Specificity versus replaceability: the relationship between skills and preferences for job security regulations

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This article explores the relationship between skills and preferences for job security regulations. Two contrasting arguments are examined: the relative skill specificity thesis advanced by Iversen and Soskice [Iversen, T. and Soskice, D. (2001) ‘An Asset Theory of Social Policy Preferences’, American Political Science Review, 95, 875–893] and the replaceability thesis propounded by Goldthorpe [Goldthorpe, J. H. (2000) On Sociology. Numbers, Narratives, and the Integration of Research and Theory, New York, Oxford University Press]. Both arguments are based on the concept of asset specificity from transaction cost economics. However, they offer conflicting expectations. Iversen and Soskice expect employees with relatively specific skills to demand more job security regulations so as to increase the likelihood that there will be a return on investment. In contrast, Goldthorpe’s reasoning implies that employees with very specific skills are difficult to replace. Consequently, they are less concerned about their job security than employees with few specific skills. Analysis of survey data lends support to Goldthorpe’s replaceability thesis.

Keywords: class, human capital, labor market institutions, regulation, skills, varieties of capitalism

JEL classification: D86 economics of contract: theory; J24 human capital, skills, occupational choice, labor productivity; J63 turnover, vacancies, layoffs

1. Introduction

Skills have entered centre stage in comparative political economy research in recent years, thanks to the Varieties of Capitalism (VoC) literature (Estevez-Abe et al., 2001; Hall and Soskice, 2001; Iversen and Soskice, 2001; Thelen, 2004). Arguments in this tradition often draw a link between the specificity of skills and the social policy preferences of individuals. It is argued that an individual’s
preferences for social protection are a function of the portability of one’s skills. General skills are marketable within the whole economy, whereas specific skills are useful only within a single firm or industry. Consequently, an investment in specific skills is a risky strategy, since these workers face the possibility that their specific skills will become redundant in the case of job loss. These risks, however, can be mitigated by social policy measures that guarantee a return on investment. These authors generally argue that skill specificity affects preferences for all forms of social protection since all forms of social protection reduce the variability of expected future income (Iversen, 2006, pp. 440–441). However, the link is most obvious in the case of labour market institutions that administer unemployment insurance or job security regulations (Estevez-Abe et al., 2001; Iversen, 2005, pp. 9–12, 46–58; Kitschelt, 2006, p. 414).

This article examines the relationship between skill specificity and preferences for job security regulations, here understood as restrictions on hiring and firing, and contrasts this argument with another skill-based argument focusing on the replaceability of employees. Originally developed by Goldthorpe (2000) to explain the existence of social classes, the argument offers an interesting contrast to the VoC literature. Goldthorpe’s reasoning implies that the more replaceable the worker, the more she or he will make demands for job security regulations. Replaceability is a function of the specificity of human assets needed to perform a task and the difficulty of monitoring the execution. The most replaceable workers are those who perform tasks that do not require specific skills and are easy to monitor. These workers have the highest risk of being dismissed. As a consequence, they are strong supporters of job security regulations. In contrast, employees performing tasks that require specific skills and whose jobs are difficult to monitor are in a less risky position, since they know that they cannot be easily replaced.

Thus, although both arguments are based on skill specificity, they offer conflicting expectations. Iversen and Soskice expect employees with relatively specific skills to demand more job security regulations so as to increase the likelihood that there will be a return on investment. In contrast, Goldthorpe’s reasoning implies that employees with very specific skills are difficult to replace. As a result, they are less concerned about their job security than employees with few specific skills.

The statistical analysis shows more support for Goldthorpe’s replaceability thesis. Employees who perform tasks that are easy to monitor and do not require specific skills demand stricter job security regulations than do employees with more specific or difficult-to-monitor skills. In contrast, the expectations based on Iversen and Soskice’s relative skill specificity thesis are not supported

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1Here, as in the following, ‘worker’ and ‘employee’ are both used to designate individuals who work in a dependent employment relationship. As such, they are interchangeable.
by the empirical analysis. This is most clearly the case for lower grade white-collar workers. According to Iversen and Soskice (2001), lower grade white-collar workers are characterized by low levels of relative skill specificity. As a result, they cannot be expected to be very sympathetic towards more protective job security regulations. In contrast, Goldthorpe (2000) expects lower grade white-collar workers to be rather supportive of more job security regulations due to the low levels of skill specificity needed to perform their tasks and the simplicity of monitoring their performance. As the empirical analysis shows, lower grade white-collar workers are very supportive of enhanced job security regulations. This result corresponds to the theoretical expectations based on Goldthorpe’s replaceability thesis.

By drawing on the VoC literature and social class theory, this article addresses several fields of research within political science and sociology. However, this article is also intended to help fill a gap in the scholarly literature on social policy preferences. Job security regulations have been identified as an important form of social protection, especially in Continental Europe, by leading welfare state scholars such as Esping-Andersen (1999), Bonoli (2003) and Kaufmann (2003). Moreover, numerous studies have examined the relationship between job security regulations and labour market outcomes. Job security regulations are said to be a major impediment to employment growth and a source of high unemployment rates (Siebert, 1997; Blanchard and Wolfers, 2000). However, despite their prominence in the current reform discussions, little effort has been made to identify the determinants of job security regulations.

I proceed as follows. The next two parts critically discuss the two theoretical arguments and combine them in a common framework of analysis. Subsequently, I present the data sources, the operationalizations and the statistical procedure before I present and discuss the empirical evidence. A concluding section briefly summarizes the major arguments and findings.

2. The relative skill specificity thesis

Researchers have generally viewed job security regulations as an obstacle to job creation (Lindbeck and Snower, 1988; Esping-Andersen, 1996; Siebert, 1997; Blanchard and Wolfers, 2000; Saint-Paul, 2002; Blanchard, 2006). However, in recent years, a new research orientation has gained prominence; often labelled ‘Varieties of Capitalism’, this approach stresses the positive contributions of job security regulations in a national production regime. Scholars in this tradition argue that long-term employment relationships change the production strategies of firms (Streeck, 1991, pp. 52–54; Crouch et al., 1999, p. 34; Hall and Soskice, 2001, p. 7). ‘Beneficial constraints’ (Streeck, 1997) such as job security regulations make low-cost, mass production strategies unfeasible and induce firms to adopt a
high-quality production strategy. ‘A policy of employment protection [...] compels employers to keep more employees on their payroll for a longer time than many might on their own be inclined to’ (Streeck, 1991, p. 52). To compensate for this lack of external flexibility, firms will try to increase their internal flexibility. This can be done by investing in training and retraining.

From a worker’s point of view, job security regulations can be considered as a means of insuring a return on investment in skills (Estevez-Abe et al., 2001; Iversen and Soskice, 2001; Mares, 2003; Cusack et al., 2006). The argument has been most clearly presented by Iversen and Soskice (2001). They distinguish between specific and general skills. General skills are marketable within the whole economy. In contrast, specific skills are marketable only in a single firm or industrial sector. As a consequence, an investment into specific skills is a risky strategy, since these workers face the possibility that their skills will become redundant in the case of job loss. However, the more general the skills, the higher the probability that the workers obtain a return on their investment even in the case of job loss. As a result, ‘exposure to risk is inversely related to the portability of skills’ (Iversen and Soskice, 2001, p. 875). Assuming risk-averse individuals, there is no reason to expect workers to invest in specific skills.

Job security regulations, however, are a way to mitigate these risks. With more job security, workers are confident that they will remain in the firm for a long enough period to reap the returns on their investments (Estevez-Abe et al., 2001, p. 150). Therefore, job security regulations have an insurance function and diminish the reluctance of workers to invest in specific skills (Mares, 2003, p. 237). Workers who invest in specific skills can thus be expected to be much more in favour of stricter job security regulations.

Job security regulations influence the incentives of workers to invest in specific skills (Estevez-Abe et al., 2001). However, workers’ skills also influence their preferences for job security regulations. Once a worker has made investments in specific skills, she or he has an interest in stricter job security regulations. The relative skill specificity thesis thus not only explains why certain kinds of employers and workers are interested in strong welfare states (Estevez-Abe et al., 2001), it also seeks to explain why workers who have invested in specific skills favour social policy measures that protect these investments (Iversen and Soskice, 2001). In contrast, Goldthorpe (2000) does not address the question of why some workers have invested in very specific skills and some not (see what follows). Thus, Goldthorpe’s replaceability thesis is much less ambitious. As a result, the two approaches are only comparable with regard to preferences for job security regulations once employees have (or have not) invested in specific skills for whatever reasons.

It is important to note that the relative skill specificity thesis relies on very strong rationality assumptions. It expects workers, especially at the beginning
of their working life, to be able to assess the effects of labour market institutions on job tenure. However, Postel-Vinay and Saint-Martin (2003) show that this may not be the case. Using an indicator of subjective job insecurity, they demonstrate that workers tend to feel more insecure in countries where job security regulations are very strict (see also Sousa-Poza, 2004). In contrast, it is a less demanding assumption that employees are very interested in institutions that protect their economic position once they have invested in specific skills for whatever reasons (the ‘second’ part of the relative skill specificity thesis) or realized that they can be easily replaced (the replaceability thesis). As a result, Goldthorpe’s replaceability thesis suffers less from severe rationality assumptions, since it does not address the question of why some workers invest in particular skills and some do not.

By arguing that job security regulations mitigate the reluctance of workers to invest in specific skills and thereby help overcome a market failure, Iversen and Soskice’s (2001) argument reveals an astonishing resemblance to transaction cost economics.² This research tradition endeavours to discover what kinds of institutions minimize the costs in economic transactions. Williamson (1985, pp. 52–61) has identified three factors which can affect the level of economic transfers: asset specificity, uncertainty and frequency. Asset specificity indicates whether the assets, i.e. ‘skills’ in the context of this paper, are the result of special purpose or general purpose investments. Special purpose investments are more risky, ‘in that specialized assets cannot be redeployed without sacrifice of productive value if contracts should be interrupted or prematurely terminated’ (Williamson, 1985, p. 54). The possibility of applying transaction cost economics to the labour market has also been recognized by Williamson and his collaborators (Williamson et al., 1975; Wachter and Williamson, 1978; Williamson, 1981). They argue as follows: ‘Where workers acquire imperfectly transferable skills, the firm and the worker have an interest in devising a governance structure to assure a continuing, cooperative relation between them. Such a relation is much less important (indeed, is unimportant) where fungible skills are involved’ (Wachter and Williamson, 1978, p. 556). Moreover, Becker discussed the implications of skill specificity on labour market outcomes (Becker, 1964). Thus, Iversen and Soskice’s (2001) relative skill specificity argument is strikingly similar to Williamson’s (1985) asset specificity argument.³


³Uncertainty refers to exogenous disturbances (Williamson, 1985, pp. 56–57). Like asset specificity, uncertainty increases the risk that the return on investment will be too small to induce workers to invest in skills. The third dimension is the frequency of transactions. High costs for specific investments are easier to recover for large transactions of a recurring kind (Williamson, 1985, p. 60).
The insurance argument can account for why low-skilled respondents are not the only ones in favour of strict job security regulations. However, some questions remain. Most notably, the distinction between specific and general skills clouds the difference between skilled and unskilled workers. The insurance argument implies that unskilled workers are not particularly interested in job security regulations. Since they did not make costly investments, they have no interest in regulations which would increase their chances of obtaining a return on investment. But these workers face another risk: no employment due to a lack of skills. This is especially true for low-skilled, blue-collar workers. In the industrialized Western democracies, low- and medium-skilled manufacturing jobs are disappearing (Ferrera et al., 2001, p. 170). At the same time, there is also a shortage of jobs in the service sector, at least in some countries (Scharpf, 2000). Thus, low-skilled workers face the very credible risk of not finding new employment. Job security regulations provide a shelter for those already employed, even the low-skilled (Esping-Andersen, 1999, p. 136). As a consequence, low-skilled workers in declining sectors may be very favourably disposed towards stricter job security regulations, even though they have no investments in specific skills to protect.

The question of whether low-skilled workers or workers with relatively specific skills would favour more job security regulations has to be answered empirically, but there is one reason to expect low-skilled workers to be more favourably disposed. Even if the specific skills become redundant after job loss, these skills still ‘signal’ to future employers that this worker is skilled, i.e. was able to develop and make use of skills. As a consequence, relatively specific skills may become redundant as skills, but they could still be useful as a signal.

3. The replaceability thesis

The second skill-based argument addresses the difference between workers with specific skills and workers with no skills. It was originally developed by Goldthorpe (2000) to explain the existence of social classes. Class refers to an individual’s power and rights over the use of inputs and over the results of their use in the production process (Wright, 2006, p. 63). Class relations come to exist when these powers and rights are unequally distributed. Because of class relations and their location within overall class structure, individuals have different strategic alternatives for securing and improving their material interests (Wright, 2006, p. 64). These different strategies can be referred to as ‘class interests’.

‘Power’ and ‘rights’ are rather abstract concepts and difficult to operationalize. As a consequence, Goldthorpe and his collaborators turned to occupations. To develop their class schema, they combine occupational categories whose members appear to be typically comparable in terms of income and conditions
of employment, in their degree of economic security and in their chances of economic advancement (Goldthorpe, 1987, p. 40).

Goldthorpe’s class schema does not answer the question why social classes come to exist in the first place. Goldthorpe tackles this question in a more recent paper. He argues that class locations are defined by employment relations (Goldthorpe, 2000, p. 206). As a consequence, he distinguishes between employers, the self-employed and employees. Employers buy the labour of others, the self-employed do not buy the labour of others and do not sell their own, and the employees sell their labour. This distinction is not particularly satisfying, since employees are such a large and heterogeneous group.

To differentiate between groups of employees, Goldthorpe draws on his earlier work in collaboration with Robert S. Erikson (1992) and distinguishes between the labour contract and the service relationship. Labour contracts operate in the case of manual and lower grade non-manual workers. In contrast, service relationships organize the work of professional, administrative and managerial staffs. For Erikson and Goldthorpe, the crucial difference is the difficulty of monitoring the work of employees. In the case of labour contracts, where a worker's productivity can be calculated on a piece-by-piece basis, monitoring is comparatively easy. In contrast, in the service relationship, there is some asymmetry of information between the employer and employee. As a consequence, the cost of effective monitoring increases. With these monitoring problems, employers are interested in designing and implementing a form of contract that increases the commitment of employees to the workplace (Goldthorpe, 2000, p. 218). This can be done by aligning the goals of the organization with the interests of the employees, for instance through long-term employment relationships.

In his more recent work, Goldthorpe introduces the degree of specificity of human capital as a second dimension alongside the difficulty of monitoring (Goldthorpe, 2000, pp. 209–223). Drawing on transaction cost economics, he argues that employers are strongly interested in retaining employees with specific knowledge, since productive value is lost when these employees leave. This link to transaction cost economics and the notion of asset specificity makes the work of Goldthorpe particularly interesting in the context of this article. However, there are important differences. Most notably, Iversen and Soskice (2001) contrast specific skills with general skills, whereas Goldthorpe (2000) contrasts specific skills with no skills. This difference is crucial. Iversen and Soskice (2001)

4Note that the difficulty of monitoring corresponds to the concept of uncertainty in transaction cost economics. As argued by Williamson (1981, p. 564), ‘The internal organizational counterpart for uncertainty is the ease with which the productivity of human assets can be evaluated’. I am grateful to Michael Tåhlin for this reference. Since issues of uncertainty are not addressed by Iversen and Soskice (2001), I will concentrate on asset specificity.
expect employees who invested in relatively specific skills to demand more job security regulations in order to guarantee that they will have a return on investment. Thus, they focus on the relative share of specific skills independent of the overall level of specific skills. In contrast, Goldthorpe (2000) argues that the specificity of the skills increases an employee’s value for the employer. As a result, employees with specific skills need less job security regulations since their jobs are already rather secure. Thus, Goldthorpe focuses on the level of specific skills independent of general skills. This difference has important implications for the operationalization of the two arguments. Iversen and Soskice (2001) focus on relative skill specificity, i.e. the share of specific skills as a percentage of total skills (specific and general). In contrast, Goldthorpe (2000) stresses absolute skill specificity, i.e. the presence of specific skills independent of general skills.

Goldthorpe’s argument implies that the more replaceable an employee is, the more she or he demands job security regulations. Replaceability is a function of the specificity of human assets needed to perform a task and the difficulty of monitoring the execution. The most replaceable employees are those who perform tasks that do not require specific skills and are easy to monitor (i.e. labour contracts). These employees have the highest risk of being dismissed. As a consequence, employees under labour contract are more supportive of job security regulations than employees under a service relationship. The latter are in a less risky position, since they know that they are not easily replaced. Employees under mixed forms of regulation occupy an intermediate position.5

As a consequence, Goldthorpe’s contribution offers an interesting contrast to Iversen and Soskice (2001). Whereas Iversen and Soskice (2001) expect relatively specific skills to lead to preferences in favour of job security regulations, Goldthorpe (2000) expects a high level of absolute skill specificity to lead to less support for job security regulations.

4. Data sources, variable operationalization and statistical procedure

In the subsequent section, I will present statistical models that test the explanatory power of the two skill-based hypotheses. Let me first discuss the data sources, the variable operationalizations and the statistical testing procedure. The empirical analysis relies on two surveys of the International Social Survey Programme (ISSP). These surveys, ISSP 1996 on the ‘Role of Government III’

5Note that the difficulty of monitoring and the specificity of human assets tend to coincide. Thus, most employment relations are characterized by high levels of asset specificity and great difficulty of monitoring or vice versa.
and ISSP 1997 on ‘Work Orientations II’, supply information on preferences for job security regulations and individual attributes. Unfortunately, the countries included in the two surveys do not overlap precisely, but in each survey all welfare regimes (Esping-Andersen, 1990; Ferrera, 1996) and production regimes (Hall and Soskice, 2001; Schmidt, 2002) are represented in the sample. ISSP 1996 incorporates 12 countries relevant to this study (Australia, Canada, France, Germany, the UK, Ireland, Italy, New Zealand, Norway, Sweden, Switzerland, and the USA), whereas ISSP 1997 covers 14 countries (Canada, Denmark, France, Germany, the UK, Italy, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, and the USA).

No survey so far has included questions that directly address respondents’ support for regulatory protection against dismissals. However, ISSP 1996 and ISSP 1997 both contain questions that capture information on important facets of job security regulations. For ISSP 1996, respondents were asked whether they approve of the following proposal: ‘Government action for economy: Support for declining industries to protect jobs?’ Respondents were offered five possible answers from 1 (‘strongly against’) to 5 (‘strongly in favour of’). This question is very specific (Kangas, 1997), but it has the drawback of also including aspects of industrial policy, which may not necessarily be supported as well. For ISSP 1997, respondents were asked the following question: ‘How important is job security as a job characteristic?’ Respondents were offered five possible answers from 1 (‘not important at all’) to 5 (‘very important’). This question is more general, but it does not make any references to other policy fields. In the subsequent sections of this article, statistical models will be presented for both questions. If the results are the same for both dependent variables, it is reasonably safe to assume that the independent variable in question has the estimated effect on preferences for job security regulations.

Table 1 provides information on the univariate distribution of the two dependent variables. Only employed respondents have been considered. As one might

<table>
<thead>
<tr>
<th>Governmental support for declining industries to protect jobs</th>
<th>How important is job security as a job characteristic?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly in favour of</td>
<td>Very important</td>
</tr>
<tr>
<td>In favour of</td>
<td>Important</td>
</tr>
<tr>
<td>Neither</td>
<td>Neither</td>
</tr>
<tr>
<td>Against</td>
<td>Not important</td>
</tr>
<tr>
<td>Strongly against</td>
<td>Not important at all</td>
</tr>
<tr>
<td>n</td>
<td>n</td>
</tr>
</tbody>
</table>

8318

7942

415
have expected, most respondents agreed that job security is an important job characteristic. And more than 50% of the respondents were also in favour of governmental action to protect jobs in threatened industries. Thus, the public is generally very positive about job security regulations.

Variables measuring relative skill specificity and social classes cannot be simultaneously incorporated into a statistical model. This is because both the relative skill specificity indicator and the social class variables are derived from the same International Standard Classification of Occupations (ISCO-88) data of the International Labour Organization. As a consequence, they are strongly related. In order to keep the two hypotheses strictly comparable, I can use either the relative skill specificity indicator by Iversen and Soskice (2001) and calculate absolute skill specificity values for each respondent so as to operationalize Goldthorpe’s replaceability thesis, or Goldthorpe’s class schema, i.e. his indicator of asset specificity, and calculate average relative skill specificity scores for each social class so as to operationalize Iversen and Soskice’s relative skill specificity thesis.

I opt for Goldthorpe’s operationalization of the replaceability thesis, since the indicator of Iversen and Soskice (2001) has been called into question by several authors (e.g. Kitschelt and Rehm, 2006, p. 81). However, note that the usage of Iversen and Soskice’s (2001) relative skill specificity indicator leads to similar conclusions. The operationalization is based on the European Socio-economic Classification of Occupations (ESoC; Harrison and Rose, 2006). The

6 Iversen shows that his indicator of relative skill specificity is related to a class schema based on ISCO-88 data by definition. As a result, the indicator of relative skill specificity and class variables derived from ISCO-88 data should not be used in the same regression (accessed at http://www.people.fas.harvard.edu/~iversen/SkillSpecificity.htm on July 2, 2008).

7 There are also measurement issues with regard to Goldthorpe’s replaceability thesis. Goldthorpe contrasts specific skills with no skills. His reasoning implies that workers with specific skills get the highest return on investment in one particular firm. This ties together employers and employees with specific skills. In this model, the level of general skills does not play a role. But how can general and specific skills be separated in the case of highly skilled workers? When workers are highly skilled, their skills are automatically rather specific. This is not a problem for these workers, since their overall skill level makes them sought-after resources in the labour market. However, this also implies that the pay-off is positive for other firms as well. As a result, these workers’ skills are not really specific anymore. Tåhlin (2007) addresses some of these measurement issues in his careful examination of Goldthorpe (2000). Tåhlin (2007) argues that the Erikson—Goldthorpe—Portocarero class schema is partly inconsistent with its theoretical underpinnings as outlined in Goldthorpe (2000). Rather, the class schema reflects asset generality, i.e. class correlates strongly with general skills (Tåhlin, 2007, pp. 563–564). This implies that the replaceability thesis is less about skill specificity than about skill level. However, note that both models in Table 4 control for the supply of general skills. Nevertheless, the Erikson—Goldthorpe—Portocarero class schema remains a highly significant predictor of preferences for job security regulations.
ESeC divides respondents into 10 groups. This operationalization corresponds to the well-known Erikson–Goldthorpe–Portocarero class schema (Erikson and Goldthorpe, 1992). The classification has been performed using ISCO conversion tables provided by Harry Ganzeboom\(^8\) and Torben Iversen,\(^9\) and the syntax files by David Rose and Eric Harrison.\(^10\) The classification differentiates between the self-employed (two categories), employees hired under a service relationship (higher and lower ‘salariat’), employees hired under a labour contract (lower grade white-collar, skilled, semi- and unskilled workers) as well as employees hired under mixed forms of regulation (higher grade blue-collar and higher grade white-collar workers). The unemployed are the final group.

The relative skill specificity thesis of Iversen and Soskice and the replaceability thesis of Goldthorpe are applicable only to respondents in dependent employment relations. As a result, non-employed and self-employed respondents as well as employers are deleted from the sample. This leaves us with seven social classes. The expectations based on Iversen and Soskice’s relative skill specificity thesis\(^11\) (black bars) and Goldthorpe’s replaceability thesis (grey bars) with regard to preferences for job security regulations are displayed in Figure 1. In the case of the Iversen and Soskice (2001) thesis, the (black) bars correspond to the average relative skill specificity per class, standardized to range from 0 to 100. According to Iversen and Soskice (2001), high levels of support for job security regulations can be expected in the case of high levels of relative skill specificity. As shown in Figure 1, this is the case for semi- and unskilled workers, skilled workers and, to a lesser extent, higher grade blue-collar workers.

In the case of the replaceability thesis, the (grey) bars correspond to the Erikson–Goldthorpe–Portocarero class schema. Following Tåhlin (2007, p. 563), I construct a continuous scale from 0 to 100, with ESeC class 1 (higher salariat) assigned 0, ESeC class 2 (lower salariat) assigned 20 (both service relationships), ESeC classes 3 (higher grade white-collar workers) and 6 (higher grade blue-collar workers) assigned 50 (both mixed forms of regulation), ESeC class 8 (skilled workers) assigned 80 and ESeC classes 7 (lower grade white-collar workers) and 9 (semi- and un-skilled workers) assigned 100 (all labour contract). Although this operationalization may be seen as somewhat arbitrary,

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\(^{11}\)I use the first of the different relative skill specificity indicators (s1) provided by Iversen and Soskice (2001), which divides absolute skill specificity by ISCO level of skills. This indicator has the advantage that both specific and general skills are considered in the denominator. As such, the indicator corresponds to the share of specific skills in total skills (specific and general).
it nevertheless reflects the differences both within and between service relationships and labour contracts (Tåhlin, 2007, p. 563). Moreover, it is used only for illustrative purposes. In the subsequent statistical analysis, I will rely on dummy variables for each social class. According to Goldthorpe (2000), high levels of support for job security regulations can be expected in the case of low levels of absolute skill specificity. This is the case for respondents working on labour contracts (semi- and unskilled workers, lower grade white-collar workers and skilled workers) and, to a lesser extent, in the case of respondents under mixed forms of regulation (higher grade blue-collar and white-collar workers).

As can be seen in Figure 1, strikingly different expectations can be observed in the case of higher and lower grade white-collar workers. Iversen and Soskice (2001) expect them to be rather hostile towards job security regulations due to low levels of relative skill specificity. In contrast, Goldthorpe (2000) expects especially the lower grade white-collar workers to be highly disposed towards job security regulations due to low levels of absolute skill specificity (i.e. high levels of replaceability). As a result, these two classes can be used to empirically evaluate the two approaches.

In all models, I include a number of control variables. These are trade union membership, education, income, gender and age. See Tables 2 and 3 for documentation of the operationalization and summary statistics. The inclusion of education is particularly important, since education is an indicator of general

Figure 1 Support for job security regulations: theoretical expectations.
<table>
<thead>
<tr>
<th>Short name</th>
<th>Operationalization</th>
<th>n</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protect jobs</td>
<td>Government action for economy: support for declining industries to protect jobs</td>
<td>10 509</td>
<td>3.52</td>
<td>1.15</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Union member</td>
<td>Are you a member in a trade union at present? (v222)</td>
<td>10 785</td>
<td>0.26</td>
<td>0.44</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Woman</td>
<td>Dummy = 1 for female respondent (v200)</td>
<td>10 730</td>
<td>0.45</td>
<td>0.50</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Age</td>
<td>Respondent's age (v201)</td>
<td>10 690</td>
<td>40.30</td>
<td>12.03</td>
<td>16</td>
<td>90</td>
</tr>
<tr>
<td>Education</td>
<td>Highest education degree (from low to high) (v205)</td>
<td>10 666</td>
<td>4.96</td>
<td>1.32</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Income</td>
<td>Household income, z-standardized per country (full sample; subsequently pooled)</td>
<td>9508</td>
<td>0.22</td>
<td>0.95</td>
<td>-2.05</td>
<td>9.60</td>
</tr>
<tr>
<td>Higher salariat (ESeC 1)</td>
<td></td>
<td>9681</td>
<td>0.14</td>
<td>0.35</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Lower salariat (ESeC 2)</td>
<td></td>
<td>9681</td>
<td>0.28</td>
<td>0.45</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Higher grade white-collar workers (ESeC 3)</td>
<td></td>
<td>9681</td>
<td>0.12</td>
<td>0.32</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Higher grade blue-collar workers (ESeC 6)</td>
<td></td>
<td>9681</td>
<td>0.15</td>
<td>0.35</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Lower grade white-collar workers (ESeC 7)</td>
<td></td>
<td>9681</td>
<td>0.10</td>
<td>0.30</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Skilled workers (ESeC 8)</td>
<td></td>
<td>9681</td>
<td>0.09</td>
<td>0.29</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Semi- and unskilled workers (ESeC 9)</td>
<td></td>
<td>9681</td>
<td>0.12</td>
<td>0.33</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Short name</td>
<td>Operationalization</td>
<td>n</td>
<td>Mean</td>
<td>Standard deviation</td>
<td>Min.</td>
<td>Max.</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>------</td>
<td>-------</td>
<td>--------------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Job security</td>
<td>How important each item you personally think it is in a job: job security (from not important at all to very important)? (v13)</td>
<td>10,624</td>
<td>4.48</td>
<td>0.70</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Union member</td>
<td>Are you a member in a trade union at present? (union)</td>
<td>10,600</td>
<td>0.41</td>
<td>0.49</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Woman</td>
<td>Dummy = 1 for female respondent (sex)</td>
<td>10,767</td>
<td>0.49</td>
<td>0.50</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Age</td>
<td>Respondent’s age (age)</td>
<td>10,744</td>
<td>39.62</td>
<td>11.79</td>
<td>16</td>
<td>90</td>
</tr>
<tr>
<td>Education</td>
<td>Highest education degree (from low to high) (degree and s_degr for SWE)</td>
<td>10,512</td>
<td>4.96</td>
<td>1.39</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Income</td>
<td>Household income, z-standardized per country (full sample); subsequently pooled</td>
<td>9,524</td>
<td>0.25</td>
<td>0.95</td>
<td>−2.66</td>
<td>19.08</td>
</tr>
<tr>
<td>Higher salariat (ESeC 1)</td>
<td></td>
<td>9,159</td>
<td>0.13</td>
<td>0.34</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Lower salariat (ESeC 2)</td>
<td></td>
<td>9,159</td>
<td>0.26</td>
<td>0.44</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Higher grade white-collar workers (ESeC 3)</td>
<td></td>
<td>9,159</td>
<td>0.14</td>
<td>0.34</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Higher grade blue-collar workers (ESeC 6)</td>
<td></td>
<td>9,159</td>
<td>0.13</td>
<td>0.33</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Lower grade white-collar workers (ESeC 7)</td>
<td></td>
<td>9,159</td>
<td>0.12</td>
<td>0.32</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Skilled workers (ESeC 8)</td>
<td></td>
<td>9,159</td>
<td>0.09</td>
<td>0.29</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Semi- and unskilled workers (ESeC 9)</td>
<td></td>
<td>9,159</td>
<td>0.14</td>
<td>0.34</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
skills (Iversen and Soskice, 2001). Unlike relative skill specificity, general skills have been measured using data on the highest attained level of education. As a consequence, indicators of relative skill specificity and general skills are independent of each other. I expect female and older respondents as well as union members to be very supportive of job security regulations. In contrast, I expect rich and well-educated respondents (high level of general skills) to be rather critical of job security regulations. Note that I have refrained from including variables measuring party preferences since, following Hamermesh (1989, 2004), it is of little utility to show that various attitudes correlate with each other. Furthermore, there are many missing observations. In any case, an inclusion of a variable measuring party preferences does not change the results presented here (estimates not reported). To estimate the models, I use ordered logit regressions with country dummies and country clusters to adjust the standard errors for intragroup correlations.\footnote{As a control, I re-estimated all models using simple bivariate logit regression models with country dummies and clusters. The binary-dependent variables are coded as follows: (a) importance of job security as a job characteristic (ISSP 1997): 1 if very important \((n = 6013)\), 0 otherwise \((n = 4611)\); (b) governmental interventions to protect jobs (ISSP 1996): 1 if in favour of \((n = 6037)\), 0 otherwise \((n = 4472)\). The results do not change when logit regressions are estimated. Logit regressions are adequate when the probability of choosing either of the two alternatives is about 50\%. Their performance can be evaluated using scobit regressions (Nagler, 1994). The test shows that logit regressions are the appropriate estimation method for the ISSP 1996 data set. In the case of the ISSP 1997 data set, the employment of logit regressions might be questionable. However, a re-test using scobit regressions shows that the results remain the same. Thus, the results are very robust.}

### 5. Empirical evidence

Table 4 provides the results of ordered logit regressions on dummy variables for social classes and control variables, using ISSP 1996 and ISSP 1997 data, respectively. Two dependent variables have been used. In Model 1, attitudes towards governmental interventions for threatened industries to protect jobs are examined, whereas in Model 2, attitudes towards job security as a job characteristic are analysed. ESeC class 2 (lower salariat) has been used as reference category. Country dummies are not reported because of space restrictions. The substantive effects are presented in Table 5.

The empirical results lend support to arguments based on the replaceability of skills. First, employees hired under service relationships (high levels of absolute skill specificity), i.e. the higher and lower salariat, are comparatively critical of job security regulations. As expected on the basis of the replaceability thesis, there is a difference between the higher and lower salariat, the former being...
even more hostile towards job security regulations than the latter. All other groups show more support for job security regulations. Employees working under labour contracts (low levels of absolute skill specificity), i.e. lower grade white-collar workers, skilled workers, and semi- and unskilled workers, are most supportive. The odds of having more positive attitudes towards job security regulations increase on average by 46% when the respondent belongs to one of these social classes as opposed to members of ESeC class 2 (lower salariat).

### Table 4 Skill-based determinants of preferences for job security regulations

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Protect jobs</th>
<th>Job security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher salariat (ESeC 1)</td>
<td>-0.283 (-5.15)***</td>
<td>-0.178 (-2.16)*</td>
</tr>
<tr>
<td>Lower salariat (ESeC 2)</td>
<td>Reference category</td>
<td></td>
</tr>
<tr>
<td>Higher grade white-collar workers (ESeC 3)</td>
<td>-0.008 (-0.10)</td>
<td>0.166 (1.94)(*)</td>
</tr>
<tr>
<td>Higher grade blue-collar workers (ESeC 6)</td>
<td>0.233 (2.50)*</td>
<td>0.287 (3.72)***</td>
</tr>
<tr>
<td>Lower grade white-collar workers (ESeC 7)</td>
<td>0.340 (5.10)***</td>
<td>0.383 (3.77)***</td>
</tr>
<tr>
<td>Skilled workers (ESeC 8)</td>
<td>0.431 (4.57)***</td>
<td>0.282 (2.58)**</td>
</tr>
<tr>
<td>Semi- and unskilled workers (ESeC 9)</td>
<td>0.466 (6.03)***</td>
<td>0.348 (3.88)***</td>
</tr>
<tr>
<td>Union member</td>
<td>0.202 (4.04)***</td>
<td>0.228 (3.86)***</td>
</tr>
<tr>
<td>Woman</td>
<td>0.646 (14.84)***</td>
<td>0.139 (2.12)*</td>
</tr>
<tr>
<td>Age</td>
<td>-0.010 (-3.59)***</td>
<td>0.007 (2.53)*</td>
</tr>
<tr>
<td>Education</td>
<td>-0.256 (-9.29)***</td>
<td>-0.189 (-5.96)***</td>
</tr>
<tr>
<td>Income</td>
<td>-0.216 (-7.38)***</td>
<td>-0.65 (-1.90)(*)</td>
</tr>
<tr>
<td>Country-fixed effects</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Pseudo R^2 (McFadden)</td>
<td>0.076</td>
<td>0.053</td>
</tr>
<tr>
<td>Adjusted count R^2</td>
<td>0.077</td>
<td>0.065</td>
</tr>
<tr>
<td>N</td>
<td>8318</td>
<td>7942</td>
</tr>
</tbody>
</table>

Notes: Ordered logit regressions with country dummies and robust standard errors. Country dummies are not reported because of space restrictions. t-values in parentheses. ***/P < 0.001, **/P < 0.01, */P < 0.05, (*)P < 0.1.

### Table 5 Substantive effects (simulations on the basis of Table 4)

<table>
<thead>
<tr>
<th>Dependent variable: per cent change in odds</th>
<th>Protect jobs</th>
<th>Job security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher salariat (0–1)</td>
<td>-24.6%</td>
<td>-16.3%</td>
</tr>
<tr>
<td>Lower salariat</td>
<td>Reference category</td>
<td></td>
</tr>
<tr>
<td>Higher grade white-collar workers (0–1)</td>
<td>(-0.7%)</td>
<td>18.0%</td>
</tr>
<tr>
<td>Higher grade blue-collar workers (0–1)</td>
<td>26.3%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Lower grade white-collar workers (0–1)</td>
<td>40.5%</td>
<td>46.7%</td>
</tr>
<tr>
<td>Skilled workers (0–1)</td>
<td>53.8%</td>
<td>32.6%</td>
</tr>
<tr>
<td>Semi- and unskilled workers (0–1)</td>
<td>59.4%</td>
<td>41.6%</td>
</tr>
</tbody>
</table>

Notes: Non-significant effects (5%) are displayed in brackets. All simulations were computed using SPost (Long and Freese, 2006).
Furthermore, respondents under mixed forms of regulation, i.e. higher grade white-collar workers and higher grade blue-collar workers, are also very positive about job security regulations. However, as expected on the basis of the replaceability thesis, they are less positive than respondents hired under a labour contract.

Above, I argued that the differences between the expectations based on the relative skill specificity thesis and the replaceability thesis are most visible in the case of lower grade and higher grade white-collar workers. On the basis of the relative skill specificity thesis, one would expect them to be rather critical of job security regulations, even more than respondents belonging to ESeC classes 1 and 2 (higher and lower salariat). In contrast, on the basis of the replaceability thesis, one would expect lower grade white-collar workers and, to a lesser extent, higher grade white-collar workers to be very positive about job security regulations. As Table 5 shows, the results correspond to the expectations made on the basis of the replaceability thesis. In fact, lower grade white-collar workers are more supportive of job security regulations than any other group in Model 2 using ISSP 1997 data.13

However, one problem remains. In the case of mixed occupations, support for job security regulations is unexpectedly strong among higher grade blue-collar workers in Model 2 using ISSP 1997 data and unexpectedly weak among higher grade white-collar workers in Model 1 using ISSP 1996 data. Higher grade white-collar workers perform tasks that are difficult to monitor but do not require very specific skills, whereas higher grade blue-collar workers perform tasks that require very specific skills but are not difficult to monitor. The fact that higher grade blue-collar workers are more supportive of job security regulations than higher grade white-collar workers could be interpreted as a sign that the difficulty of monitoring is more important in determining one’s preferences for job security regulations than the specificity of one’s skills. Alternatively, this result could also reflect de-industrialization (Kitschelt, 2006, pp. 413–414). As argued earlier, industrialized Western democracies currently face the problem that low- and medium-skilled manufacturing jobs are disappearing (Ferrera et al., 2001, p. 170). This process affects higher grade blue-collar workers much more

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13Iversen (2005, p. 104) analyses the relationship between relative skill specificity and preferences for job security regulations using ISSP 1996 and finds a very strong positive relationship (t-value of 16.5). However, his results are very questionable for two reasons. First, he incorporates an interaction effect between relative skill specificity and national unemployment. His interpretation, however, does not take this into account. As a result, his interpretation is valid only for the very unrealistic case of zero national unemployment. Second and more importantly, there is strong reason to believe that Iversen estimated the models using ordinary least squares with country dummies despite having an ordinal dependent variable ranging between 1 and 5. Otherwise, it cannot be explained how Iversen obtained adjusted $R^2$ for his regression models.
than higher grade white-collar workers. As a result, blue-collar workers tend to perceive their jobs as more insecure than white-collar workers (OECD, 1997, pp. 132–133; Näswall and De Witte, 2003, pp. 199–202; Erlinghagen, 2008, pp. 191–192). Furthermore, the weak effect of the dummy variable for higher grade white-collar workers in Model 1 may be due to the manufacturing bias of the dependent variable. Governmental interventions to protect jobs are normally targeted at the industrial sector. As a consequence, not all labour market participants benefit equally from these interventions. In contrast, all labour market participants can expect to gain from job security regulations. Not surprisingly, then, a significant positive effect can be observed in Model 2.

Finally, turning to the control variables, it can be seen that union members, poor respondents and women prefer more regulations, whereas well-educated respondents demand less protection. Contradictory effects can be observed in the case of age.

6. Conclusions

This article has explored the relationship between skills and preferences for job security regulations, which have been identified as being particularly important for the development of high-skill production regimes (Crouch et al., 1999; Estevez-Abe et al., 2001; Kitschelt, 2006). Two different arguments are analysed: the well-known relative skill specificity thesis advanced by Iversen and Soskice (2001) and the replaceability thesis propounded by Goldthorpe (2000). Both arguments are based on the concept of asset cost specificity as argued in transaction costs economics. However, the two arguments generate conflicting expectations regarding employee preferences for stricter job security regulations. Iversen and Soskice expect employees with relatively specific skills to favour more job security regulations in order to increase the likelihood that they will have a return on their skills investment. In contrast, Goldthorpe’s reasoning implies that employees with very specific skills are difficult to replace. Consequently, these workers do not have to worry as much about job security as do employees with general skills.

The empirical analysis lends more support to Goldthorpe’s replaceability thesis. Employees who perform tasks that are easy to monitor and do not require specific skills demand more job security regulations than do difficult-to-monitor employees with specific skills. In contrast, the expectations based on the relative skill specificity thesis have not been confirmed by the empirical analysis. This is most clearly visible in the case of white-collar workers. On the basis of the relative skill specificity thesis by Iversen and Soskice (2001), white-collar workers can be expected to be rather critical of job security regulations. In contrast, on the basis of the replaceability thesis, one
would expect lower grade white-collar workers and, to a lesser extent, higher grade white-collar workers to be very positive about job security regulations. The analysis supports the expectations of the replaceability thesis.

There are two explanations as to why the relative skill specificity thesis is not supported by the empirical analysis. First, the relative skill specificity thesis, unlike Goldthorpe’s replaceability thesis, suffers from very strong rationality assumptions. The relative skill specificity thesis implies that individuals come to a decision whether or not to invest in specific skills on the basis of the existing institutional environment. Considering that most people are not aware of the effects of job security regulations on job tenure (Postel-Vinay and Saint-Martin, 2003; Saint-Paul, 2004; Sousa-Poza, 2004), it is difficult to imagine how this should be the case. In contrast, Goldthorpe’s (2000) replaceability thesis is less ambitious, although also relying on rational actors, and does not address the question of why individuals or firms invest in skills.

Of course, it is less demanding to assume that employees, once they have invested in relatively specific skills for whatever reasons, are interested in institutions that protect their investments. This, however, does not resolve the second problem of the relative skill specificity thesis. Iversen and Soskice’s (2001) argument cannot be extended to employees with hardly any skills (neither general nor specific). However, as I argue on the basis of Goldthorpe’s (2000) replaceability thesis, there is good reason to expect low-skilled workers to be even more positive about stricter job security regulations. Even if the specific skills become redundant after job loss, these skills still signal to future employers that this worker is skilled, i.e. was able to develop and make use of skills. As a consequence, specific skills may become redundant as skills but they could still be useful as a signal.

I hasten to add that these results do not imply that there are no high-skill production regimes or that capitalism cannot take on different institutional forms. However, I argue that a possible relationship between a high level of non-market coordination in a production regime and high levels of job security regulations is not due to the employees’ investment decisions and social policy preferences, but rather the result of a more or less conscious strategy of aggregate political and economic actors (Streeck, 1997; Thelen, 2004). This conclusion is also supported by the observation of Pontusson and others that the Swedish and the Danish states bear more responsibilities for the training of workers than Continental Europe (Pontusson, 2005, p. 115; Kristensen, 2006, p. 300; Hall, 2007, p. 51; Iversen and Stephens, 2008). Furthermore, this also explains why Culpepper finds such a general skill profile for Sweden (2007, p. 632). Although the Nordic countries can be characterized as high-skill economies (Finegold and Soskice, 1988), this has more to do with the preferences of trade unions (Ebbinghaus, 2006, p. 125)
and the incentive effects of wage compression (Acemoglu and Pischke, 1999a, b) than with a production regime based on specific skills.

This paper relies on the relative skill specificity indicator provided by Iversen and Soskice (2001). I calculated average levels of relative skill specificity per social class to test their hypothesis and to contrast it to Goldthorpe’s (2000) replaceability thesis. However, as argued earlier, Iversen and Soskice’s (2001) relative skill specificity indicator has been called into question. The problems become very visible once absolute skill specificity is calculated by multiplying relative skill specificity with the ISCO measure of level of skills (see the definition of relative skill specificity in Iversen and Soskice, 2001, p. 881).

The advantage of absolute skill specificity is its straightforward interpretation. Relative skill specificity is a complex indicator, whereas absolute skill specificity is a rather intuitive one. For instance, it would be very implausible if, according to the indicator, semi- and unskilled workers (ESeC 9) were to possess fewer specific skills (low absolute skill specificity) than skilled workers (ESeC 8) or higher grade blue-collar workers (ESeC 6). But this is exactly the case if we are to believe Iversen and Soskice’s (2001) relative skill specificity indicator.14

As a result, an indicator of absolute skill specificity based on Iversen and Soskice’s (2001) relative skill specificity indicator is an inappropriate operationalization of Goldthorpe’s (2000) replaceability thesis. This does not rule out that Iversen and Soskice’s indicator is an acceptable approximation of relative skill specificity. However, it raises questions concerning validity.

The development of an improved indicator of relative skill specificity lies outside the scope of this paper. However, as Iversen and Soskice’s (2001) relative skill specificity thesis enjoys great popularity in scholarly research and their indicator is widely used, contributions attempting to operationalize absolute and relative skill specificity would be very welcome. For now, the level of sophistication and controversy at the theoretical level is not matched by a similar refinement at the level of indicators.

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14Higher grade blue-collar workers have an average absolute skill specificity score of 3.7 (ISSP 1996) and 3.8 (ISSP 1997). Skilled workers have an average score of 4.2, and semi- and unskilled workers have an average score of 4.5 in both data sets.
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References


