recent appointment.

8.1.3. The missing link of organizations

Responding to the call of Raffe (2012: 14-15) for research on school-to-work transitions that escapes the “straitjacket of methodological nationalism”, the meso level of analysis has also been analysed in this monograph. Within-country variation in employers’ hiring behaviour has been related to a set of factors at the level of the organization, building on the well-known distinction between open and closed employment systems (Sørensen 1983). Conditional support to the matching mechanisms was not only found at the country level, but also at the level of the organization.

In particular, employers’ recruitment turned out to play a significant role. Two types of recruitment strategies have been discussed in chapter 7: a preference for formal recruitment over informal methods and recruitment via direct applications. Formal recruitment has been associated with closed employment relationships, whereas direct applications have been related to open employment relationships in an unconstrained (i.e. external) labour market. Formalized procedures for the advertisement of a vacancy imply that labour market opportunities are broadcasted widely: higher exposure, in turn, leads to the establishment of criteria for occupational entry, resulting in closed employment relationships (closure by degrees). The analyses of employers’ answers to the question “what is proxied by education?” confirmed that employers who predominantly rely on formal recruitment methods associate education with expected trainability instead of skills. As a consequence, the employment relationship moves towards the closed pole of the continuum.

Chapter 7 also showed that when job-seekers apply directly “at the gate” employers reward education for its role in providing job-relevant skills. This finding suggests that employers, while dealing with unsolicited applicants, can depart from centrally established pay scales and occupational regulations. Individual negotiation of wages and conditions of employment allows a direct rewarding of skills: matching of pay with performance is in line with human capital theory and the productivity-enhancement mechanism. Similar interpretations can be found in Matković and Kogan (2012), in a comparison

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1 Grimshaw and Rubery (1998: 217) suggest that even in closed systems in some cases it is “possible for the firm to incorporate the widening dispersion of wages in the external labour market through new practices of pay determination”, for instance by supplementing centrally negotiated wages with performance-related pay or other types of rewards that are more closely reflecting employee skills and productivity. However, these types of rewards are typically not included in the analysis of returns to human capital.
between Croatia and Serbia, and in the comparative study of Bol (2013). External labour markets are segments that approximate systems of open employment relationships, in which education is not credentialed into strict entry requirements and employers can freely allocate job rewards as a response to marketable skills acquired through education. In less closed employment relationships, such as the ones resulting from direct applications, employers satisfy their demand for immediate productivity by selecting on productivity-enhancing skills through spot-market contracting.

Social closure also results from school-based recruitment. Through the involvement of employers in the provision of internships or in various forms of on-campus activities (one example being the traditional ‘milkround’ in UK universities during which campus recruiters tour across universities to find suitable candidates for their graduate schemes), closure by networks is reproduced, as recruitment is targeted at specific education providers. Results for the use of internships as a recruitment source were not clear-cut. On the one hand, analyses in chapter 7 showed that organizations that regularly recruit via internships were more likely to associate education with expected trainability, given that internships represent a screening device to the employer. However, the association between recruitment via internships and the mechanism of expected trainability was not robust to the inclusion of other controls. On the other hand, in England, previous interns received significantly higher ratings during the phases of curricula screening (chapter 5) and shortlisting (chapter 6), and the mediation analysis revealed that part of this payoff was due to the fact that interns were perceived as more highly trainable and as a better fit with the organization. Future research could explore this issue further, following the example of Kariya and Rosenbaum (1995).

Closure by networks is not limited to highly coordinated apprenticeships in dual systems; other forms of linkages such as the more loosely regulated internships discussed in chapter 5 can also be classified as a form of closure by networks, as long as repeated and persistent interactions occur between the school and the employer. These types of less institutionalized linkages were relevant only in England. Networks of this kind represent a preferential route into employment and deserve closer attention as they may “aid or constrain individuals' careers between supplier and purchasing institutions” (Kariya and Rosenbaum 1995: 100). The school-to-work transition literature has almost exclusively focused on the distinction between occupational and internal labour markets, drawing from the early works of Maurice, Sellier, and Silvestre (1986), Marsden (1990) and Shavit and Müller (1998). However, country classifications based only on these two types of labour market systems may be misleading, as already proven by Gangl (2001) in relation to Southern European countries. It is very plausible that even within a given country different labour market segments co-exist, depending on industrial sector, firm size, etc, resulting in both significant outside hiring and internal promotion at
any level (Lazear and Oyer 2004). The classical dichotomy between internal and occupational labour markets neglects other forms of organizing the labour market that are also possible. More research on closure by networks could focus on whether, in some countries, ports of entry are located directly at the school, introducing a form of quasi-internal labour markets (Kariya and Rosenbaum 1995).

8.1.4. The direct measurement of matching mechanisms

Compared to earlier research, this study made a more explicit effort to capture the matching mechanisms discussed throughout the book from the perspective of employers. Up until now, these mechanisms have been typically measured indirectly, using different research designs. Closure by degrees has been captured by estimating sheepskin effects, i.e. the effect of degrees on top of years of schooling (Bol and Van de Werfhorst 2011); signalling theories and human capital theory have been tested with several models of employer learning (Weiss 1995). Chapter 5 and 7 contribute to this literature with direct measurements of the characteristics that employers associate with education. In particular, the concept of trainability has been explored in depth. Whereas earlier studies did not or could not test whether trainability is a real concern for employers, in this study employers’ perceptions of job applicants’ trainability were elicited directly. Through a mediation analysis it was possible to identify the signals that employers use to estimate applicants’ trainability, thus providing a more complete test of the job competition model (Thurow, 1975). Additionally, chapter 7 related the mechanism of expected trainability to the training investment anticipated by the employer. This is crucial, as it is not intuitively clear why employers would even try to identify the most easily trainable applicants if training cannot be provided within the organization.

With regard to the other mechanisms, closure by degrees has been captured by the vignette characteristic of study duration, which differentiated between credentialed and uncredentialed learning. In line with expectations, the penalty of an unfinished degree was significantly higher in the Netherlands than in Italy, whereas the difference between England and the Netherlands was not significant in the pooled model (cf. annex A in chapter 5). Closure was not only discussed in relation to credentialing practices institutionalized by social partners to regulate demand and supply of given qualifications, as in the work of Weeden (2002) and Bol and Weeden (2013), but also to the amount of graduates present in a country. As revealed by the interaction effect between level of education and study duration, uncredentialed learning was especially penalizing at the tertiary level in England and the Netherlands, but not in Italy, a country with a relatively lower number of graduates and an alarming share of tertiary drop-outs. In line with Collins (1979) and his interpretation of educational qualifications as hiring floors, chapter 5 showed that in Italy the penalty associated with upper secondary education is explained away by
the entry requirements of the organization. Thus, in the Italian context, lower
ratings were due to the fact that the applicants were perceived by the employer
as undereducated.

The social closure argument was extended to the role of networks as a pathway
into employment. Two variants of closure by networks were distinguished:
school–firm linkages and particularistic networks in the form of internships at
the employer’s premises. Further, internships were also discussed as one possible
way for the organization to structure its recruitment strategies (chapter 7).
School–firm linkages turned out to be more relevant in the Netherlands, and
at any stage of the hiring process, consistent with the theory of occupational
labour markets. Standardized curricula make qualifications portable across
organizations, regardless of the school where they have been acquired. The
two types of closure, by networks and by degrees, were mutually reinforcing in
the Dutch context: qualifications were even more important if the employer
had established some sort of on-going collaborations with schools at the same
level of education and was familiar with the course offering of a given track.

With regard to human capital theory, a direct measure of skills was not
included in the vignette study. Thus, in the hiring simulation it was hypothesized
that employers would not penalize (or would penalize to a lower extent) study
delays if the productivity-enhancing mechanism was at play, in line with
Groot and Oosterbeek (1994). This hypothesis was not supported by the data
(although during the ranking phase described in chapter 6, study delays were
not penalized by Dutch employers). The productivity-enhancing mechanism
was also associated with fields of study, with the expectation that matching fields
of study (i.e. informatics) would be rewarded to a greater extent if employers
were selecting on the basis of skills and subject-specific knowledge. Chapter
5 showed that in England, the country with the most generalist education
system, fields of study played less of a role in employers’ decision-making.
Results for Italy, however, were more ambiguous, as mentioned above. Cross-
national and inter-organization differences in the extent to which employers
consider education as a provider of job-specific skills were further discussed
in chapter 7: the productivity-enhancing mechanism was more applicable in
the Netherlands than in England, whereas no significant difference was found
between Italian and Dutch employers. Employers were also more likely to
select on skills when hiring for more technically-oriented jobs (i.e. software
engineers).
8.2. Methodological considerations

8.2.1. What can be learned from “virtual people”?

In conclusion of this monograph, it has to be reiterated that vignette studies can measure attitudes or beliefs, and not real decision-making processes. As in any study in the tradition of attitudinal research, the outcomes discussed have to be interpreted as employers’ hiring propensities or preferences, that is, indications of what they would do in a situation that is hypothetical. To increase the external validity of the research, several questions were included in the employer questionnaire that dealt with employers’ behaviour in their daily hiring routines. To the extent that employers were truthful in answering the questionnaire, the strict correspondence between their rating and ranking behaviour in the hiring simulation and their reported behaviour in real hiring settings should be reassuring. Results are also remarkably in line with findings obtained from comparative studies based on employee data (Bol and Van de Werfhorst 2011, Matković and Kogan 2012), as well as with graduate surveys about the employability of graduates (e.g. REFLEX and CHEERS projects introduced in chapter 3).

Vignettes, a technique that has rarely been applied to sociological research on education (but see De Wolf and Van der Velden 2001; Karpinska 2013) proved to be a very valuable instrument for the analysis of employers’ hiring preferences. Compared to previous research, it was possible to identify the importance of each single aspect of job applicants’ educational pedigree (e.g. level of education, field of study, grades) for employers’ hiring behaviour, something that can only be assumed in research based on supply-side surveys. A large number of educational facets could be considered, expanding on previous studies that, by focusing on selected characteristics (such as grades or fields of study or educational levels) are exposed to the risk of misspecifying the education effect. Overall, it was possible to qualify better than in previous research the education effect at entry into employment. Moreover, results obtained from the hiring simulation converged with the scores derived from a direct indicator of what education signals to employers taken from the employer questionnaire, corroborating the research validity.

The combination of the vignette study and the employer questionnaire was a particularly valuable strategy to link the education signals to the three matching mechanisms. Besides the intuitive association between the vignette characteristics and the mechanisms that was introduced in chapter 2 and justified in chapter 5 (tables 5.18 and 5.19), the mediation analysis probed further into the mechanism of expected trainability (table 5.15). An important contribution of this analysis was to confirm that grades and study delays are used in, respectively, England and Italy to estimate future trainability. In the Netherlands, trainability was mostly associated with work experience and fields of study. The proposed relationship between (some of) the education signals
and the mechanisms is, therefore, sufficient but not necessary. The extent to which grades or work experience can represent a signal of trainability for employers, or of skills, or both, varies depending on the institutional context or on the job for which the selection is made.

8.2.2. Why surveying employers?

Collecting data from employers is absolutely important for improving our understanding of the education payoff in the labour market. To the best of my knowledge, this is the first comparative study that quantitatively assess the way employers interpret education during the hiring process. Employers are central actors for the allocation of job seekers to the labour market and, as acknowledged in earlier research (Breen et al. 1995; Bills 2003), returns to education arise from employers’ use and interpretation of education during the hiring process. Employers are a difficult-to-reach population and, when contacted, are unlikely to disclose information about their hiring practices due to organizational policies or time constraints. Difficulties encountered while collecting the data can be off-putting; persistence and patience are necessary when sampling, and as argued by Bills (1992: 22) “this is true with a vengeance when sampling employers”. To circumvent this problem, a variety of studies are based on surveys of job holders which, however, do not permit to control for applicant pools and cannot differentiate those who successfully get a job offer from those who are rejected after competing within the same pool. In chapter 4, I provided an extensive overview of the various methodological choices that can be followed to study employers’ hiring behaviour, arguing that analyses based on post-hire data refer to a sample that is truncated by design. Unlike such studies, the vignette design allowed me to distinguish successful applicants from the rejected ones and to estimate more precisely the role of education at entry into employment.

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2 Similar considerations have been made by De Wolf and Van der Velden (2001: 319) in their study with Dutch employers: “grades and study duration might be used by employers with a professional vacancy to indicate the level of specific competences. The same indicators, however, can be also used by employers with a general vacancy to gain an idea of the general level of competences of applicants”.

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8.3. Generalizability of the findings

8.3.1. Country-specific patterns

Any generalization to other countries would surely be premature from a study based on a comparison of three case studies. However, with the due caution, findings can inform us about school-to-work transitions in other advanced economies. The three case studies were carefully selected as to represent three ideal–typical modes of school-to-work transitions identified in earlier research (Gangl 2001). Awaiting confirmation from future research that tests mechanisms across different groups of countries, some expectations can still be put forth.

Ireland and the United States are comparable to England for the low vocational orientation of the education system and the deregulated labour market, whereas in Germany, Austria and Switzerland the entry of youth into employment is coordinated through institutional arrangements that are similar to the ones found in the Netherlands. Thus, employers should reward education for its role in signalling expected trainability in the former group of Anglo-Saxon countries, whereas closure by degrees and by networks can be expected in the German-speaking cluster, characterized by a strong influence of social partners in the establishment of strict credential requirements to regulate access to specific occupations (e.g. evidence from Bol and Weeden 2013 for Germany).

Italy, however, is less easy to place in international context. In the comparative study of Gangl (2001), youth in Southern European countries, including Italian school-leavers, shared a similar pattern of labour market entry which deviated considerably from the usual dichotomy between occupational and internal labour markets, or qualification-based and organization-based training systems. Transitions of Southern Europeans were characterized by low mobility rates, a low educational gradient on unemployment and strong experience effects on occupational attainment. The pattern of transitions observed in Italy could plausibly be found also in some of the Central and Eastern European countries, especially in those with an equally strong tradition of strict employment protection (Slovenia and Croatia) or with a rather undifferentiated tertiary education system and a relatively low number of graduates (Romania or Bulgaria).

This being said, this study abstains from making any claim of direct applicability of the findings to other countries, but invites us to interpret the mechanisms why education matters to employers conditionally, given the institutional context of the education systems and of the labour market.

3 However, one of the reasons mentioned by Gangl (2001) for the distinct type of transitions was the strong role of familial networks that guarantee a safety net to fall back on during periods of prolonged job search. This explanation is not applicable to my study, as the job search processes of applicants were taken as given. The other reason, a strictly regulated labour market oriented towards insiders, is probably more suitable.
8.3.2. Sector-specific challenges

With regard to the sector of the economy under study, the research design was aimed to maximize cross-national variation in terms of education and labour market institutions at the country level while at the same time keeping constant the sector of the economy in which the hiring decisions were made. The research design can be defined as a crucial case study, as ICT is arguably the economic sector where the needs related to the skill formation of the workforce are most comparable. The fact that there was still significant country variation in employers' hiring criteria strengthens the claim that institutions and organizations matter. Variation in the matching mechanisms across countries and/or organizations was not a foregone conclusion: as employee trainability is an overriding concern in this sector of the economy, employers in any country or organization may have an interest in searching for indicators of trainability while hiring new recruits. Hence, this sector was a challenging case for testing conditional support to the matching mechanisms, as convergence towards the trainability-improvement mechanism could as well be expected.

Of course, recruitment, selection and allocation processes in other sectors of the economy may function according to very different rationales. As an example, occupations in the field of medicine and allied subjects have strict requirements for entry, suggesting that the closure by degrees mechanism should be pervasive. Still, variation may be limited to lower-tier occupations, such as nurses, midwives and other kinds of health practitioners, for which educational requirements have only recently been upgraded to tertiary education, and with different education programmes. Another example can be taken from Rivera (2011), who shows that access to positions in elite professional services, such as consultants in investment banks or upmarket law firms, are not related to the possession of productivity-enhancing skills. Instead, similarity of lifestyle markers, cultural interests and leisure pursuits with recruiters is crucial. Recruitment is often campus-based and targeted to a very limited number of Ivy League universities, reinforcing the closure by particularistic networks mechanism. Hiring for these types of occupations is more than simply a process of skills sorting: employers look for signs of a shared culture while screening candidates, and their search for lifestyle markers (e.g. leisure pursuits and extracurricular activities) configures hiring as a process of cultural-matching (Rivera 2012). However, variation may still occur given that institutional differentiation between education providers is less pronounced in other contexts (e.g. continental Europe). Future research should explore inter-sectoral variation more closely.
8.4. Unaddressed issues: a two-sided perspective on the role of education in the job matching process

Although the main contribution of this book is to explore how institutional and organizational settings influence the mechanisms by which employers reward education at point of hire, the vignette study has taken the pool of job applicants and the number of available vacancies (respectively eighteen applicants and one vacancy for each employer) as given. Hiring matches were based on employers’ assessments of randomly assigned profiles, meaning that the search process of job applicants could not be modelled. This condition was necessary to carry out the hiring simulation, but obviously does not correspond to realistic job matching processes. In real labour markets, employers’ hiring decisions interact in important ways with supply-side factors – such as class-advantages (Torche 2011) or impoverished social networks (Solga 2002) – which determine job seekers’ decisions to apply for a job in the first place. Therefore, future studies should strive to capture both demand-side and supply-side processes that influence the labour market allocation of school leavers. This is important from a policy perspective, as job search expectations vary across institutional contexts (Solga 2008; Buchmann and Park 2009).

8.4.1. The composition of applicant pools

From a supply-side perspective, one important factor to take into account is the extent to which the labour market for graduates is rigidly separated from the labour market for secondary school leavers. The permeability of the graduate labour market is subject to cross-country variation. Findings from chapter 5 indicate that, in England and Italy, employers very weakly differentiated between job applicants from the various educational levels, whereas in the Netherlands hiring chances were negligible for non-tertiary graduates. As a consequence, upper-secondary school leavers in the three countries presumably have very different perceptions about their own opportunities to succeed. To the extent that the search behaviour of job-seekers is based on these considerations, applicant pools in Italy and England should be more heterogeneous than in the Netherlands. One can even speculate that the two processes may even reinforce each other: school-leavers from vocational secondary education perceive that they have lower chances to enter these types of job positions and decide not to apply; employers predominantly receive applications from tertiary school-leavers and adjust their preferences accordingly. As the labour market is perceived as strongly stratified by educational qualifications, students from upper-secondary vocational tracks either decide to continue studying and enter vocational higher education, or decide to apply to different types of jobs, more congruent with their own educational level, thus adapting to a segmented labour market.

Overall, these are important considerations as youth’s perceptions of their
own employment opportunities and of the association of education with labour market returns drive self-selection into applicant pools (Bills 2003). If low educated job applicants self-exclude themselves from certain employment trajectories due to a fear of stigmatization, or because they anticipate failure, they will abstain from applying to more qualified labour market segments (Solga 2008). Vocational education may not only divert them from alternative options at a higher educational level within the education system (Müller and Shavit 2002), but discourage them to apply and contribute to labour market segmentation by qualification levels. Diversion of this kind is more likely to occur in highly stratified and standardized education systems, where the identification of ‘educational failure’ is easier and more visible (Solga 2008).

From a more optimistic point of view, however, this segmentation may result into smoother entry transitions and more stable early career trajectories, as documented in previous studies (e.g. Gangl 2001; Müller 2005). If the outcome of interest is not the type of job that is entered, or its occupational prestige, but rather the length of the search and the stability of the job obtained, then a highly segmented labour market is usually associated with faster transitions: employers are better able to assign job applicants to the available jobs when using completed qualifications as an allocation rule (closure by degrees).

8.4.2. The opportunity structure of the labour market

The labour market opportunity structure is in constant change, depending on – among other factors – the business cycle, institutional arrangements and demographic equilibria. Transitions from school to work are better described as sequences of events that, taken together, delineate specific pathways of labour market entry. In this study, I have only specified the task requirements of the job that school leavers were being selected for. Quality of the job entered, the type of contract (permanent versus short term) and the related opportunities for career advancements and upward mobility are all important characteristics that, however, have not been dealt with.

Countries differ considerably with regard to the stability of the pathways that are undertaken by labour market entrants (Scherer 2005; Van der Velden and Wolbers 2007; Leuze 2011). Institutional arrangements define the extent to which employers are able to assess ex-ante the performance of prospective hires as well as their leeway to replace possible mismatches (Breen 2005). Where the education system and the labour market are tightly connected, as in the Netherlands, labour market entry should be smoother, with earlier transitions into stable jobs (Gangl 2001; Scherer 2005). On the contrary, if the linkage between qualifications and occupational destinations is loose, school leavers have to go through a series of trial and error job matches, and their early career trajectories are more turbulent (as in England, where the low employment protection enables employers to easily replace mismatches) or postponed until a satisfactory match is found (as in Italy, where employers
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are reluctant to hire applicants due to the stricter regulation on dismissals, and family support guarantees that job seekers can search longer. Therefore, my results should be interpreted as a snapshot of a longer process of labour market integration during the early career, and the full education effect may only be appreciated in the long run (cf. Bills 1988a; Rosenbaum and Binder 1997; Miller 1998).

8.4.3. Study limitations

At the end of any research project, a reflection on its limitations is due. Three shortcomings are worth mentioning and could inform future planning of similar types of data collection. First, although the variables to insert in the vignettes were chosen as to capture the three matching mechanisms, a proper measurement of applicants’ skills was lacking. It could be expected that, if education is itself a provider of job-specific skills, additional information about applicants’ skills should be redundant. This hypothesis could have been tested by varying applicants’ observed skills across employers. Also, technical skills are not all that matters to employers. Other types of skills, such as business awareness, communication skills, commercial skills, creativity, consultancy and project management skills were also found to be important in a comparative study of small and medium-sized organizations in the ICT sector (Scholarios et al. 2008).

Second, although the mechanisms of productivity-enhancement and expected trainability were measured directly in the employer questionnaire, an indicators for the two variants of the closure mechanism were missing. One question dealt with the presence of entry requirements in the organization, but whether these requirements were the result of institutionalized closure processes was not investigated.

Third, the issue of expected productivity could have been explored more into detail, both in the vignette study (e.g. adding a dependent variable measuring employers’ expectations about future productivity) and in the accompanying questionnaire (e.g. adding questions about performance-evaluations, use of pay-for-performance systems, opinions about the productivity of school-leavers with different levels of education).

Granted these limitations, the study still provides an in-depth, comparative look at employers’ recruitment and hiring practices, and examines the role of education in employers’ hiring behaviour in far greater detail than previous research.
8.5. Applicability of the findings to policy-debates on education

Besides contributing to the specialized literature on school-to-work transition and social stratification, several lessons can be drawn from this study that have clear policy implications. In the following, I present three considerations that are directly related to widely discussed issues at both the national and the European level.

8.5.1. What is the graduate labour market?

Tertiary education is portrayed by policy-makers as the currency for success in a knowledge based economy. Technological developments are discussed among the drivers of educational expansion. Results from my study show that the definition of the graduate labour market varies across countries. Whereas in the Netherlands non-tertiary job applicants were at a clear disadvantage, half of the Italian employers mentioned in the survey that upper-secondary vocational education was the minimum entry requirement for a job as software engineer or business consultant in their firm. These differences imply that labour market opportunities are differentially stratified across educational groups in the three countries under study and that existing classifications of graduate occupations cannot easily be transferred from one national context to the other.

As an example, nearly half of employers (30 out of 59) in the Italian sample mentioned that 5-year upper secondary vocational education was the minimum entry requirement for a job as software engineer, business consultant or database administrator. Even when considering only the first two job types, classified as qualified professions in the Professions Information System of the national statistical office (ISTAT Classificazione Professioni 2011), tertiary education was not required by 22 out of 50 employers (44%). On the one hand, this may raise the suspicion that Italian employers were under-reporting minimum entry requirements and thus inflating the proportion of applicants that were classified as overeducated. On the other hand, forecasts indicate that in the Italian labour market a tertiary degree is not the only entry route into employment for software professionals. Recent data from the Excelsior survey on labour market needs forecasting reveal that, of the software professionals expected to be hired between 2010 and 2012, 28.6% were graduates from upper-secondary education (i.e. diplomati) and 71.4% were graduates from

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4 The Excelsior survey is conducted by the Italian Union of the Chambers of Commerce (Unioncamere). Every year (since 1997) the survey covers a sample of over 100000 private enterprises operating in Italy and provides detailed information on the characteristics of the labour demand, as well as the number and preferred profile of employees that the enterprises plan to recruit during the year. The recruitment forecast database is integrated with the Professions Information System, making it possible to break down the analysis of the labour demand at the level of occupations.
tertiary education\textsuperscript{5}.

Considering these differences in the definition of the graduate labour market and in its permeability, initiatives such as the skill and demand forecasts in European countries promoted by Cedefop (the European Centre for the Development of Vocational Training) are timely. The identification of skill imbalances in the labour market supply and demand, and the anticipation of future skill needs, are particularly important in relatively recent and fast-paced sectors such as the ICT one. Similarly, national and international job vacancy monitors can aid researchers and policy-makers alike to chart the occupations that are strictly closed to tertiary graduates and those who are accessible to non-tertiary school-leavers.

\section*{8.5.2. Sub-degree qualifications}

In the vignette study, applicants from non-tertiary education fared relatively well in the Italian and the English context, whereas in the Netherlands the segmentation of the labour market by educational credentials represented a barrier for their employment opportunities. The employability of youth with less than higher education is a very current topic in policy debates about the introduction of sub-degree qualifications among the course offering of national education systems. The qualification framework for the European Higher Education Area adopted by higher education ministers in 2005 as part of the Bologna process explicitly referred to the possibility for EU Member States to develop, within each national context, short-cycle degrees. These courses are typically equivalent to 120 study credits and represent intermediate qualifications within the first cycle of higher education. Changing occupational requirements brought about by ubiquitous technological progress and the expansion of the service sector in the last decade created the conditions for the development of sub-degree qualifications (i.e. ISCED level 5B). These sub-degree qualifications were planned or introduced in a number of countries in order to meet the rising need for high-level technicians and associate professionals in many sectors of the economy, especially in areas such as ICT, Business and Administration, Hospitality, Engineering, Education and in the subjects allied to Medicine. Short-cycle higher education always leads to a certified vocational HE qualification, with the aim of facilitating immediate entry into employment, although students in most cases can decide to continue studying and complete a bachelor course. Study programmes are often attuned to the needs of regional or local labour markets: employers are involved in designing curricula and providing work placements, and representatives of industry usually sit on management boards of institutions and examination

\textsuperscript{5} A quick look at online job boards further confirms that in Italy vacancies advertised for the position of software engineer often do not express a clear preference for applicants with tertiary qualifications (indicating among the formal educational requirements “diploma tecnico e/o laurea in informatica”).
boards for final evaluations.

Sub-degree qualifications, although not included in the vignette study, have been planned or introduced in the three countries: in the UK, the Foundation Degree has registered increasing enrolments in the last few years; the Associate Degree has been pilot-tested in the Netherlands as a shorter study within universities of applied sciences; in Italy, a recent reform introduced higher technical education institutes (Istituti Tecnici Superiori), oriented towards the needs of local labour markets and offering curricula that should be taught for at least half of the study provision by professionals from the industry. Examples in other countries include: the Brevet de Technicien Supérieur and Diplôme Universitaire de Technologie in France and Luxembourg, the Academy Profession Degree in Denmark, the Brevet de l’Enseignement Supérieur in Belgium, the Técnico Superior in Spain, the Higher Certificate in Ireland, the Diploma of Technical Specialisation in Portugal and the Certificate of Higher Level Vocational Qualification in Hungary (EURASHE 2011).

The attractiveness of short-cycle higher education to employers also depends on the extent to which alternative vocationally-oriented programmes are already in place. The Dutch case is particularly interesting in this respect. Between 2006 and 2010, several pilot projects were carried out in the Netherlands in order to establish whether there was a perceived need for a sub-degree qualification like the Associate Degree. On the basis of the final evaluation of the pilots (SEO 2011) and the advice of the Veerman Commissie, the government eventually decided for the introduction of the Associate Degree as a two-year higher education programme to be organized within the universities of applied sciences. Students look favourably on the Associate Degree, as it is a higher education qualification that does not require of them a four-year commitment. Sub-degree qualifications have the potential to attract students that would not otherwise opt for tertiary education, compensating for the well-known diversion effect of vocational education (Shavit and Müller 2000). From the perspective of Dutch employers, the Associate Degree clearly fills a gap in the existing curricula offer, as it situates itself between the MBO level 4 and the HBO, qualification levels that are perceived as too far apart (as reflected in the strongly negative coefficients for MBO education in the vignette study, compared to HBO). These two types of qualifications, differing in quantitative terms only by a year of schooling, lead to very different employment outcomes, as confirmed in a recent study of Dutch school-leavers (Coenen, Ramaekers, and Van der Velden 2012). However, employers

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6 Decree of the President of the Council of Ministers of January 25, 2008 (Decreto del Presidente del Consiglio dei Ministri recanti linee guida per la riorganizzazione del Sistema di istruzione e formazione tecnica superiore e la costituzione degli Istituti tecnici superiori). This decree was approved as part of an overall reform of higher education and was motivated by the intention to introduce a recognized qualification at an intermediate position between upper secondary education and the three-year university degree.
expressed the concern that the introduction of short cycle degrees may lead to HBO bachelor programmes of lowered quality (niveauverlaging). Among the most debated issues, stakeholders' opinions diverged with regard to the specificity of the curriculum. If on the one hand the Associate degree should be employment-oriented, on the other hand study programmes that are too specific would be in direct competition with the existing MBO-4 offer (SEO 2011).

In comparative perspective, short vocationally-oriented tertiary programmes may be particularly valuable in the Italian context, given the undifferentiated nature of the higher education system and the high number of drop-outs from regular university programmes. The fact that shorter programmes could function as an incentive for students to undertake and complete tertiary education has partly been proven with regard to the introduction of the bachelor/master structure (Gasperoni 2011), which was successful in increasing the number of enrolled students who obtain a degree, shortening on average the dramatically high time-to-study-completion. Reduction of study delays is a policy challenge that would have clear implications for first-time job-seekers: in the hiring simulation, Italian employers preferred applicants who completed their studies on time, who were considered more trainable and had better employment prospects.

8.5.3. Investment in alterable signals to decrease social selectivity

A further consideration can be made with regard to the motivational aspects that influence job-seekers' decision to apply for a job. Self-selection into applicant pools is a socially stratified process (Solga 2008) that, to an important degree, is shaped by students' perceptions of what matters to employers during the hiring process. A characteristic of signals is that they can be altered (Spence 1973). Though, some signals are more alterable than others. If signals are hardly alterable (e.g. track allocation) students may be entrapped in school trajectories that are associated with more modest employment opportunities and their own aspirations may be driven downwards. This is particularly problematic in countries where tracking occurs at a very early stage. Indeed, previous studies have shown that educational choices made early on in life are more strongly affected by parental background, with far-reaching consequences on the reproduction of class differentials (Hanushek and Wössman 2006; Shavit and Müller 2006; Bol and Van de Werfhorst 2013).

It is plausible that students' views about the importance of grades or tracks to succeed in the labour market vary across institutional contexts. My study shows that in the Netherlands stratification by educational levels overrides any differentiation based on grades. Applicants from tertiary education compete on a completely different league than applicants from the upper secondary track. In Italy and England, these boundaries are more permeable.
From a policy perspective, employers’ responsiveness to easily alterable signals, such as grades or internships, may represent a strong incentive for students to improve their own employment opportunities during the course of the studies. Grades can be improved by putting more effort in the assigned course work; likewise, participation in internships and in-firm activities can be encouraged through more focused counselling activities organized by the career office of schools and universities. The same can be said about study delays, which could be reduced by introducing stricter requirements with regard to the number of courses that a student has to pass each year. The incentivizing role of grades and other types of alterable signals is crucial from a policy perspective. As the job search experiences of school leavers have institutional sources and are dependent on social background (Solga 2002; 2008; Gesthuizen et al. 2011), institutional contexts where jobs are linked to grades instead of being linked to educational tracks could contribute to furthering equality of opportunities.

8.6. Suggestions for further research

In conclusion, I would like to suggest a few avenues for further research that were inspired while writing this book and that would shed more light on the role of education in the social stratification process. First, drawing on the last policy implication discussed above, further research is needed to analyse the correspondence between employers’ hiring criteria on the one hand, and students’ perceptions of their own employment opportunities on the other hand. This line of research is very much related to the debate on primary and secondary effects in the reproduction of educational inequalities. Studying from a comparative perspective how students of different social backgrounds perceive the employment opportunities associated with varying levels of educational qualifications and of academic performance could reveal whether school-leavers’ experiences of educational failure (i.e. their risk-aversion), and the choices made at subsequent educational and employment transitions, have institutional sources. This is relevant in light of recent evidence that cross-national variation in inequality of educational opportunities is primarily driven by secondary effects, i.e. differences in choice net of educational performance (Jackson 2013). Grades are an indicator of performance in education that is visible to students and employers alike. To the extent that high-performers from a low socio-economic background are aware of the importance of grades in the labour market, they may opt for more challenging (and rewarding) pathways than otherwise typical for their social class.

Second, a process that deserves further attention in comparative stratification research is the institutional differentiation within higher education. Recent contributions have focused on horizontal differentiation within tertiary education, both in Western Europe (Leuze 2010) and in Central and
Eastern European countries (Kogan et al. 2012). Paying close attention to
differentiation, both vertical and horizontal, at times of educational expansion
opens up the possibility that credential inflation and the resulting processes
of occupational displacement may be stream-specific, with job applicants
from higher vocational education outranking competing applicants from
vocational upper-secondary education. Leuze (2010) already suggested that
the proportion of students obtaining a qualification from vocational higher
education in a given country is an important dimension to consider when
discussing the changing employment opportunities of upper-secondary school
leavers. Employers’ perceptions of vocational upper-secondary school-leavers
could vary depending on the expansion (or lack thereof) of vocational higher
education. An interesting comparison would be between the Netherlands
(vocationally-oriented, high tertiary expansion), Germany (vocationally-
oriented, low tertiary expansion), England (low vocational specificity,
high tertiary expansion) and Italy (low vocational specificity, low tertiary
expansion). More generally, institutions of tertiary education systems should
be described and compared more thoroughly. Existing studies on comparative
social stratification refer to institutional variation in secondary education
systems, based on earlier research from Allmendinger (1989). More than
twenty years on from the original study in which the concepts of stratification
and standardization were developed, educational expansion brought about
significant changes in the institutional setup of tertiary education systems.
One indicator of standardization has been constructed by Oliveira Martins
et al. (2007). The vocational specificity and orientation of higher education
systems, however, remain largely unexplored.

Finally, this book has related screening criteria to recruitment strategies,
an approach that is relatively rare in comparative stratification research, apart
from a few studies on the American and Japanese labour markets (Rosenbaum
and Kariya 1989; Brinton and Kariya 1998). This is an area of research that
could provide new insights into the role of social networks in the labour
market. School–employer linkages could either lead to a redistribution of
employment opportunities (if networks reduce labour market discrimination
by improving access to information), or contribute to labour market inequality
(if networks systematically disadvantage certain social groups). Miller and
Rosenbaum (1997) even suggested that employers may use a system of
preferential treatment such as hiring from institutionalized networks to render
the selection process more meritocratic. Matching mechanisms may vary also
depending on the way information about formal qualifications is obtained
by employers. One possible way in which social networks may interact with
the role of education in the hiring process is by increasing employers’ trust in
education as a signal. This should be especially important in settings where
signals from education are less specific (Dj Stasio and Gërshani 2013). More
generally, the search for conditional support to the mechanisms may expand
not only to other countries, or sectors, but also to other stages of the hiring process (e.g. recruitment).

Overall, the contextualization of matching mechanisms presented in this book has proven successful in mapping variation across countries and across organizations in the reasons why education pays off in the labour market. I believe the evidence gathered in support of studying mechanisms *conditionally* is solid and confirms that several educational features matter to employers during the hiring process, but for reasons that vary depending on the context in which employers are embedded.