

EDUCATION POLICY AND THE CONSEQUENCES FOR
LABOR MARKET INTEGRATION IN DENMARK,
GERMANY, AND THE NETHERLANDS

Moira Nelson

A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in
partial fulfillment of the requirements for the degree of PhD in the Department of Political Science.

Chapel Hill

2008

Approved by:

John D. Stephens

Evelyne Huber

Gary Marks

Georg Vanberg

David Soskice

ABSTRACT

MOIRA NELSON: Education Policy and the Consequences for
Labor Market Integration in Denmark, Germany, and the Netherlands

(Under the direction of John D. Stephens)

The increased risk of skill obsolescence calls for new types of education policy that facilitate learning throughout the life course. I build two indices in order to express the types of education policy required to ameliorate this increased risk as well as explore variation in the degree to which different countries succeed at developing education policy to address this risk. Analyzing the origins behind the country rankings on these two indices, the results from the fuzzy set and regression analysis underscore a Scandinavian path to high rankings on both indices buttressed by the key presence of high left party incumbency and a powerful state. With respect to the skill transparency index, an additional path appears plausible consisting of strong right party incumbency combined with relatively well-organized social partners and left parties. Also, Christian democratic incumbency appears particularly hazardous for the development of policies that secure the transparent certification of skills. Examining the cases of Denmark, Germany, and the Netherlands in greater detail provides evidence first for the role of the various political factors described above in influencing the development of education policy. Three thematic groups of education policies are considered, the comprehensive school movement, continuing education, and active labor market policies. Second, firm interviews regarding firms' involvement in active labor market policies help to delve deeper into the mechanisms by which mutually beneficial policy outcomes are facilitated or made more difficult. Although Denmark, Germany, and the Netherlands have all used active labor market policies to reintegrate workers into the labor market, the types of policies each country has pursued as well as the degree of investment that these policies have both demanded and received from firms varied.

TABLE OF CONTENTS

| | |
|--|-----|
| LIST OF TABLES | v |
| LIST OF FIGURES..... | vi |
| ABBREVIATIONS..... | vii |
| Chapter | |
| I. INTRODUCTION | 1 |
| II. ECONOMIC CHANGE AND SKILL OBSOLESCENCE | 6 |
| Defining Skill Obsolescence..... | 7 |
| Recent Causes of Skill Obsolescence | 10 |
| Education and Social Risks..... | 16 |
| Index Composition..... | 22 |
| Results..... | 25 |
| Validation | 28 |
| Implications for Integration | 31 |
| Political Determinants..... | 33 |
| Conclusion | 34 |
| III. DETERMINANTS OF SKILL ACQUISITION AND SKILL TRANSPARENCY | 36 |
| Literature Review | 37 |
| Fuzzy Set Methodology | 40 |
| Analysis | 48 |
| Discussion and Conclusion..... | 58 |
| IV. CASE SELECTION..... | 63 |
| Case Selection Procedure: Strengths and Weaknesses | 64 |
| Overview of Political Party Systems | 74 |
| Contextualizing the Indices of Skill Acquisition and Skill Transparency | 76 |
| Overview of Trends in Education..... | 83 |
| Conclusion | 86 |
| V. COMPREHENSIVE SCHOOLING | 88 |
| Background Information..... | 88 |
| A Unified Primary School | 92 |
| The Unified Primary and Secondary School | 93 |
| Comparison and Conclusion..... | 102 |
| VI. CONTINUING TRAINING | 105 |
| Literature Review | 105 |
| Case Study Analysis | 107 |
| Comparison..... | 111 |
| Conclusion | 117 |
| VII. ACTIVE LABOR MARKET POLICIES..... | 118 |
| Active Labor Market Policies: Definitions, Relation to Skill Acquisition, Skill Transparency, and Welfare State Reform | 119 |
| Historical Development of Active Labor Market Policies in Denmark, Germany, Netherlands..... | 124 |
| Mid-1970s Onwards: Active Labor Market Policies in the Period of Permanent Austerity | 127 |

| | |
|---|-----|
| Denmark | 132 |
| Germany | 136 |
| Netherlands | 139 |
| Comparison and Conclusion | 144 |
| | |
| VIII. PRIVATE FIRMS AND ACTIVE LABOR MARKET POLICIES | 147 |
| | |
| Theoretical Framework: Private Firm Involvement in the Reintegration of Marginalized Workers..... | 147 |
| Analysis: Reintegration in Denmark, Germany, and the Netherlands – How Involved are Private Firms? | 158 |
| Conclusion | 181 |
| | |
| IX. CONCLUSION | 183 |
| | |
| Theoretical Framework | 183 |
| Tracing Causal Origins | 189 |
| Comparative Historical Case Studies | 197 |
| Firm Interviews | 198 |
| Concluding Remarks | 199 |
| | |
| APPENDIX A | 201 |
| | |
| APPENDIX B | 203 |
| | |
| REFERENCES | 215 |

LIST OF TABLES

| | |
|--|-----|
| Table 2.3. Validity Check: Skill Acquisition | 30 |
| Table 2.4. Validity Check: Skill Transparency | 31 |
| Table 2.5. Education and Integration through ALMP | 32 |
| Table 2.6. Education and Political Factors..... | 33 |
| Table 3.1. Truth Table from Analysis of Eight Causal Conditions of Skill Acquisition | 50 |
| Table 3.2. Truth Table from Analysis of Eight Causal Conditions of Skill Transparency | 52 |
| Table 3.3. Solution Sets for Skill Acquisition Index..... | 53 |
| Table 4.1. Political Ideologies in Education | 71 |
| Table 4.2. Measures of Education Systems: From Data to Empirics..... | 80 |
| Table 6.1 Training Activity and Forms of Agreements (measures are percent of all firms in sample) | 112 |
| Table 7.1. Activation Policies | 120 |
| Table 7.2. Initial Legislation of Passive Social Policies | 124 |
| Table 8.1. Hypotheses about Factors Influencing Investment of Private Firms in Active Labor Market Policies..... | 157 |
| Table 8.2. State and Interest Group Structures in Denmark, Germany, and the Netherlands | 159 |
| Table 8.3. Danish Firms' Responses to the Question: Should firm have social responsibility for own workers? | 164 |
| Table 8.4. Danish Firms' Responses to the Question: Should firm take social responsibility for socially- excluded people such as long-term unemployed?..... | 164 |
| Table 8.5. German Firms' Responses to the Question: Should firm have social responsibility for own workers? | 167 |
| Table 8.6. German Firms' Responses to the Question: Should firm take social responsibility for socially- excluded people such as long-term unemployed?..... | 167 |
| Table 8.7. Dutch Firms' Responses to the Question: Should firm have social responsibility for own workers? | 170 |
| Table 8.8. Dutch Firms' Responses to the Question: Should firm take social responsibility for socially- excluded people such as long-term unemployed?..... | 170 |
| Table 8.9. Firm Participation Patterns in ALMP in Denmark..... | 173 |
| Table 8.10. Firm Participation Patterns in ALMP in Germany (All Policies) | 173 |
| Table 8.11. Firm Participation Patterns in ALMP in Germany (Only Previously Unemployed) | 174 |
| Table 8.12. Firm Participation Patterns in ALMP in the Netherlands | 175 |
| Table 8.13. Reasons for Participating or Not in ALMP..... | 176 |

LIST OF FIGURES

| | |
|--|-----|
| Figure 2.1. Dimensions of Education Systems: Skill Acquisition and Transparency | 28 |
| Figure 3.1. Rankings on the Skill Acquisition Index | 44 |
| Figure 3.2. Skill Acquisition: Raw Values and Fuzzy Set Scores | 45 |
| Figure 3.3. Rankings on the Skill Transparency Index | 46 |
| Figure 3.4. Skill Transparency: Raw Values and Fuzzy Set Scores | 47 |
| Figure 3.5. Independent Variable Plots: Raw v. Fuzzy | 47 |
| Figure 6.1. Reasons from Non-Training Firms on Why Not Training | 114 |
| Figure 6.2. Relative Use of Public and Private Institutions by Training Firms | 115 |
| Figure 6.3. Relative Use of Union and Employer Organization Training by Training Firms..... | 116 |
| Figure 7.1. Unemployment Rates Between 1960 and 2000 | 129 |
| Figure 7.2. Employment Rate of the Active Population between 1960 and 2000 | 130 |
| Figure 7.3. Spending on Active Labor Market Policies (as percent GDP/unemployment rate) between 1980 and 2000 | 131 |
| Figure 7.4. Spending on Active Labor Market Policies (as percent GDP) between 1980 and 2000 ... | 132 |

ABBREVIATIONS

General

| | |
|------|---|
| APL | Accreditation of Prior Learning |
| EQF | European Qualifications Framework |
| EU | European Union |
| OECD | Organization for Economic Cooperation and Development |

Denmark

| | |
|-----|---|
| AMU | Act on Vocational Training for Unskilled Workers, <i>Arbejdsmarkedsuddannelserne</i> |
| DA | Danish Confederation of Employers, <i>Dansk Arbejdsgiverforening</i> |
| LO | Confederation of Danish Trade Unions, <i>Landorganisationen</i> |
| SD | Social Democratic Party of Denmark, <i>Socialdemokraterne</i> |

Germany

| | |
|---------|--|
| AGDB | General German Trade Union Association, <i>Allgemeiner Deutscher Gewerkschaftsbund</i> |
| BDA | Confederation of Unions of Employers of Germany, <i>Bundesvereinigung der Deutschen Arbeitgeberverbände</i> |
| CDU/CSU | Christian Democratic Union/Christian Social Union of Bavaria, <i>Christlich Demokratische Union Deutschlands/ Christlich-Soziale Union in Bayern</i> |
| DGB | Confederation of German Trade Unions, <i>Deutsche Gewerkschaftsbund</i> |
| GGD | General Commission of German Trade Unions, <i>Generalkommission der Gewerkschaften Deutschlands</i> |
| MECG | Ministers for Education and Culture in the Federal Republic of Germany, <i>Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung</i> |
| SPD | Social Democratic Party of Germany, <i>Sozialdemokratische Partei Deutschlands</i> |

Netherlands

| | |
|-----|---|
| CDA | Christian Democratic Appeal, <i>Christen Democratisch Appèl</i> |
| D66 | Democrats 66, <i>Politieke Partij Democraten 66</i> |

| | |
|---------|---|
| HAVO | Higher General Continued Education, <i>Hoger algemeen voortgezet onderwijs</i> |
| HBO | Higher Professional Education, <i>Hoger Beroeps Onderwijs</i> |
| NVV | Dutch Association of Trade Unions, <i>Nederlands Verbond van Vakverenigingen</i> |
| PvdA | Labor Market Party of the Netherlands, <i>Partij van der Arbeid</i> |
| VMBO | Preparatory Mid-Level Vocational Education, <i>Vorbereidend Middelbaar Beroepsonderwijs</i> |
| VNO-NCW | Confederation of Netherlands Industry and Employers, <i>Verbond van Nederlandse Ondernemingen, Nederlands Christelijk Werkgeversverbond</i> |
| SBO | Council for the Education Labor Market, <i>Sectorbestuur Onderwijs Arbeidmarkt</i> |
| VVD | People's Party for Freedom and Democracy, <i>Volkspartij voor Vrijheid en Democratie</i> |
| VWO | Pre-university Secondary Education, <i>Vorbereidend Wetenschappelijk Onderwijs</i> |
| WO | Scientific Education, <i>Wetenschappelijk Onderwijs</i> |

CHAPTER 1

INTRODUCTION

Skill-biased technological change, trade, and financial liberalization change the skills demanded by firms across advanced industrialized economies. Trade and financial liberalization shift production in goods requiring low skill levels to low-wage countries, increasing the premium on higher skills as well as the demand for skills complementary to service sector production such as social skills. Technological change increases the skill intensity of production across industries, which includes the particular increase in the intensity of cognitive skills; due to the high rate of technological change and the changed role of knowledge in the production process, the types of skills demanded is in a constant state of flux.

These developments induce skill obsolescence to the degree that workers no longer hold all of the skills necessary to function in their current or a comparable employment position. The structure of national education systems, moreover, holds consequences for the capacity of workers to prevent and respond to skill obsolescence by structuring opportunities to enter into formal education and overseeing the transparent certification of skills. In these ways, the education system not only delivers skills, but also governs the distribution of labor market opportunities. The impact of skill-biased technological change, trade, and financial liberalization on skill obsolescence opens up a role of education policy to address skill obsolescence and thereby reduce the risk of labor market marginalization.

Education policy as an appropriate tool to reduce skill obsolescence and thus labor market marginalization, however, does not receive sufficient attention in the social policy or comparative political economy literatures. Scholarly work has generally focused on the mix between changed economic conditions, labor market regulation, and social policy to explain the causes of and solutions to the heightened risk of labor market marginalization. The analysis here speaks to this

debate by illuminating the central role of national education systems in influencing the degree to which workers' skill sets reflect current skill demands.

This study aims at making four central contributions. The first contribution of this study includes a comprehensive conceptualization of education systems. The welfare state and comparative political economy literatures have generally not included education policy within the conventional set of redistributive policies despite the significant ramifications of education policy for labor market opportunity structures. Conceptualizing the role of education policy within a political science framework motivates the delineation of two dimensions of education policy in this study. The first dimension of education policy captures the degree to which education policy expands opportunities to acquire skills. Analysis of the consequences of education policy for opportunities to acquire skills has a long history within the sociology literature and naturally the education policy literature. Within the political science literature, however, the link between education policy on the one hand and political contestation and redistributive outcomes is less studied. There are exceptions to this generalization (e.g. Castles 1989), and indeed in the past few years there has been increased attention paid to the political determinants of educational investment by national governments and private firms (e.g. Busemeyer 2007; Hall & Soskice 2001b; Iversen & Stephens 2008). By addressing the issue of opportunities to acquire skills and cataloging the host of education policies that expand educational opportunities, the theoretical and empirical construction of this first dimension contributes to this growing debate on the redistributive politics of education.

The second dimension of education systems developed in this study builds off the argument that the manner in which skills are certified influences their actual and perceived market value. The concept of skill certification was given central attention in Thelen's (2004) study of skill regimes in Japan, the UK, the US and Germany, which recognized not only the distributive aspects of skill certification but also linked the control over certification measures to the quality of firm-based training. Outside of this study, however, the topic of skill certification and related issues of skill transparency have been all but absent from research on the political contestation of skills.

Attempts at harmonization of educational standards across the European Union has placed educational reform on the policy agendas of Member States and helped to instigate a data-gathering process on the subject of certification structures that has had the consequence of facilitating comparison within Europe and beyond. The urgency to harmonize qualification systems across Europe underscores the recognition among policy-makers of the obstructive effects of the non-transparency of skills on labor mobility.

Analogous attention in scholarly work to issues of skill certification is also needed. The consequences of skill certification and, by extension, skill transparency are not insignificant, yet most studies implicitly assume that economic actors have complete information with regards to workers' skill sets. Also, virtually no study except the Thelen book endogenizes firms' preferences over the certification of skills. The theoretical and empirical construction of a skill transparency dimension, which captures education policies that promote the clear certification of skills and the recognition of complementary skills between occupational and educational units, aims to address this lacuna in the literature.

The second main contribution involves a systematic analysis of the determinants of the skill acquisition and skill transparency dimensions. Using fuzzy set and regression analysis, the explanatory value is tested of factors frequently related to the passage of generous social policy. The results allow for comparison of the origins of education policies that promote both opportunities to acquire skills as well as skill transparency with the existing body of knowledge about the determinants of the development and change of the welfare state.

The third main contribution of this study lies in examining political contestation over education policy in Denmark, Germany, and the Netherlands. Given the dearth of political science studies on education policy, the historical case studies of these three generous welfare states provides above all information about the distributive politics of education policy in these three countries. The analysis divides the policies from the skill acquisition and skill transparency dimensions into five

groups in order to facilitate the discussion of education policy from a historical perspective. These groups include the comprehensive schooling, state planning, firm-based training, active labor market policies, and qualification systems.

Beyond intrinsic informational value, these comparative historical analyses also speak to broader debates within the welfare state and comparative political economy literatures on the causes of and solutions to the problem of marginalized employment. In particular, the comparative studies on education policy draw out the stark differences between social democratic and Christian democratic incumbency in supporting education policies that facilitate skill transparency. By linking the effect of such policies to the occurrence and intensity of labor market marginalization, this study introduces an explanatory variable that holds the promise of offering considerable leverage in explaining recurrent difficulties in Christian democratic countries to reduce long-term unemployment.

The fourth main contribution of this study is the dataset composed of firm-based interviews in Germany and the Netherlands. By replicating the interviews conducted by C. J. Martin (Martin 2004b; Martin & Swank 2004; Martin 2004c) in Denmark and the UK in the German and Dutch context, the study facilitates cross-national comparisons of firm behavior.

To make these contributions, the study consists of ten additional chapters. Chapter 2 lays out the theoretical framework of the study, explaining the growing need to gain skills throughout the career and the role of education policy in addressing this need. The theoretical discussion is followed up by an empirical section that develops two indices that aim to capture the two theoretical dimensions: the ‘skill acquisition’ index measures the extent to which education policy expands opportunities to acquire skills and the ‘skill transparency’ dimension measures the strength of policies supporting the clear certification of skills and the recognition of shared skill sets between different occupational and educational units.

Chapter 3 endogenizes the skill acquisition and skill transparency indices. Using fuzzy set and regression analysis appropriate to small N samples, the analysis assesses the explanatory power of variables highly relevant to the clarification of social policy outcomes in the welfare state and comparative political economy literatures. The results indicate the positive relation between left party incumbency, public sector employment, and trade union density to the passage of policies promoting skill acquisition and skill transparency, and the detrimental effects of right party incumbency to skill acquisition policies and Christian Democratic Party incumbency to skill transparency policies.

Chapters 4 through 7 involve comparative historical case studies of education policy in Denmark, Germany, and the Netherlands. Chapter 4 sets up the analysis by justifying the case selection method and providing background information on the three cases. Chapter 5 analyzes political contestation around comprehensive schooling. Chapter 6 examines the degree of coordination over firm-based training. Chapter 7 assesses developments in the field of active labor market policies.

Chapter 8 presents results from 150 firm-based interviews in Denmark, Germany, and the Netherlands. The theoretical section develops expectations about the role of business organization and the state on private firms' willingness to hire marginalized workers. The interview data is used to substantiate these claims. Chapter 9 concludes.

CHAPTER 2

ECONOMIC CHANGE AND SKILL OBSOLESCENCE

Education systems hold the potential to address the heightened risk of skill obsolescence today by facilitating skill acquisition and skill transparency. The realization of this potential, however, remains contingent on political reforms, because contemporary education systems largely developed in a period of lower skill obsolescence when initial education proved sufficient to secure employment throughout the career. By facilitating skill acquisition and transparency, education systems stand to play a central role in bolstering labor market chances among marginalized workers as well as supporting government programs to reintegrate the unemployed.

The potential for education systems to alleviate skill obsolescence abides by the following logic. When faced with skill obsolescence, workers lose the capacity to fulfil the tasks required by their employment position. Depending on the source and degree of skill obsolescence, workers can reduce the ensuing labor market risk by bolstering their competitiveness in their current employment position or moving to a new employment position. All of these responses, however, require either learning new skills or providing evidence of existing skills to education institutions or potential new employers; these actions, in turn, depend largely on the structure of the education system.

Two aspects of education systems stand as particularly relevant to the mitigation of skill obsolescence, skill acquisition and skill transparency. Education systems influence skill acquisition by investing in individuals' cognitive capacity and creating opportunities to enter into formal education. The capacity and opportunity to learn skills reduce the risk of skill obsolescence

by facilitating the replacement of obsolete skills with marketable skills. The second dimension, skill transparency, refers to the structure of the skill certification system, which governs the formal recognition of skills and the acknowledgement of shared skill sets between different academic degrees and professional occupations. Due to information problems that employers face in assessing job candidates and the extent to which previous coursework acts as a prerequisite for further study, the structure of the certification system influences hiring decisions and the range of training opportunities that workers' previous education qualifies them to pursue, respectively. Together these dimensions of skill acquisition and skill transparency express how education systems influence the ability of workers to prevent and respond to skill obsolescence. To test the theoretical claim that education systems mitigate the risk of skill obsolescence, I create two indices for these aspects of educational systems.

The chapter proceeds as follows. The next section defines skill obsolescence and outlines the causes of its recent upward trend. The following section builds a model of how education systems mitigate skill obsolescence by first reviewing the existing literature on how education policy relates to economic and social outcomes and then developing an argument on the particular ways in which education systems can address the current risk of skill obsolescence. The analysis section outlines the measurement of the indices on skill acquisition and skill transparency, presents the results, and then validates the indices by correlating them with measures of observable implications of the theoretical argument. The discussion section then explains potential implications of the index for the integration of the unemployed and analyzes potential political explanations for the country rankings on both dimensions.

Defining Skill Obsolescence

While the intensity of skill obsolescence fluctuates over the course of history, recent trends prompt a new period of heightened skill obsolescence. To support this claim, it is first necessary to define skill obsolescence. In general, skill obsolescence means the loss of the value of skills that workers possess, though definitions of obsolescence vary according to how loss is calculated. Viewing

obsolescence as a relational concept between workers suggests the following definition: “A person is obsolescent to the degree that, relative to other members of his profession, he is not familiar with, or is otherwise unfitted to apply, the knowledge, methods, and technologies that generally are considered to be important by members of his profession” (Shearer & Steger 1975, p. 265). From another perspective, obsolescence does not define the distance from the skills of the average worker, but rather the distance from the ideal skill set necessary to complete the task associated with a given job. With this understanding, one might consider the following definition: “Obsolescence is the degree to which organizational professionals lack up-to-date knowledge or skills necessary to maintain effective performance in either their current or future work roles” (Kaufman 1974, p. 23). For the purposes of the argument here, I rely on a broad understanding of skill obsolescence, where obsolescence refers to the deficiency of skills necessary to fulfill the tasks associated with one’s employment position or comparable employment positions.

Different general varieties of skill obsolescence can be identified: skill atrophy due to illness or nonuse; job-specific skill obsolescence through technological change; sector-specific skill obsolescence due to shifts in employment; and firm-specific skill obsolescence through displacement (de Grip 2004). These categories of skill obsolescence cluster into roughly two groups: technical obsolescence refers to changes that originate within the individual (e.g. nonuse) whereas economic obsolescence refers to decreases in the value of an individual’s human capital due to external changes (e.g. technological change) (de Grip et al 2002; Rosen 1975). I focus here on economic obsolescence, which occurs through technological developments, trade, sectoral employment shifts, company restructuring, and shorter average job tenure.

The literature generally relies on three different ways of measuring skill obsolescence. The most direct way to assess obsolescence is through personal assessments (e.g. Allen & van der Velden 2002; Blechinger & Pfeiffer 2000; Karasek et al 1998; Kaufman 1989; van Loo et al 2001). Economic studies tend to focus most on wages (e.g. Jacobson et al 1993; Mincer & Ofek 1982; Neuman & Weiss 1995), which should decrease in response to high skill obsolescence. Other

studies either look at flow from employment into unemployment (e.g. van Loo et al 2001) or non-participation (e.g. Allen & De Grip 2005; van Loo et al 2001) as an indicator of human capital obsolescence.

Quantifying skill obsolescence is an illusive task. Measurement issues remain for three main reasons. First, both workers and employers' self-evident incentives to avoid obsolescence will lead them to update periodically existing skill sets to adapt to technological innovations or changes in the market. These practices will mask obsolescence by reducing skill-obsolescence-induced unemployment or non-participation. Declining investments in certain skill sets or increasing training efforts could provide additional measures of skill obsolescence, although cross-sectional time series data on college majors or in-firm training courses are not available.

Second, labor market regulations frustrate the reflection of skill obsolescence in labor market statistics. Sticky wages conceal skill obsolescence by failing to register reductions in productivity. In addition, employment protection potentially reduces the likelihood of unemployment of workers with obsolete skills, thereby underestimating true levels of skill obsolescence. On the other hand, unemployment rates may also overestimate skill obsolescence, because factors besides skill obsolescence lead to unemployment (see de Grip 2004).

Finally, personal assessments face the dilemma that obsolescence measures are subject to individual biases. For instance, managers may face problems in assessing the skills of their subordinates (Borghans et al 2000; de Grip 2004). At the same time, personal assessments hold the advantage that they capture potential skill obsolescence not yet reflected in wage levels due to wage rigidity.

Having defined skill obsolescence and the main methods of measuring of skill obsolescence, I now turn to the main causes of the heightened risk of skill obsolescence in the recent period. Doing so clarifies the ways in which skill obsolescence manifests itself by drawing out the ways in

which demands for various skilled changed over time. The discussion calls on economic changes that alter the level and types of skills needed in advanced industrialized economies as well as the changed role of human capital in the production process.

Recent Causes of Skill Obsolescence

Over the last three decades or so, a number of economic changes generated a sustained period of high skill obsolescence. These changes include trade, financial liberalization, skill-based technological change, and the growth of the knowledge economy. Together, these changes alter firms' skill needs. In terms of skill level, trade, capital market liberalization, and skill-based technological change lead to a shift towards demand for higher skills. The types of skills that firms demand also changed. Firm displacement to foreign countries as well as shorter job tenure increases the obsolescence of firm-specific skills. The growth of the service sector and skill-based technological change also increase the salience of various social skills, computer related skills, and cognitive skills. Below I elaborate on the logic behind and the evidence for these trends. I first review the support for the claim that the levels of skills has changed. Then I discuss ways in which the types of skills demanded by firms have changed. Finally, I discuss the growth of the knowledge economy and how technological innovation shortens the 'half-life' of workers' human capital investments and prompts the need to invest more often in training.

Demand for high-skilled workers arises predominantly from trade, financial liberalization and skill-based technological change. For the trade argument, the logic of factor price equalization suggests that prices for low-skilled labor in developed countries cannot remain above those in developing countries. Following Heckscher-Ohlin-Samuelson assumptions, trade with developing countries with abundant low-skilled workers should force down wages of less abundant low-skilled workers in developed countries; if labor market policy prevent adjustment, unemployment among low-skilled workers will rise in low wage countries. International specialization therefore drives up skill premia in economically developed nations (Wood 1994; Wood 1995). Increased levels of trade between advanced industrialized countries and less developed countries thereby

either reduce the return to low-skill work or increase the risk of redundancy. Both lower wages and redundancy imply skill obsolescence, either because a worker's skills no longer suffice to earn the previously established wage or because high wage costs led firms of a certain skill-level to relocate in low-wage countries, thereby reducing labor demand for these skills in high-wage countries.

Financial liberalization allows for massive foreign direct investment (hereafter FDI) flows that, according to 'knowledge capital theory,' provide firms with incentives to reorganize production in ways that are sometimes analogous to trade. According to Markusen and Maskus (2002; 2002), firms in traded industries face three options: they can either remain domestic, internationalize 'horizontally' by dividing similar production processes between different countries, or internationalize 'vertically' by dividing different production processes across countries. Firms follow these strategies depending on firm-level economies of scale and the costs of trade and FDI. Horizontal FDI aims to facilitate access to foreign markets, and trade and horizontal FDI are therefore substitutes. Vertical FDI aims to take advantage of lower labor costs in countries with relatively abundant labor, and trade and vertical FDI are complements because component parts return to the home country for completion of the production process. Empirical evidence provides evidence for the link between firms incentives to pursue vertical FDI with the relative abundance of low-skilled labor in host countries (Hanson et al 2001). The pursuit of vertical FDI therefore increases the risk of skill obsolescence among low-skilled workers by shifting their low-skilled jobs to low-wage countries, similar to the trade argument.

Skill based technological change involves transformations in production technology that favor skilled labor over unskilled labor by increasing its relative productivity. Initial studies assumed that technological change was factor neutral and therefore influenced all workers equally (e.g. Solow 1957), but recent work finds evidence that technological change produces factor- and sector-specific effects (Chusseau et al 2008; Haskel & Slaughter 2002). On the basis of the different logics outlined above, scholars explain the clear trend towards increased demand for

higher skills and waning demand for low skills (Autor et al 2006; Bresnahan et al 2002; Geishecker ; Nickell & Bell 1995). Skill based technological change therefore increases skill obsolescence by reducing the returns to low-level skills.

Beyond the increased obsolescence of low-level skills, broad types of skills also face obsolescence either because they have become redundant to the production process or because new skills become relatively more important. To begin, firm-specific skills face higher obsolescence in recent times. Firm displacement due to trade and financial liberalization as well as shorter terms of tenure increases the obsolescence of various firm-specific skills since workers who lose their position in a firm can no longer apply these skills to new jobs.

Sectoral employment shifts and skill based technological change also create new skill needs. An oft-cited skill requirement includes cognitive skills, which are mental skills used in gaining knowledge such as reasoning, perception and intuition. Furthermore, in contrast to product-specific skills dominant in the industrial period, the focus today is on problem solving, entrepreneurship, communication, and social skills (Bengtsson 1993; Green et al 2000). Since service sector jobs typically involve face-to-face interaction, an ability to communicate and interact with a broad range of individuals greatly facilitates business. High rates of service sector growth thereby generate high demand for social skills.

Skill based technological change also calls for cognitive skills due to the need to work with and create new technologies. Frequently cited in the literature is the development of information and communication technologies, the impact of which is most often captured by the expansion of computer-based technologies. Demonstrating the salience of this technology for changing skill needs, studies indeed show that skill-upgrading occurs at highest rates in computer-intensive sectors (Autor et al 1998). Computers represent what Rosen (1975, pp. 199-200) labels a vintage effect, which occurs when “stocks of knowledge available to society change from time to time [and] capital losses are imposed on those embodying the earlier knowledge and skills.” The

capacity to function within a computer-based environment demands new competencies: “Effective use of computer systems calls for new cognitive skills, having a deep understanding of one’s own organization and one’s customers’ needs. Even those managerial and professional workers who never touch computers are having their work transformed in this way, calling for more and more complex bodies of skill and knowledge” (Bresnahan et al 2002). The development of new technologies therefore calls for a new type of worker with the capacity to operate these technologies and apply them to existing work practices.

Additionally, business in a service-based technologically advanced society is more customer-orientated than was production in the industrial period. This tendency acquired the label mass customization, which stems from computer-based advancements that make the unification of low unit costs with mass production processes with the flexibility of custom-design possible (Pine 1999). Although the occurrence of long supply chains inhibits the development of mass customization, facilitating greater individualization on a mass scale defines a current shift in production strategies and management techniques.

In sum, the need to operate both with new technologies and more closely with customer needs increases demands for cognitive skills. In contrast to the skills required during the period of industrialization, the new period places more value on the ability to analyze and incorporate information quickly into the production process. Individuals who fail to adapt to these new skill needs face obsolescence, because their existing skill set does not suffice to compete effectively on the labor market.

The higher emphasis on cognitive skills in a postindustrial period belies a larger transformation in the nature of production. According to scholars of the ‘knowledge economy,’ the continued obsolescence of skills is a characteristic feature of the current era. The roots of the knowledge economy can be traced to innovations in scientific and information technology and can be defined as “production and services based on knowledge-intensive activities that contribute to an

accelerated pace of technological and scientific advance as well as equally rapid obsolescence” (Powell & Snellman 2004, p.201). David and Foray continue this line of thought and, acknowledging the critical role of knowledge in economic growth, explain that “the crux of the issue lies in the accelerating (and unprecedented) speed at which knowledge is created, accumulated, and, most probably, depreciates in terms of economic relevance and value” (David & Foray 2003, p. 21). Though defining knowledge frustrates analysis, some describe the salience of knowledge as the heightened need of ‘articulating and integrating’ information into activities (Winch 2003) or the importance of ‘know-why’ (more theoretical knowledge), ‘know-how’ (skills), and ‘know-who’ (networks) as compared to ‘know-what’ (facts) (OECD 1996).

The breadth and depth of the knowledge economy remain controversial. Whereas some research views these changes as structural, influencing the whole economy (Bell 1973; Romer 1990), other research focuses more narrowly on productivity growth in certain industries (Brynjolfsson & Hitt 2003). Another strand of this literature looks at the capacity for knowledge transfer within the firm (Nonaka & Takeuchi 1995; Prusak 1997), which implicitly upholds a widespread view that the diffusion of new technologies depends on the development of complementary institutions and policies (Bengtsson 1993; David 1990). Beyond a handful of fields such as biotechnology where high levels of R&D and patents clearly demonstrate innovation, the extent to which the knowledge economy affects all workers is difficult to quantify.

Attempts to gauge the development of the knowledge economy tend to focus either on stocks of knowledge including human, organizational, and intellectual capital or on activities including investment in training and information technology, R&D expenditure, and organizational reform (Powell & Snellman 2004). By far, however, the most commonly used measure of knowledge intensive production is patent data. High quality US patent data is publicly available (Hall et al), and demonstrate an upward trend since 1983 that takes off in the late 1990s, particularly in biotechnology and semiconductors. Finland provides a European example. Based predominantly on paper and forestry production in 1960, the growth in telecommunications and multiplex

communications overtook these traditional industries in terms of patent size in 1994 (Powell & Snellman 2004). Additional support for the growth of knowledge intensive production shows an increase in the share of high tech patents in Finland, from 8.9 percent in 1990, to 30.3 percent in 1995, and 51.6 percent in 2000 (Powell & Snellman 2004; Zoppè 2002). The more salient role of knowledge in the production process increases the risk of skill obsolescence, because new ‘vintages’ are constantly developed, thereby reducing the relative value of existing skills. Since skills become obsolete quickly, individuals who fail to learn new technologies stand the risk of becoming obsolete as well.

To summarize, economic changes in the last few decades of the twentieth century altered the level and types of skills necessary to find stable employment. In some cases, jobs may simply no longer exist that use the workers’ existing skills. This is the case where firms become insolvent or move abroad as well as in cases where workers’ firm-specific skills lose value because they become redundant. Skill obsolescence also occurs when new skill needs reduce the relative value of workers’ existing skills. This occurs due to new skill needs generated by both technological change and sectoral shifts in production.

These changing skill demands influence the capacity of individuals to retain their productivity in their current job or find similar employment positions. The degree of skill obsolescence inflicted by these economic changes varies by position, firm, sector and country. To minimize the effects of skill obsolescence, namely unemployment or job instability, it is necessary to anticipate obsolescence and adjust accordingly in terms of either gaining skills or changing employment. Participating in training holds the potential to reduce the negative consequences of skill obsolescence. Assessing the influence of lifelong learning on skill obsolescence, de Grip and van Loo find that training decreased the chance of unemployment or early labor market exit among workers (Allen & De Grip 2005). The study also showed proof that training occurs more often in jobs with high rates of obsolescence and that a decrease in training activity increases the

probability of future job loss. Drawing on these insights, the next section explores how education can mitigate the negative consequences of skill obsolescence.

Education and Social Risks

Education policy represents an obvious policy area for addressing declining value in workers' human capital investment. For clarity, education systems include the rules, regulations and institutions that govern entry into new forms of education (prerequisites and costs), the content of education courses (curriculum), and the way in which skills are formally certified (categorization of skills, formal acknowledgement). Due to difficulties in collecting data and validating comparability, the issue of curricula is not addressed in detail here. The role of curricula differences in explaining responses to skill obsolescence is therefore only handled cursorily as part of the discussion on skill forecasting and state planning.

Highly relevant international organizations recognized the potential of education policy to address heightened labor market risk. In response to the increased incidence of labor market marginalization and the development of the knowledge economy, both the OECD and the World Bank developed agendas for education reform. The OECD's *Schooling for Tomorrow Programme* and the World Bank's report, *Lifelong Learning for the Global Knowledge Economy*, encapsulate the views of these organizations. Both institutions call for governments to address the salient role of knowledge in today's economy by expanding opportunities to learn throughout the career as well as preparing young children to cope in a technologically advanced economy. However, while both agendas forward the idea of 'learning to learn,' the World Bank policy promotes a policy of competitive individualism whereas the OECD focuses more on institutional configurations that support the sharing of knowledge (Robertson 2005). The difference between these responses suggests the diversity of possible responses to economic change.

Despite the variety of potential policy responses, all education reforms infer a move away from passive social policies towards an active welfare state. Passive social policies exist on the

assumption that income replacement during an absence from work upholds the value of workers' skills by providing adequate search time (DiPrete 2002; Gangl 2004) or induces investment in specific skills (Hall & Soskice 2001b). While short term income support does indeed help to maintain high employment levels (Bradley & Stephens 2007), insuring the future value of skills becomes a risky business in a period of heightened skill obsolescence. Since the best safeguard of human capital is participation in the labor market (Huber & Stephens 2001; Scharpf 2001), sustaining prolonged labor market exit on the logic of the insurance principle becomes contradictory, particularly if skill obsolescence triggered unemployment. Under these conditions, social policy focused on upholding employment levels should emphasize investment skills to improve workers' employment opportunities, rather than insuring obsolete skills.

Despite the attention to education reform by international organizations, the political science literature has not given the education reforms much consideration for their potential role in an active welfare state agenda. The political science literature addresses the increased risk of skill obsolescence under the rubric of new social risks as well as part of the discussion about shifting the focus of welfare state policy towards labor market participation rather than labor market exit, i.e. activation. New social risks refer to "situations in which individuals experience welfare losses and that have arisen as a result of the socioeconomic transformations that have taken place during the past three to four decades and that are generally subsumed under the heading of postindustrialization" (Bonoli 2007, p.498). Industrial unemployment, low-value-added service sector jobs, single parenthood, and temporary or part time work represent the most prevalent new social risks.

The potential of education policy to address these new risks, however, does not receive much attention in the academic literature. As case in point, scholars note that education has always held a precarious position in the comparative political economy literature (Arnesen & Lundahl 2006;

Iversen & Stephens 2008).¹ An EU-funded project at Uppsala University found that research on education reform rarely addressed aspects of social exclusion and inclusion (Popkewitz et al 1999). Perhaps also complicating the analysis of the effects of education policy, Arnesen and Lundahl (2006) also recognize that: “[i]n contrast to other parts of the welfare apparatus, e.g. health care and social services, education is supposed to serve several masters simultaneously. Not only should it provide the individual citizen with a certain safety and social connection, it must also contribute to economic growth by producing human capital” (286). In short, education policy does not assume a central role in the welfare state literature and vice versa.

Recent work has begun to explore the distributive politics of education (e.g. Ansell 2006; Busemeyer 2007; Iversen & Stephens 2008) drawing particularly on the power resources approach (Stephens 1979; Wilensky 1975). Social democrats tend to spend more than other parties on all levels of education (Busemeyer 2008; Iversen & Stephens 2008), which some interpret as an alternative ‘left’ growth strategy (Adsera & Boix 2000; Boix 1998). Right parties spend less than other parties (Busemeyer 2007), and Christian democrats spend relatively less on primary and tertiary education than their Scandinavian neighbors (Iversen & Stephens 2008). Moreover, due to a trade-off between education and social insurance policies, Christian democratic parties’ preference for social insurance may cause them to forego opportunities to expand education funding. Other factors that increase public education spending include a relatively young population, a decentralized fiscal system, high numbers of veto points, and high levels of public spending (Busemeyer 2007).

Beyond a redistributive role, the varieties of capitalism approach (Hall & Soskice 2001b) illuminates a second goal of education policy. Focusing on firms’ needs, the varieties of capitalism approach dichotomizes countries according to the degree to which production relies on specific

¹ A brief look through major journals demonstrates that most political science work on education examines its role in state-building and democracy. See Baum MA, Lake DA. 2003. The Political Economy of Growth: Democracy and Human Capital. *American Journal of Political Science* 47:333-47, Brown DS, Hunter W. 2004. Democracy and Human Capital Formation: Education Spending in Latin America, 1980 to 1997. *Comparative Political Studies* 37:842, Stasavage D. 2005. Democracy and Education Spending in Africa. *American Journal of Political Science* 49:343-58.

skills. Where specific skill production dominates, firms develop an incentive to invest more highly in firm-based vocational education, or apprenticeships. Firms prefer apprenticeships because they want to control the content of training. In order to ensure the sustained production of specific skills, firms rely on additional labor market institutions and social policies. For instance, social pressure on firms to invest in apprentices reduces free-riding, unemployment insurance induces workers' investment in such skills by supporting long job search time, and industry-wide training standards guarantee increase external demand for apprentices (see Hall & Soskice 2001b).

Despite these recent studies in political science, other fields such as economics, sociology and comparative education demonstrate a long history of assessing the diversity in educational institutions and their consequences for various micro and macro outcomes. Economists recognize the role of education in economic growth (e.g. Barro 1997; Romer 1994). Working predominantly on the micro level, sociologists consider the stratifying effects of education policy (e.g. Kerckhoff 2001; Müller & Shavit 1998; Shavit 2007; Shavit et al 1998). Comparative education scholars explore education policy in different nations and investigate the social, economic, and political factors that explain the variation (e.g. Boli et al 1985; de Bruijn & Howieson 1995; Finlay & Niven 1996; Grollmann & Ruth 2006). The theory that I delineate below shares the sociological perspective on stratification, particularly among the low skilled, though the independent variable of interest remains the macro structure of educational institutions, and the analysis tries to understand how these structures influence the labor market integration of marginalized workers. The richness of the economics, sociological and comparative education research helps to develop a model of how education systems influence reintegration efforts. Analyzing the politics of education reform, moreover, helps to address the question of why countries fail to invest highly in human capital and why some social groups face relatively higher labor market risk than others. Drawing on these various explanations of factors influencing educational spending, the structural of education institutions, and the social and economic ramifications of education policy, the following section builds upon this discussion to develop a model of how education institutions can mitigate the heightened risk of skill obsolescence.

Building a Theoretical Model for the Relationship between Education Policy and Labor Market

Integration

In order to flesh out how education institutions can reduce the risk of skill obsolescence, I draw out two theoretical dimensions along which education policy varies. The unit of analysis is for both dimensions is the skill set of an individual. I am interested in ways in which education institutions facilitate the adjustment mechanism of a (partially) obsolete skill set to a non-obsolete skill set. In my conceptualization, this can occur in two ways: either by acquiring new skills or by making existing skills more transparent to economic actors. First, education institutions can create the capacity or opportunity for individuals to acquire new skills. For example, in terms of cognitive ability, education systems can endow individuals with a strong initial education that makes it easier for them to acquire skills later in life. In terms of opportunities, education institutions can provide financial relief or mandate firms to provide training. Therefore, education policy can be understood as reducing the risk of skill obsolescence by investing in cognitive capacity and providing opportunities to gain new skills. For conceptual clarity, I will call this dimension the skill acquisition dimension.

Second, education institutions influence the transparency of individuals' skill sets, where transparency refers to the formal recognition of skills and the acknowledgement of shared skill sets between different academic degrees and professional occupations. Skills are typically learned as part of a broader group of similar or related skills. To the extent that educational degrees and job descriptions only acknowledge a skill as belonging to a specific academic degree or occupational profession, overlap between the skill sets of different educational degrees or professions does not receive acknowledgement. If authorities begin to recognize individually the various skills included as part of educational degrees or job descriptions, it becomes possible to measure the degree of overlap between of different degrees or professions. By extension, the coursework necessary to change professions can be developed. In education systems that facilitate

skill acquisition and skill transparency, skills at the lower end of the distribution should be relatively higher and the incidence of employment precariousness should be relatively lower. I call this dimension the skill transparency dimension.

The two concepts underlying these two dimensions, skill acquisition and skill transparency, align closely with the concepts of vertical and horizontal organizational differentiation developed by Aage Sorensen (1970). Vertical differential refers to division of student cohorts into different ability groups, whereas horizontal differentiation implies division according to different types of curricula. This comparison is useful because it provides an example of a study that links education structures to the distribution of skills within a given social group. However, whereas Sorensen was interested in the effect of school organization on student achievement, I am interested in the national structure of education policy more generally and the consequences for the skills, defined by level and transparency, of workers trained within that national structure.

To recapitulate, the theoretical argument developed above contends that education policy holds the potential to reduce the risk of skill obsolescence and does so by expanding opportunities either for individuals to acquire skills or by increasing the transparency of existing skills. Policies that expand opportunities to acquire skills constitute the skill acquisition dimension, and policies that improve skill transparency make up the skill transparency dimension. The observable implications of these two theoretical dimensions include expectations about skill levels and training behavior. In particular, high rankings on the skill acquisition and skill transparency dimension should be linked to higher average skill levels and training rates. Policies promoting skill acquisition will endow workers with strong cognitive skills that enable them to learn relatively efficiently and increase incentives to take up post-compulsory education due to higher expectations of success. These policies will also make opportunities to acquire skills relatively more affordable and abundant. The logic behind these observable implications in terms of skill transparency is a bit different. Where education policies increase skill transparency, workers will find it easier to enter

new forms of training because their educational background, particularly initial and informal education, will qualify them for a relatively broader array of education opportunities.

Index Composition

Following from the theoretical discussion, I now develop empirical measures for the dimensions of skill acquisition and skill transparency. For each dimension, available measures of educational institutions, regulations or policies capture an aspect of skill acquisition or skill transparency, respectively.

For the analysis, the direction of the hypotheses is presumably consistent across all labor market groups, although the effect may be stronger for some than for others. The selection of these variables suffered from considerable data restrictions, because finding cross-nationally valid measures that are at once reliable across countries and simultaneously express much of the variation in countries' opportunities to enter new forms of education remains difficult.

To build the skill acquisition dimension, I measure nine variables that cluster into three groups. All nine variables express ways in which educational institutions facilitate or frustrate entry into further education. Making the link between education policies and training behavior follows two logics. Addressing how education policy influences the capacity to learn, the first four variables speak primary to the investment in future workers' cognitive capacity. The second set of variable speaks to the way in which education institutions restrict access to education before the end of compulsory education. The final set of variables focuses on post-compulsory education and captures the barriers to entering tertiary, continuing education, and active labor market policies. I will briefly elaborate on these variables below.

The first group captures the degree of public investment in education. Whereas pre-primary and primary education provides workers with cognitive abilities to learn more efficiently (Esping-Andersen 2005), investment in secondary and tertiary education provides a base of reading,

writing and reasoning skills that improve learning capacity. Following previous work measuring quality of education (Barro & Lee 1996; Dustmann et al 2003), I use education spending .

The second group captures the degree to which the structure of educational institutions, on the secondary level, shapes the probability of entering further forms of education. Key differences between education systems lie in whether students follow different tracks and face an option of entering vocational education. These two institutional structures relate to each other, although they are not synonymous with each other. On the one hand, vocational education historically receives positive acclaim for increasing students' employment chances. Vocational education facilitates both matching of skills to employers' needs (Scherer 2005), fulfils a safety net function (Arum & Shavit 1995; Shavit & Müller 2000), and has been shown to increase participation in continuing vocational training (Blog 2007). Although vocational systems appear to face challenges in recent periods, particularly with respect to firms' willingness to invest in apprenticeships, the merits of vocational training in providing students with useful occupational skills continues to be strong.

At the same time, such systems often carry with them reputational costs when students who follow vocational tracks are separated institutionally from the higher performing students. This separation signals to students and teachers alike the expected lower potential of this group, which may influence how these students perceive their future goals and, by extension, their ambitions in the labor market (see review by Arum & Shavit 1995). Therefore, I construct a variable for vocational training that codes countries that divide students according to ability before the end of compulsory education as '0' and all other countries according to the percentage of each student cohort that enters apprenticeship training. As such, this variable aims at capturing the labor market benefits of apprenticeship training while controlling for the disadvantages of such a system in terms of limiting students' perspective too early.

The third group of variables that I consider include measures of the ways in which the state reduces barriers to post-compulsory education. I consider the total commitment of countries to

providing financial aid and, in light of the growing relevance of tertiary education for job security, I consider the cost barriers to entry into tertiary education. Low costs and available financial support improve chances for access to tertiary education (OECD 2000, 2002). With respect to continuing training, I include a variable for the regulation of continuing training. The regulation of continuing training will increase worker participation in training (Billett & Smith 2005; Hall et al 2002; Smith & Billett 2006), and countries are coded according to the level at which training is mandated. Finally, I include a variable for the level of expenditure on active labor market policies divided by unemployment levels with the expectation that spending effort on active labor market policies improves the employment prospects of program participants (Bradley & Stephens 2007; Kenworthy 2003).

Having discussed the variables that comprise the skill acquisition dimension, I turn now to skill transparency. Six variables that fall into three groups express how education policy can facilitate skill transparency. Skill transparency plays a large role in reducing the risk of skill obsolescence, but in order to clarify how it is necessary to explain what is being made transparent and to whom. First, skill forecasting plays a key role in illuminating general trends in skill demands, which, if taken seriously by policy-makers, can lead to updated curricula and modernized occupations (Neugart & Schömann 2002b). In this case, skill forecasts make new skill needs more transparent, which should help educational institutions adjust their curriculum and students match firms' needs with greater accuracy.

The next set of variables speaks to the degree to which qualifications are made transparent. First, the centralization of the qualification system increases transparency of earned qualifications across federal units (Blog 2007). Recognition of prior learning increases transparency by linking informal learning to formal educational classifications (Colardyn & Bjornavold 2005). Firms' use of external training institutions is first important because firm training is seen as central to a nation's skill profile (Lloyd & Payne 2002) and because the information about training from external institutions servicing many firms will be relatively more available.

The final set of variables goes one step further than the previously discussed by highlighting complementarities between different qualifications. A framework for linking different occupations illuminates shared skill sets between occupations and thereby facilitates occupational mobility (Blog 2007), and unitized qualifications, or modules, increase the pathways between vocational education and training and higher education.

To construct each index, I conducted factor analysis. The results provided evidence for a single latent factor for each dimension based on the scree plot of the eigenvalues created with unrotated factor loadings. The first factor is therefore scored and used as the country values in the rest of the analysis.

Results

The tables below display the two indices of skill acquisition and skill transparency.² A brief glance over the two dimensions reveals the differences between the rankings and perhaps a surprising lack of clustering around groupings such as welfare state regimes or varieties of capitalism. One exception seems to be the Social Democratic countries, which receive high scores for both skill acquisition and skill transparency. The diversity in the Christian Democratic countries is evident on the skill acquisition dimension with Belgium, Italy, the Netherlands and Austria ranking quite high and Germany and Switzerland low. In terms of skill transparency, the Netherlands remains highly ranked, but Germany, Austria, Switzerland, and Italy receive low scores. Despite these shifts, however, Christian Democratic welfare states can be described as scoring about average on both dimensions.

The ranking of the Liberal welfare states demonstrate changes the most between the two dimensions. On the skill acquisition dimension, almost all Liberal states receive below average scores. On the skill transparency dimension, however, only the United States remains low on the

² Appendix A and B explains the measurement and sources for the indices.

ranking. All the other countries receive substantially higher scores, and New Zealand and Australia even receive the rank of 1 and 2, respectively.

Eastern European countries generally remain lower on the rankings of both dimensions with the exception of Slovenia, which scores high in terms of skill acquisition.

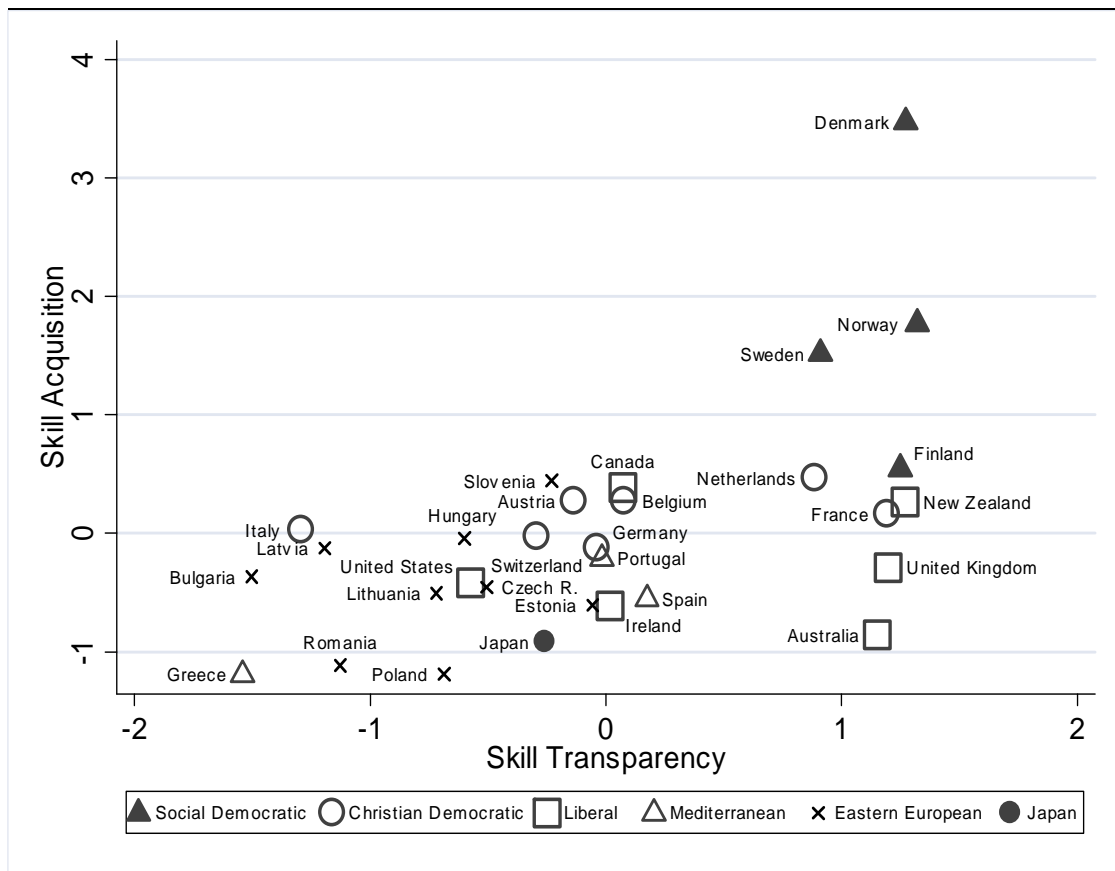
Table 2.1. Acquisition Dimension

| Country | Access |
|----------------|--------|
| Denmark | 3.47 |
| Norway | 1.77 |
| Sweden | 1.52 |
| Finland | 0.55 |
| Netherlands | 0.47 |
| Slovenia | 0.44 |
| Canada | 0.39 |
| Belgium | 0.27 |
| Austria | 0.27 |
| New Zealand | 0.26 |
| France | 0.16 |
| Italy | 0.03 |
| Switzerland | -0.03 |
| Hungary | -0.04 |
| Latvia | -0.13 |
| Germany | -0.13 |
| Portugal | -0.21 |
| United Kingdom | -0.29 |
| Bulgaria | -0.37 |
| United States | -0.42 |
| Czech Republic | -0.45 |
| Lithuania | -0.51 |
| Spain | -0.55 |
| Estonia | -0.61 |
| Ireland | -0.61 |
| Australia | -0.86 |
| Japan | -0.92 |
| Romania | -1.12 |
| Poland | -1.19 |
| Greece | -1.19 |

Table 2.2. Transparency Dimension

| Country | Transparency |
|----------------|--------------|
| Norway | 1.32 |
| Denmark | 1.27 |
| New Zealand | 1.27 |
| Finland | 1.25 |
| United Kingdom | 1.20 |
| France | 1.19 |
| Australia | 1.15 |
| Sweden | 0.91 |
| Netherlands | 0.89 |
| Spain | 0.17 |
| Belgium | 0.08 |
| Canada | 0.07 |
| Ireland | 0.02 |
| Portugal | -0.02 |
| Germany | -0.04 |
| Estonia | -0.06 |
| Austria | -0.13 |
| Slovenia | -0.23 |
| Japan | -0.26 |
| Switzerland | -0.29 |
| Czech Republic | -0.51 |
| United States | -0.58 |
| Hungary | -0.60 |
| Poland | -0.69 |
| Lithuania | -0.72 |
| Romania | -1.13 |
| Latvia | -1.19 |
| Italy | -1.29 |
| Bulgaria | -1.50 |
| Greece | -1.54 |

Figure 2.1. Dimensions of Education Systems: Skill Acquisition and Transparency



Validation

Having created an index that captures how educational institutions portend to reduce the risk of skill obsolescence, I now provide some evidence of the observable implications for the theory in order to validate the construction of the index. First, I will provide evidence that the skill acquisition dimension captures to a high degree the extent to which the education system develops cognitive capacity and provides opportunities to enter into new forms of education. Then, I will turn to the skill transparency dimension and provide some evidence that the index expresses how education systems provide formal recognition of individuals’ skill as well as the degree of overlap between different professional skill requirements.³

³ Due to missing data, the countries that are included in the different correlations vary. Refer to the appendix for more information.

The theory explained that different elements of the education system facilitate skill acquisition by developing cognitive skills and reducing barriers to pursuing further education. If the index for the skill acquisition indeed promotes the attainment of new skills, the index should correlate highly with data for cognitive abilities and participation in various forms of education. As such, I correlate the index with measures of both low and information age literacy.⁴ Cognitive ability, along with reduced barriers to education, should also increase training and overall labor market success after compulsory education. For these reasons, I also correlate the skill acquisition index with measures of training incidence, including percent of early school-leavers, tertiary education enrolment, participation in continuing education and recent participation in lifelong learning, as well as measures of unemployment among school-leavers with only a secondary degree.

All of the correlations receive the correct sign. As predicted, the index varies negatively with the measure of low literacy and positively with the measure for information age literacy, which suggests that investments in cognitive capacity improve skills on the low end of the distribution and at the high end. The following four variables provide evidence that the index captures the facility with which individuals enter education. The index correlates negatively with the percentage of individuals between 18 and 24 with only a secondary school degree and not currently in training; the index correlates positively with measures for tertiary education enrolment, continuing training among workers, and recent participation in lifelong learning among the working age population. Finally, looking at labor market outcomes among low-skilled workers, the results demonstrate that higher rankings lead to better employment prospects. I focus here on low-skilled workers, because the structure of the education system portends to have the largest effect on these workers. As case in point, unemployment among primary and secondary

⁴ The data for these variables comes from the Adult International Literacy Survey. “The IALS employed a sophisticated methodology developed and applied by the Educational Testing Service to measure literacy proficiency for each domain on a scale ranging from 0 to 500 points. Literacy ability in each domain is expressed by a score, defined as the point at which a person has an 80 per cent chance of successful performance from among the set of tasks of varying difficulty included in the assessment” Kahn LM. 2000. Wage Inequality, Collective Bargaining, and Relative Employment from 1985 to 1994: Evidence from Fifteen OECD Countries. *The Review of Economics and Statistics* 82:564-79.

school leavers is lower for higher rankings. The gap in employment levels between those with a tertiary degree and those with a secondary degree narrows at higher rankings.

Table 2.3. Validity Check: Skill Acquisition

| | Coefficient | | P-Value |
|---|-------------|---|---------|
| Low Literacy ^a | -0.611 | * | 0.007 |
| Information Age Literacy ^a | 0.588 | * | 0.010 |
| Percent Early School Leavers ^b | -0.275 | | 0.183 |
| Gross Tertiary Enrolment ^c | 0.349 | | 0.059 |
| Participation in Continuing Education ^{a, b, c, d} | 0.494 | * | 0.006 |
| Percent in Recent Training Activity ^b | 0.684 | * | 0.000 |
| Unemployment - Primary School ^b | -0.363 | | 0.074 |
| Unemployment - Secondary School ^b | -0.547 | * | 0.005 |
| Employment Gap - Tertiary – Secondary ^b | -0.573 | * | 0.003 |

Sources: ^a Adult Literacy Survey; ^b Eurostat; ^c UNESCO; ^d (Kurosawa 2001; Medvešek-Milošević 2007).

A similar group of variables demonstrates the validity of the skill transparency dimension, insofar as skill transparency improves individuals' labor market chances. Since workers with high-level skills should face better chances of finding employment in any education system, I focus on the labor market prospects of low-skilled workers.

The results provide strong support for the relation between high-levels of skill transparency and the chances that low-skill workers avoid unemployment. As the theoretical discussion explained, the skill transparency dimensions facilitates training both by improving the chances that prerequisites are met as well as by revealing overlap between various skill sets.

Table 2.4. Validity Check: Skill Transparency

| | Coefficient | | P-Value |
|---|-------------|---|---------|
| Low Literacy ^a | -0.499 | * | 0.031 |
| Information Age Literacy ^a | 0.585 | * | 0.011 |
| Percent Early School Leavers ^b | -0.219 | | 0.294 |
| Gross Tertiary Enrolment ^c | 0.430 | * | 0.018 |
| Participation in Continuing Education ^{a, b, c, d} | 0.714 | * | 0.000 |
| Percent in Recent Training Activity ^b | 0.716 | * | 0.000 |
| Unemployment - Primary School ^b | -0.375 | | 0.065 |
| Unemployment - Secondary School ^b | -0.484 | * | 0.014 |
| Employment Gap - Tertiary – Secondary ^b | -0.569 | * | 0.003 |

Sources: ^aEurostat; ^b UNESCO; ^c (Kurosawa 2001; Medvešek-Milošević 2007).

These calculations therefore provide evidence for the validity of the education system indices. Higher rankings on the skill acquisition and transparency dimensions lead to higher training activity and better labor market outcomes among low-skilled workers.

Implications for Integration

Given that education system influences the skills levels and training of workers, a further extension of this argument is that education systems improve the efficiency of programs that facilitate the reintegration of marginalized workers. In general, low-skilled workers face a much higher risk of unemployment. In countries with high rankings on the skill acquisition and transparency dimensions, however, the skills of these workers will be relatively strong and more visible to employers than in countries with low rankings. Since the original index for skill acquisition included a variable for active labor market policies, I have removed this variable for

these correlations so that the indices do not correlate with the various measures of active labor market policies.

Table 2.5. Education and Integration through ALMP

| | Skill Acquisition | | | Skill Transparency | | |
|--|-------------------|---------|---------|--------------------|---------|---------|
| | Coefficient | P-Value | P-Value | Coefficient | P-Value | P-Value |
| Spending on Active Labor Market Policies | 0.698 | * | 0.000 | 0.526 | * | 0.010 |
| Subsets of ALMP: Training | 0.793 | * | 0.001 | 0.498 | * | 0.013 |
| Subsets of ALMP: Recruitment | 0.712 | * | 0.000 | 0.219 | | 0.303 |
| Subsets of ALMP: Disabled | 0.488 | * | 0.016 | 0.333 | | 0.112 |
| Subsets of ALMP: Direct Job Creation | -0.035 | | 0.872 | 0.193 | | 0.366 |

Source: OECD.

Indeed, the correlation of the two indices with an aggregate measure of active labor market spending (of GDP weighted by the unemployment rate) shows a strong relationship. Breaking down spending on active labor market policies shows that not all aspects of active labor market

policies correlate highly with skill acquisition and transparency. High rankings on the educational system indices relate to high spending on training and, in the case of skill acquisition, on recruitment subsidies and support for the disabled. Neither index correlates highly with spending on direct job creation, nor are the results for the skill acquisition dimension actually negative. Given the relative success of training and recruitment subsidies and failure of direct job creation programs, a potential interpretation of these findings could be that high investment in education and transparent certification procedures improves the efficiency of active labor market policies.

Political Determinants

Looking to the political factors associated with the indices of educational systems, correlation coefficients also suggest the possible role of left parties and employer organizations in bolstering both skill acquisition and skill transparency. In terms of skill transparency, Christian democratic parties are negatively associated with high rankings on this dimension.

Table 2.6. Education and Political Factors

| | P- | | | | P-Value |
|-------------------|-------------|---|-------|-------------|---------|
| | Coefficient | | Value | Coefficient | |
| Cumulative Left | | | | | |
| Cabinet Share | 0.667 | * | 0.003 | 0.562 | * 0.015 |
| Cumulative | | | | | |
| Religious Cabinet | | | | | |
| Share | -0.094 | | 0.710 | -0.519 | * 0.027 |
| Employment | | | | | |
| Organization | 0.421 | | 0.082 | 0.300 | 0.227 |

These findings support previous work by Busemeyer (2008), Boix (1998), Iversen and Stephens (2008) that relate left parties to high spending on education policy. Compared to other work that finds Christian democratic parties relatively less supportive of educational spending, the results for Christian democratic government also demonstrate a weaker relationship between this regime and education. Although the varieties of capitalism approach identifies both Social Democratic and

Christian Democratic welfare states as coordinated market economies, these two groups appear to follow two divergent paths in terms of educational reform. Both regimes purportedly invest highly in specific skills, yet the degree to which the education system promotes the acquisition of new skills and the recognition of complementarities between different professional occupations varies tremendously between these two groups. It is perhaps not surprising that liberal market economies promote skill transparency, since reducing the costs of exit from professional occupations is not an issue with employers. In coordinated market economies, however, employers depending on specific skills should be wary about making it easier for their workers to find jobs in different industries.

Conclusion

In this chapter, I have introduced the education system as a key explanatory variable for defining the range of workers' employment opportunities. The education system consists of policies that create the capacity to learn, the opportunity to learn, and the transparency of earned skills. Due to skill-biased technological change, trade, financial liberalization, and the growth of the knowledge economy, the potential for the education system to address the heightened risk of skill obsolescence has increased.

In order to substantiate the theoretical discussion, I constructed two indices, the skill acquisition index and the skill transparency index. By correlating these indices with measures of the observable implications of the theoretical discussion, I provided validation that the indices measure what I intended. Correlations with spending on active labor market policies also confirmed that the structure of the education system relates to the spending on active measures and the more efficient subsets of active measures in particular. These results provide groundwork for further analysis into the causal nature of the relationship between the structure of the education system on the one hand and the efficiency of public policies promoting the integration of the unemployed on the other.

Finally, correlations between the two indices and measures for left party incumbency, Christian democratic incumbency, and employer organization corroborate the theoretical expectations of the power resources theory that relates working class organization to the expansion of social policy. Christian democratic incumbency, however, is weakly negatively related to the skill acquisition dimension and strongly negatively related to the skill transparency dimension. To the extent that education policy is understood as a subset of social policies, these results place in question the interpretation of Christian democratic parties as welfare state parties. At the same time, the emphasis on insurance-based social policy and vocational training in Christian democratic welfare states suggests an alternative role for education policy in these contexts. Finally, the organization of business correlated positively but not significantly with the two dimensions. In sum, whereas both social democratic and Christian democratic incumbency relate to high social spending, these findings do not travel well to the specific case of education policy. Although social democratic incumbency correlates strongly with both the skill acquisition and skill transparency indices, Christian democratic incumbency is not related strongly to the composite index of skill acquisition and correlates strongly negatively with the skill transparency index.

CHAPTER 3

DETERMINANTS OF SKILL ACQUISITION AND SKILL TRANSPARENCY

What leads to high levels of skill acquisition and transparency? Having established measures of skill acquisition and transparency and demonstrated the importance of these policy dimensions for addressing changed economic conditions, the causal forces that explain the rankings on these two dimensions deserve attention: Why did some countries manage to develop policies that promote one or both of these dimensions? Why do countries sometimes score high on one dimension and low on another? Why do welfare regimes appear to play a relatively small role in explaining the country rankings? This chapter addresses these questions by using fuzzy set and regression analysis. Fuzzy set analysis excels at identifying causal configurations when the number of observations is small and testing multiple pathways to the observed outcome. Regression analysis complements this initial step by introducing stricter conditions for testing the significance of a causal relationship between the explanatory variables and the two indices of skill acquisition and skill transparency.

The results support the strong relationship between left party incumbency, trade union density, and public employment and the passage of policies that promote skill acquisition and skill transparency, and the negative relationship between veto points and the creation of such policies. Christian democratic incumbency appears to obstruct the passage of policies that promote skill transparency, whereas right party incumbency obstructs policies that support skill acquisition. The results for wage bargaining coordination and employer organization are less straightforward. For the skill acquisition dimension, the fuzzy set analysis always include high levels of wage coordination in the causal combination leading to high rankings on that dimension, although the regression analysis shows that the coefficient for wage bargaining are not always positive making conclusive results about the directional effect of coordinated wage bargaining more difficult. The

directional results for employer coordination for the skill acquisition dimension are ambiguous (can be both positive and negative) in the fuzzy set and positive in the regression analysis. In terms of the results for the skill transparency dimension, both the fuzzy set and regression results reveal ambiguous results for both wage bargaining coordination and employer coordination.

The chapter proceeds as follows. First, I review the variables that are theorized to influence the rankings on the skill acquisition and skill transparency indices. Then, I review fuzzy set methodology to set up the paper and create fuzzy set scores for the two indices (dependent variables). I then conduct the analysis with fuzzy sets as well as regression, discuss the results, and conclude.

Literature Review

The next step is to identify relevant causal factors that are hypothesized to influence the passage of policies that expand opportunities to acquire skills as well as support the transparency of these skills. I identify eight variables that I draw from the welfare state and comparative political economy literatures and hypothesize lead to membership in these two sets.

1. *Left parties incumbency* – Left parties incumbency has been shown to lead to equitable social policies and outcomes (Korpi 1983; Stephens 1979). This logic of ‘power resources,’ or the consequence on social spending of political influence in left parties and unions among lower income workers, has been applied to education policy. Studies find that left parties support high education spending in order not only to support lower income workers but also to forge an alliance with the middle class (Busemeyer 2008). Given this emphasis not only on education in general but also on higher education, I hypothesize that left parties will also support skill transparency in order to facilitate education among individuals with diverse educational backgrounds. To test the influence of left party incumbency, I use the level of cumulative left party incumbency between 1960 and 2000 (Huber et al).

2. *Christian democratic incumbency* – Christian democratic parties are also related to social policy expansion (Hicks 1999; Huber & Stephens 2001; Huber Stephens et al 1993; van Kersbergen 1995), although the nature of Christian democratic support for education spending is contingent. Whereas Christian democratic parties support vocational training, their willingness to invest highly in other forms of education is weaker (Iversen & Stephens 2008). Given that vocational training may disadvantage students who follow less prestigious vocational ‘tracks,’ spending does not necessarily indicate the promotion of skills if vocational degrees limit future educational and work opportunities. The emphasis on occupational based social benefits may also belie a broader orientation towards support for rigid occupational categories, thereby frustrating efforts to increase skill transparency. To test the influence of Christian democratic party incumbency, I use the level of cumulative religious party incumbency between 1960 and 2000 (Huber et al).

3. *Right party incumbency* – The preference of right parties for minimal government intervention in the government and social affairs reduces their willingness to invest in education. As case in point, they have been tied to more radical cuts in social policy in the period of welfare state retrenchment (Allan & Scruggs 2004) and rely on limiting labor market regulations in order to promote growth rather than investing in education as a growth strategy (Boix 1998). At the same time, right parties tend to rely on support from high income workers (Hibbs 1977) who tend to represent business interests. Since business may rely on specific skills for their production processes (Hall & Soskice 2001a; Mares 2003), right parties may sometimes demonstrate a preference for education in order to ensure these skills. Also, since business prefers to maintain a high supply of skilled labor in order to sustain production and keep labor costs down, businesses in expanding industries should promote skill transparency in order to facilitate the movement of workers into their industry; businesses in declining industries, however, should oppose steps to increase skill transparency, however, because they will fear losing workers. To test the influence of right party incumbency, I use the level of cumulative right party incumbency between 1960 and 2000(Huber et al).

4. *Employer organization* – Employers may support social policy expansion in order to induce investment in specific skills (Hall & Soskice 2001b; Iversen 2005) and business organization has been related to the expansion of the welfare state (Martin 2000a; Swenson 1991), and active labor market policies in particular (Martin 2004b; Martin & Swank 2004; Martin 2004c). High level of business organization influence the supply of social policy by offering “governments the institutional vehicle through which to build business support for social welfare initiatives” (Martin & Swank 2004, p. 598) as well as the demand for social policy by forging broad collective goals between different business groups (Martin 2000a; Martin & Swank 2001; Martin & Swank 2004; Schmitter 1981; Streeck 1992). I use the average measure of employer organization between 1980 and 1998 from the database used for Martin and Swank (2004).

5. *Wage bargaining centralization* –The centralization of coordinated bargaining facilitates the realization of socially optimal outcomes by creating discipline among members of interest organizations (and thereby limiting in a credible way the pursuit of particularistic goals) as well as generating a formidable bargaining partner(s) on the national level who lobby for members’ collective goals (Schmitter 1981). These capabilities improve the probability that socially optimal policies supporting skill acquisition and transparency will be implemented. I use the average level of coordinated bargaining centralization between 1960 and 1998 (Huber et al).

6. *Union density* – As with left parties, the improved ‘power resources’ of workers organized in unions increases their capacity to realize collective goals. Given that workers face the need to acquire new skills throughout their career, they are hypothesized to prefer policies expanding skill acquisition and transparency; their chances of achieving policy reforms that reflect these preferences are hypothesized to increase if more individuals are union members. I use a measure of the average union density since 1960.⁵

⁵ This measure was provided by Professor John Stephens and Sung Park and compiled from OECD data.

7. *Veto points* - Veto points constitute formal institutional constraints that arise from the dispersion of political power in representative institutions. Institutions that allow dissenting minorities to block legislation represent veto points (Huber & Stephens 2001; Immergut 1990). To the extent that improving skill acquisition and skill transparency require political reforms, the number of veto points is hypothesized to frustrate this process. I use a composite measure of federalism, parliamentarism, bicameralism, and use of popular referenda to capture the number of veto points (Huber et al).
8. *Size of state* – The “state-centric” perspective on welfare state development points to the role of (assumed autonomous) state bureaucrats in formulating social policy as well as the role of state structure in sustaining existing policy (Hecló 1974; Skocpol 1988). Recent work also points to the continued importance of the state in the current period of welfare state retrenchment: “a strong state and a large public sector shore up national coordinating capacities in their impact on *government strategies and capacities* and in their impact on *alliances and strategic options of other actors* (especially but not exclusively the export sectors). The former inspires greater attention to social solidarity, while the latter supports a political climate favorable to its realization” (italics in original) (Martin & Thelen 2007). In particular, Martin and Thelen draw on the additional point that the state retains an interest in improving the productivity of low-wage workers in order to justify public expenditures (Spicker 1997) and that there is a higher likelihood of low wage workers to be hired in the public sector. Since skill acquisition and transparency improve adjustment to changed economic conditions, the size of the state is hypothesized to support skill acquisition and transparency. I use the average level of public employment since 1982 as a measure of state size (Huber et al).

Fuzzy Set Methodology

Background Information

Fuzzy sets developed from qualitative comparative analysis which was intended for ‘crisp’ sets, or Boolean set where variables either assume the values of 0 or 1. In this version of set analysis,

items are either in or out of a given set. This works well with qualitative data and in instances where the set under consideration does not exhibit multiple defining characteristics. Examples include the presence of judicial review and the introduction of national health services. Many phenomena in political science, however, exist in degrees. For instance, one could categorize federalism as binary variable (either a country has federal units or it does not), but this would ignore the range of activities that characterize the extent of power-sharing between the federal units and the centralized government, such as taxation, executive and legislative rule, and constitutional authority.

Where the object of inquiry exhibits multiple defining characteristics, fuzzy set analysis presents a viable alternative to crisp set analysis. Following from the above discussion, fuzzy set may be better suited to analyze federal systems than crisp set analysis. Fuzzy set analysis could also be applied to the indices of education mobility, where each index consists of multiple variables that each approximate a different aspect of skill acquisition or skill transparency, respectively.

Compared to crisp analysis, fuzzy set analysis does not force cases to be either fully in or fully out of a given set. For instance, in terms of skill acquisition and skill transparency, we might conceive of two sets that define cases that unambiguously promote skill acquisition (SA) or skill transparency (ST). Although some cases may fall clearly into set SA or ST, there is little theoretical reason to believe that all countries necessarily exist completely in or completely out of this set. As the theoretical discussion in the preceding chapter discussed, a high value on one item may not necessarily indicate a high value on another. For instance, high spending on secondary education does not imply necessarily high spending on tertiary education. Fuzzy set analysis allows researchers to account for these cases that do not fall unambiguously into the set under consideration.

Continuous fuzzy set analysis is the form of this methodological approach that allows for the greatest flexibility in terms of the degree of set membership. Although fuzzy set scores vary between 0 and 1, they can assume any value in this range. The coding of fuzzy set scores,

however, relies more on theoretical considerations than maintaining the integrity of the original interval scale, in particular with respect to the coding of full membership (1) and nonmembership (0). In this way, “[f]uzzy membership scores address the varying degree to which different cases belong to a set (including the two qualitative states, full membership and full nonmembership), not how cases rank relative to each other on a dimension of openended variation” (Ragin 2007, p. 3). Therefore, the highest ranking does not automatically receive the unique label of full set membership. Rather, to the extent that other high-ranking cases also complete the theoretical conditions for set membership, they should also be coded as full members, or receive a score of 1. The same is true when coding cases that are fully out of the set or do not belong at all to the set. A final ‘anchor’ in fuzzy set analysis includes the value of 0.5, when a set is neither fully in nor fully out of the set. Consideration should be given to the value that represents a theoretical tipping point, where cases cannot be considered more in than out.

Fuzzy set analysis also allows one to test both for *causal configurations*, where a variable only has an impact within a given subset of other variables, as well as *multiple pathways*, where an outcome occurs due to different subsets of variables. Using fuzzy set analysis to examine the causal precursors to the education mobility indices improves on regression analysis in three ways. First, in regression analysis, causal configurations are tested with interaction terms. Generating consistent parameters of interaction terms demands a high level of observations not available in small N datasets (here N=18). Interpreting coefficients for interaction terms with more than 2 variables is also extremely problematic in regression analysis. Finally, regression analysis treats interaction terms as demonstrating a multiplicative effect, where qualitative comparative analysis treats any case aspects that occur together as potentially interdependent (Epstein et al 2007, p. 2). Fuzzy set analysis thereby assess causal configurations with consideration for both data limitations and causal complexity.

Fuzzy set analysis also helps to spot multiple pathways to a specified outcome. In regression analysis, a potential aspect of a causal process (independent variable) that systematically fails to

produce a given outcome receives a low coefficient, even though this variable may indeed play a significant role in producing the outcome when in conjunction with other variables. Therefore, fuzzy set analysis addresses the possibility not only that an outcome may occur by a ‘configuration’ of variables, but also that variables may express different causal force depending on the combination of other variables with which they interact. In this way, fuzzy set analysis captures the way in which causal mechanisms vary across contexts that share some attributes but not others.

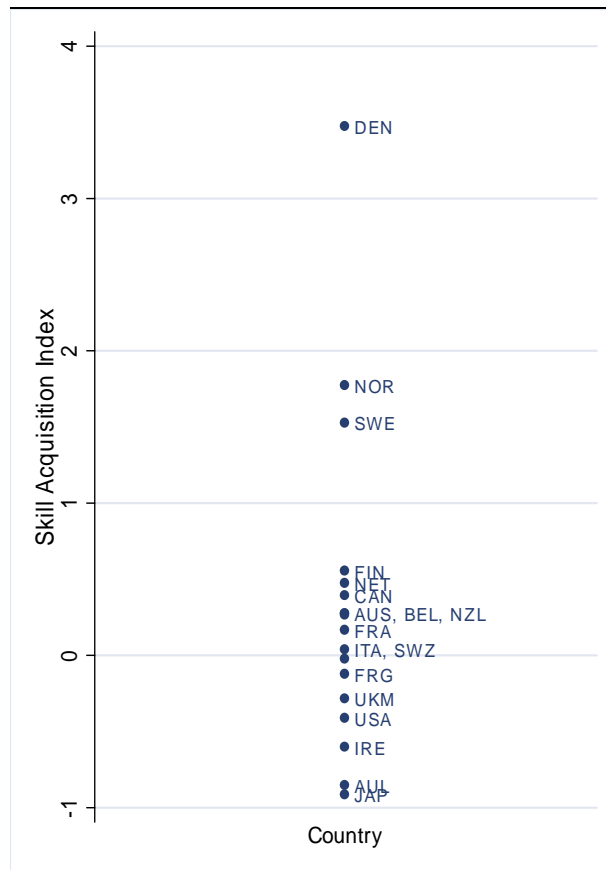
Creating Fuzzy Scores from Skill Acquisition and Skill Transparency

The first step before conducting the analysis is to create fuzzy set scores for the two dependent variables. First, I will code the skill acquisition index. Countries range from 5.5 to 14 on the skill acquisition index, and I am interested in first identifying the cases that are fully in the set SA or ST, respectively.⁶ Referring to Figure 1, Denmark clearly represents the highest value on the skill acquisition index and is followed only quite distantly by Norway and then Sweden. Where Norway might be considered quite close to the Danish case, quite important differences remain in terms of lower primary and secondary spending. Sweden looks quite a bit more different with lower secondary school spending, low regulation of continuing training, and no framework linking occupational categories. For these reasons, Denmark is coded as 1 for full membership in SA. On the other end of the distribution, it is less clear which countries should be coded as completely out of the SA set: on the one hand, Ireland receives the lowest ranking of 5.5, but, on the other, seven other countries receive rankings of 7 or below. At this point, the decision whether to code one or eight countries as ‘0’ or completely out of the set is a theoretical decision that should be made based on empirical knowledge of the cases. Therefore, given the relevant differences between these eight cases and the potential of continuous fuzzy set analysis to cope with values between 0

⁶ Due to data limitations on the independent variables, only 18 of the original 30 countries in the indices in Chapter 1 can be included in this analysis. These countries include Australia (AUL), Austria (AUS), Belgium (BEL), Canada (CAN), Denmark (DEN), Finland (FIN), France (FRA), Germany (FRG), Ireland (IRE), Italy (ITA), Japan (JAP), the Netherlands (NET), New Zealand (NZL), Norway (NOR), Sweden (SWE), Switzerland (SWZ), the UK (UKM), and the US (USA).

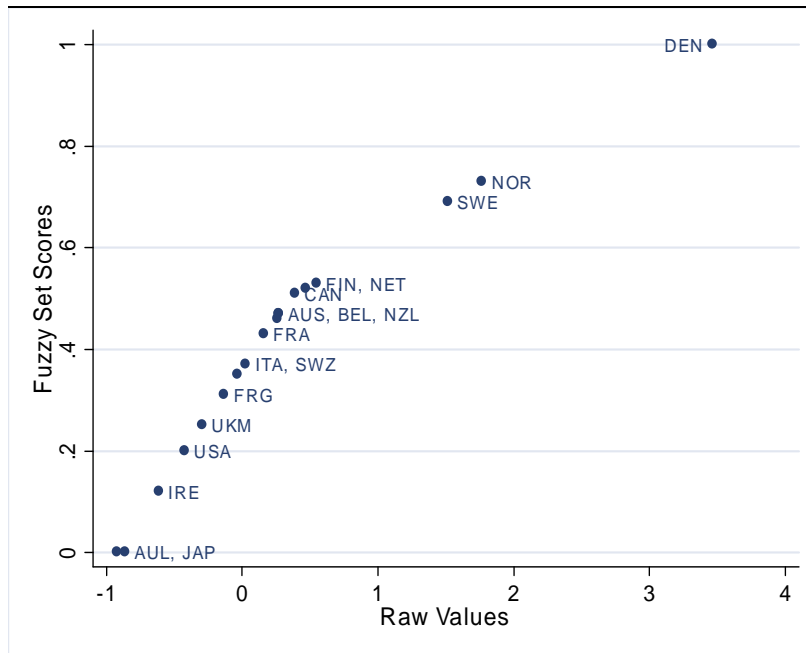
and 1, I code Ireland as 0 and consider the other aforementioned countries as ‘almost’ out of the set.

Figure 3.1. Rankings on the Skill Acquisition Index



Having coded the cases for completely in and completely out of the SA set, the last value to be aware of before coding the remaining cases is the ‘cross-over’ point of 0.5. This point distinguishes cases that are equally in and out of the set. An appropriate dividing point seems to be between Finland and Belgium on the one hand and Netherlands and Italy on the other: although all systems contain aspects of their education systems that promote skill acquisition, the comprehensive schooling system of Finland brings it closer to Denmark and the stratifying educational policy in Italy (due to ‘tracking’ and low support for tertiary education) places it closer to Ireland. With this cross-over point in mind, the remaining values are coded using the formula $(\text{raw value} - \text{minimum}) / \text{range}$. Figure 2 shows the fuzzy set scores plotted against the raw values.

Figure 3.2. Skill Acquisition: Raw Values and Fuzzy Set Scores



Having coded the skill acquisition set, or SA, I now turn to the skill transparency index in order to code set membership in ST. The highest ranked country on the skill transparency index is New Zealand, whereas the worst performer is Italy. I code New Zealand as 1, for full membership in ST, and Italy as 0 for being completely out of ST.

Figure 3.3. Rankings on the Skill Transparency Index



I identify the cross-over point as lying between Ireland and Belgium. Although the countries demonstrate quite similar scorings, Ireland's framework for linking different occupational qualifications within the education system places it closer to New Zealand and Belgium's lack of such a framework places it closer to Italy. As before, I then create the fuzzy scores using the formula $(\text{raw value} - \text{minimum}) / \text{range}$ to code the remaining cases. The raw values of the skill transparency index are plotted against the fuzzy set scores in Figure 4.

Figure 3.4. Skill Transparency: Raw Values and Fuzzy Set Scores

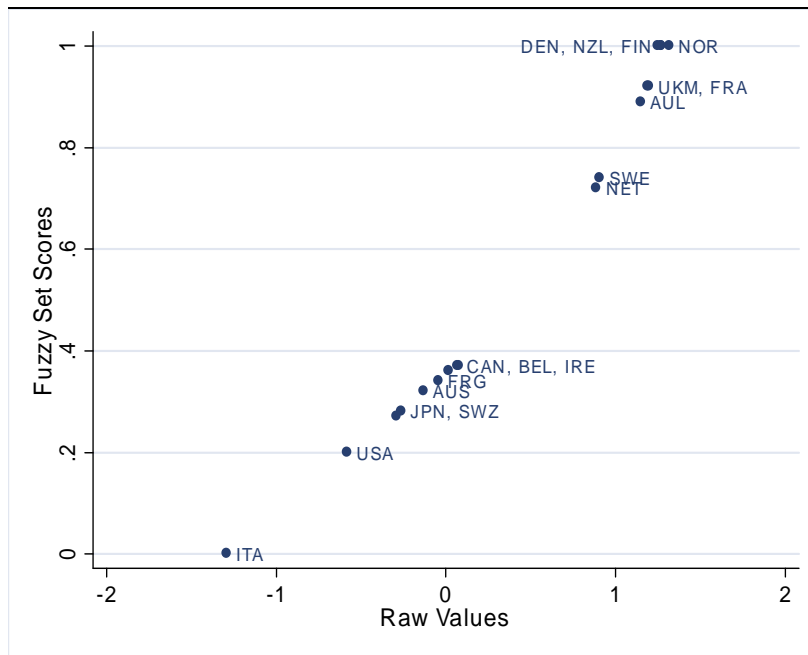
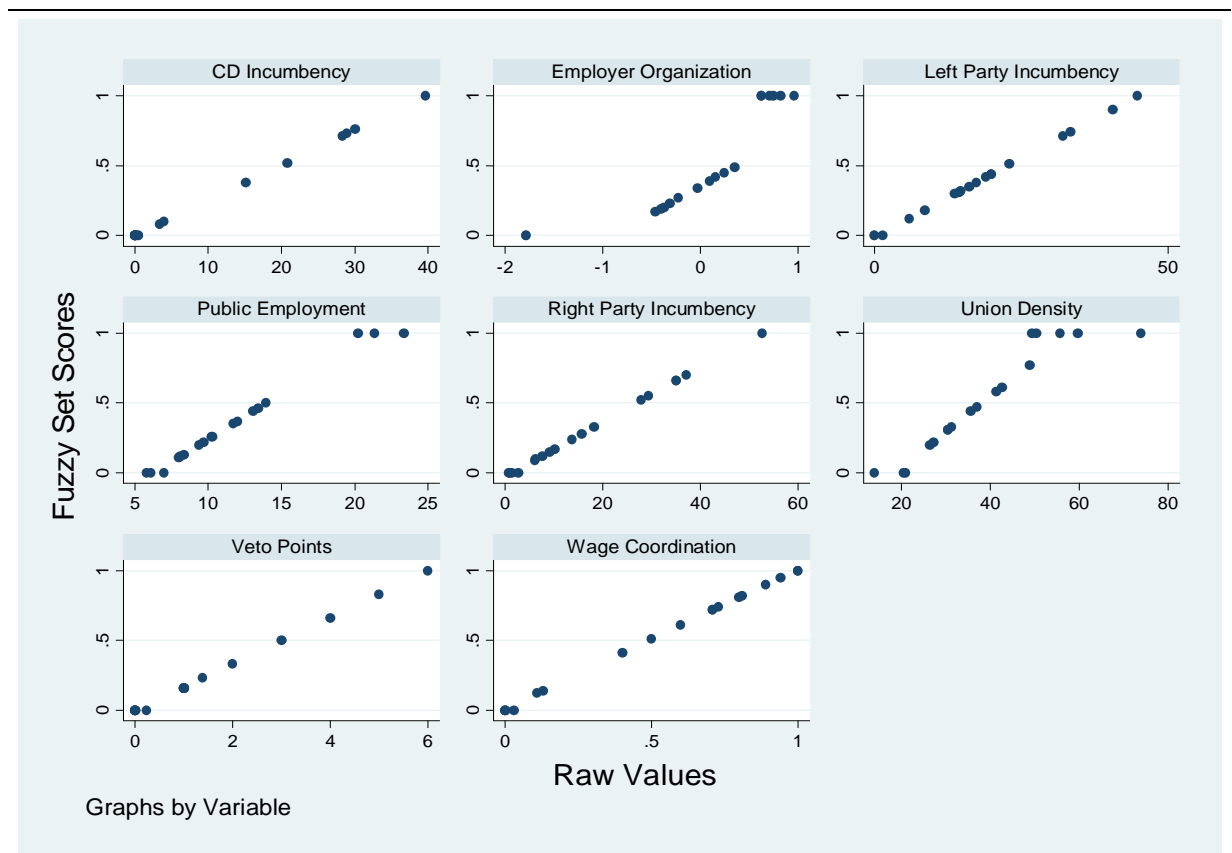


Figure 3.5. Independent Variable Plots: Raw v. Fuzzy



Analysis

Having created fuzzy set scores for the dependent variables, or indices on skill acquisition and skill transparency, and the independent variables, I now turn to the analysis. Beginning with the fuzzy set analysis, I test which combinations of independent variables best explain membership in the two sets, SA and ST. Where fuzzy set analysis excels at assessing the influence of *combinations* of independent variables in explaining a given outcome, however, it does less well at establishing that the effect of a given independent variable is significantly different from zero. For this reason, I follow up the fuzzy set analysis with a regression analysis where the dependent variables are regression on all possible combinations of the independent variables, with a maximum of three variables per regression and a minimum of two.

Fuzzy Set Analysis

Fuzzy set analysis is used to analyze the relationship between the eight causal factors described above and the two indices of educational mobility as captured in the two sets, SA and ST. The analysis is conducted using fs/QCA 2.0.⁷ The software denotes set membership (fuzzy set score above 0.5) with capital letters and non-membership with lower case letters. I maintain this practice throughout the analysis.

After specifying which independent variables to include in the model, the next step in fuzzy set analysis is creating a truth table. Since I have two dependent variables, I create two truth tables, which are below in Tables 3.1 and 3.2. The truth table lists all possible combinations of the independent variables. Since I have eight variables, there are 2^8 or 256 possible causal configurations.

The ‘number’ column indicates how many cases conform to the causal configuration, or, in other words “the number of cases with greater than 0.5 membership in each combination” (Ragin 2007, p. 14). Out of the 18 cases under examination, 16 find expression in the causal configurations. The

⁷ The software and supporting material can be found at www.u.arizona.edu/~cragin/fsQCA/software.shtml.

remaining 2 cases cannot be categorized as definitively belonging to a given causal configuration due to scores of 0.5, where they are neither more in nor more out of a given set. It is important to mention that although the other 16 clearly belong to one of the 256 possible causal configurations, these are not the only cases used to assess the likelihood of observing various causal configurations. Aspects of all cases are used to construct the most important statistic in fuzzy set analysis, the consistency score. For example, a case with a fuzzy set score for left party incumbency (LEFT) of 0.90 is also understood as expressing non-membership (left) with a fuzzy set score of 0.10. Also note that it is impossible for countries to rank above 0.5 in both a given category and its negation.

The main purpose of the truth table is to calculate consistency scores for each causal combination. Consistency refers to the sufficiency of each causal combination in producing the given outcome or the extent to which causal configurations are subsets of the outcome. Specifically, it is the measure of the degree to which membership in the outcome set is equal to or greater than membership in the causal configuration, which can be expressed as: $\text{consistency}(x_i < y_i) = \frac{\sum(\min(x_i, y_i))}{\sum(x_i)}$. A consistency score of 1 indicates that the causal configuration is a perfect subset of the outcome, where a score of 0 shows no relationship.

Using the ‘number’ and ‘consistency’ scores, two decisions need to be made to complete the analysis. First, for all the cases where number is equal to or more than one, the consistency scores are used to determine the range of causal configuration that can be considered reasonable subsets of the outcome. Table 1 shows the causal configurations that are represented in the data (16 of 256), sorted by their consistency score. Ragin (2004) recommends using a minimum consistency score of 0.75 although higher scores are preferable. I use a minimum score of 0.80. These cases are therefore coded as 1, as demonstrated by the italicized numbers in Table 3.1.

The second decision to be made before estimating the results involves how to handle counterfactual cases. As described above, there were 2^8 , or 256, possible causal configuration,

because there eight independent variables. Since the data only find recognition in 16 cases, there are 240 counterfactual case for which there is no empirical evidence. The program fs/QCA can handle these counterfactual case in two ways: either by assuming that they could have indeed existed (in fs/QCA, this is the ‘don’t care’ or parsimonious option) or by assuming that the fact that they were not instantiated empirically means that they are negative examples of the outcome (in fs/QCA, this is the ‘false’ or complex option).

The decision of how to deal with counterfactuals is highly relevant because these counterfactuals can help to sort out which parts of given causal configuration hold the most weight. In the first four rows of the truth table in Table 1, the only variable that appears in all rows is wage coordination. It could be argued that the remaining six variables that show up are extraneous in the causal mechanism that produces high skill acquisition. Choosing the ‘don’t care’ option uses the additional 240 cases in order to eliminate aspects of these causal configurations represented in the data.

Table 3.1. Truth Table from Analysis of Eight Causal Conditions of Skill Acquisition

| Left | CD | Right | Employer Organization | Wage Coordination | Union Density | Veto | Civilian Government Employment | # | DV | Consist | Pre | Product |
|------|----|-------|--------------------------|----------------------|------------------|------|--------------------------------------|---|-------|---------|-------|---------|
| 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 3 | 0.938 | 0.9 | 0.851 | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0.649 | 0.3 | 0.221 | |
| 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0.546 | 0.2 | 0.092 | |
| 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0.465 | 0 | 0 | |
| 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0.573 | 0.2 | 0.142 | |
| 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0.557 | 0.2 | 0.099 | |
| 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0.312 | 0 | 0 | |
| 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0.49 | 0 | 0 | |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.639 | 0 | 0 | |
| 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0.917 | 0.4 | 0.367 | |
| 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0.84 | 0 | 0 | |
| 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0.667 | 0 | 0 | |
| 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0.802 | 0 | 0 | |
| 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0.894 | 0 | 0 | |

Before showing the results for both the complex (‘false’) and parsimonious (‘don’t care’) solutions, I will briefly review the truth table for the ST fuzzy set on skill transparency. To be

consistent with the previous discussion, I use 0.80 as a consistency threshold. Notice that the number of causal configurations present in the data remains constant even though the dependent variable has changed. This is to be expected since independent variables are the same. The only values that have changed are the consistency scores, because the extent to which the 256 causal configurations represent subsets of the set of SA countries is different than the extent to which they are subsets of ST.

The two tables below show the solution sets for SA and ST, respectively. The first part of each table contains the complex results, where the remaining counterfactual cases were not used. The second part of each table shows the parsimonious results where the remaining cases were indeed used, on the assumption that they could have been empirically instantiated, in order to eliminate potentially superfluous members of the empirically instantiated causal configurations with high (>0.80) consistency.

The main to interpret these findings is with reference to the consistency scores. As with the truth table, the consistency scores refer to the extent to which the causal configuration is a subset of the outcome. The second term used to interpret the results is coverage, which refers to “the proportion of the sum of the membership in an outcome that a particular configuration explains. Very low coverage scores indicate that even if a causal configuration is consistent with the outcome, it is substantively trivial.

Coverage and consistency often are inversely related to one another, because very particular or exact explanations (which may be highly consistent) tend to be less generalizable. ‘[R]aw coverage’ scores refer to the proportion of the outcome scores covered by an explanation by itself, while ‘unique coverage’ refers to the proportion of outcome scores covered, net of that solution's coverage overlap with the other solutions identified” (Epstein et al 2007, p. 12-13). These two terms, coverage and consistency, can be used to interpret the Tables 3.3 and 3.4.

Table 3.2. Truth Table from Analysis of Eight Causal Conditions of Skill Transparency

| Left | C D | Right | Emp Org | Wage | Uni on | V eto | CGE | # | D V | Consist | Pre | Product |
|------|--------|-------|------------|------|-----------|----------|-----|---|--------|---------|------|---------|
| 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 3 | | 0.98 | 1.00 | 0.96 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | 1.00 | 1.00 | 0.99 |
| 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | | 1.00 | 1.00 | 1.00 |
| 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | | 0.89 | 0.80 | 0.67 |
| 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | | 0.85 | 0.80 | 0.65 |
| 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | | 0.88 | 0.70 | 0.62 |
| 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | | 1.00 | 1.00 | 1.00 |
| 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | | 1.00 | 1.00 | 1.00 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | 0.29 | 0.20 | 0.05 |
| 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | | 0.81 | 0.80 | 0.61 |
| 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | | 0.80 | 0.10 | 0.05 |
| 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | | 0.85 | 0.60 | 0.53 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | | 0.99 | 1.00 | 0.97 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | | 0.88 | 0.40 | 0.39 |

Table 3.3. Solution Sets for Skill Acquisition Index

| | Coverage | | Consistency |
|---|----------|--------|-------------|
| | Raw | Unique | |
| <i>Complex (no simplifying assumptions)</i> | | | |
| left*CD*right*employer*WAGE*union*veto*public+ | 0.08 | 0.08 | 0.92 |
| LEFT*cd*right*EMPLOYER*WAGE*UNION*veto*PUBLIC | 0.49 | 0.49 | 0.94 |
| solution coverage: 0.57 solution consistency: 0.93 | | | |
| <i>Parsimonious (simplifying assumptions)</i> | | | |
| PUBLIC+ | 0.75 | 0.64 | 0.94 |
| CD*WAGE*union*veto | 0.14 | 0.00 | 0.80 |
| CD*employer*WAGE*union | 0.12 | 0.02 | 0.88 |
| right*WAGE*union*veto | 0.18 | 0.00 | 0.66 |
| solution coverage: 0.86 solution consistency: 0.88 | | | |
| <i>Intermediate (simplifying assumptions)</i> | | | |
| right*CD*left*employer*WAGE*union*veto*public | 0.08 | 0.08 | 0.92 |
| LEFT*cd*right*EMPLOYER*WAGE*UNION*veto*PUBLIC | 0.48 | 0.49 | 0.94 |
| solution coverage: 0.57 solution consistency: 0.93 | | | |

Table 3.3 shows the results for the causal configurations that make up subsets of the SA set or the set of countries promoting skill acquisition. Looking first at the complex solution sets, three causal configurations make up possible causal pathways to SA set inclusion. As a reminder, the capital letters represent inclusion, whereas lower case letters imply negation or absence.⁸ The two causal configurations that make up the complex solution sets explain 57 percent of membership patterns in SA and 93 percent of the aspects in these causal configurations make up subsets of the outcome, membership in SA.

⁸ The abbreviations in Table 3 and 4 refer to the following variables: Left=left party incumbency; Cd=Christian democratic incumbency; Right=right party incumbency; Employer=employer organization; Wage=wage bargaining coordination; Union=union density; Veto=veto points; Public=public employment level.

Table 3.4. Solution Sets for Skill Transparency

| | Coverage | | Consistency |
|---|----------|--------|-------------|
| | Raw | Unique | |
| <i>Complex (no simplifying assumptions)</i> | | | |
| LEFT*cd*right*EMPLOYER*WAGE*UNION*veto+ | 0.39 | 0.32 | 0.98 |
| left*cd*employer*wage*union*veto*public+ | 0.29 | 0.04 | 1.00 |
| left*cd*RIGHT*employer*wage*veto*public+ | 0.27 | 0.01 | 1.00 |
| left*cd*RIGHT*employer*WAGE*UNION*VETO*public | 0.08 | 0.03 | 1.00 |
| solution coverage: 0.66 solution consistency: 0.99 | | | |
| <i>Parsimonious (simplifying assumptions)</i> | | | |
| cd*UNION | 0.61 | 0.36 | 0.98 |
| cd*veto*wage | 0.44 | 0.18 | 0.92 |
| solution coverage: 0.79 solution consistency: 0.94 | | | |
| <i>Intermediate (simplifying assumptions)</i> | | | |
| left*cd*employer*wage*union*veto*public+ | 0.29 | 0.04 | 1.00 |
| left*cd*RIGHT*employer*wage*veto*public+ | 0.27 | 0.01 | 1.00 |
| LEFT*cd*right*EMPLOYER*WAGE*UNION*veto+ | 0.39 | 0.32 | 0.98 |
| left*cd*RIGHT*employer*WAGE*UNION*VETO*public | 0.08 | 0.03 | 1.00 |
| solution coverage: 0.66 solution consistency: 0.99 | | | |

Table 3.3 identifies two paths towards set membership in the set ‘Skill Acquisition.’ The first path contains the components belonging to the singular case of the Netherlands, whereas the second path represents the cases of Norway, Denmark, and Sweden. Making simplifying assumptions, these paths can be reduced mainly to the presence of public service sector employment. In sum, the predominant path towards policies that facilitate skill acquisition can be categorized as a Scandinavian one. These countries share a capacity for consensual decision-making between

diverse governmental actors and the social partners, which can be seen in the high membership scores in union density and employer organization. Although the Netherlands does not reveal high scores on these variables, the weak density and organization scores mask a high capacity of the peak organizations to coordinate diverse interests. Also, these countries share a strong electoral record among social democratic parties, the relative inability of confessional and right parties to dominate the government, and low veto points.

There are more varied paths towards set membership in the set 'Skill Transparency.' Of the four identified in Table 3.4, the first path is the most similar to the second listed in Table 3.4 with many of the same countries, including Norway, Denmark, Sweden, and one new-comer Finland.

However, the three remaining paths are quite different.

The remaining three have in the common the following variables: low incumbency among left and Christian democratic parties, weak employer organization, and low public employment. The second path in Table 3.4 belongs to the Netherlands, and although this path resembles the latter two, the characteristics of the Netherlands are more similar to the countries belonging to the first path.

The countries belonging to the last two paths have more in common. The countries belonging to the third path include New Zealand, the UK, and France, whereas Australia alone is represented in the fourth path. Technically the third path is distinguished by the high incumbency of right-wing parties, whereas the fourth path also has high union density, many veto points, and strong wage coordination. Beyond the technicality of these path components, however, these countries all represent un-coordinated market economies that nevertheless demonstrate historical legacies of market capitalism combined with redistributive elements. In all four countries, social democratic parties were electorally successful although nevertheless able to make it into government regularly. Also, these countries differ markedly from the USA, Canada, and Ireland by the organizational capacity of their trade unions and employer organizations. In short, the last two

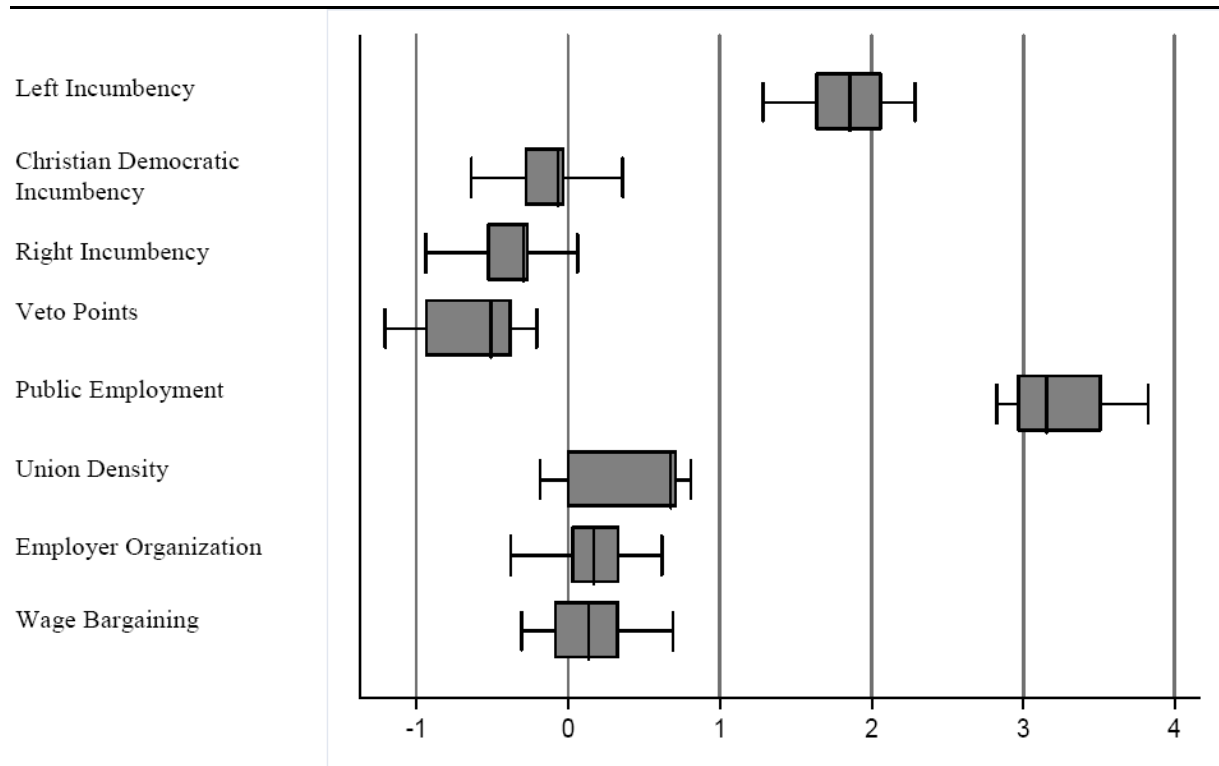
paths suggest that not all liberal market economies are based fundamentally on market forces alone. Rather, to the extent that policies promoting skill transparency are considered redistributive in nature, the organization of capitalism in these countries also demonstrates coordinated elements as well.

Regression Analysis

In order to complement the fuzzy set analysis, I now conduct an additional regression analysis. Due to the small number of observations, I follow a method employed by Lane Kenworthy (2009), whereby the two indices for skill acquisition and skill transparency, respectively, are regressed on all possible combinations of the eight explanatory variables where the number of variables in any given regression was either two or three. Due to multicollinearity, I dropped regressions with both left party incumbency and either union density (correlation 0.82) or public employment (correlation 0.77) as well as both employer organization and wage bargaining coordination (0.80). This led to a total number of sixty-four regressions. Each variable was included between fourteen and twenty-five times.

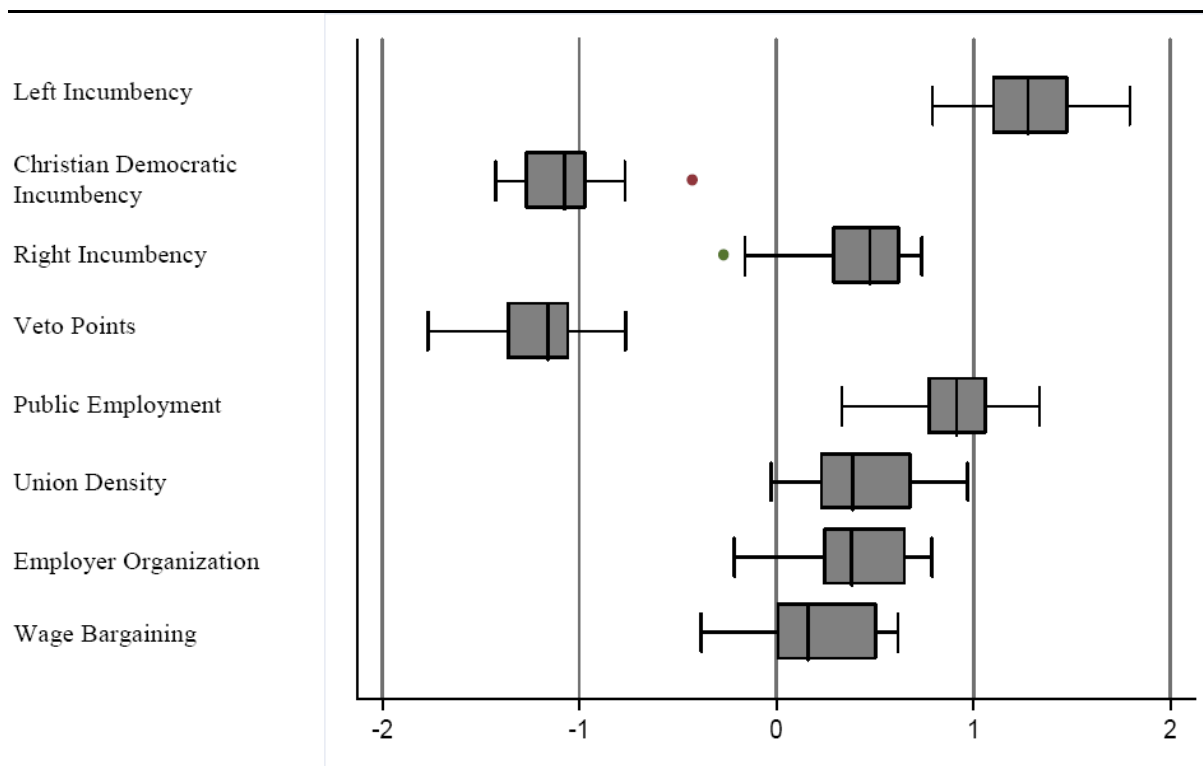
The results are presented below in Figures 3.6 and 3.7. The line in each box represents the median coefficient, the sides of the box represent the twenty-fifth and seventy-fifth percentile coefficient, respectively, and the “whiskers” represent the minimum and the maximum, respectively. The circles outside of the boxes represent outliers.

Figure 3.6. Regression Results: Hypothesized Determinants of the Skill Acquisition



Turning to the results for the skill acquisition dimension, Figure 3.6 presents the spread of the coefficients of the eight explanatory variables. The coefficients for left party incumbency and public employment are unambiguously positive, and the coefficients for veto points are unambiguously negative. The remaining variables take on both positive and negative values. With regards to Christian democratic and right party incumbency, the coefficients are predominantly negative with three-fourths of the coefficients falling below zero. The coefficients for union density and employer organization demonstrate the opposite trend, with three-fourths of their coefficients falling above zero. The coefficients for the wage bargaining variable, on the other hand, are more evenly distributed.

Figure 3.7. Regression Results: Hypothesized Determinants of the Skill Transparency Dimension



With regards to the results for the skill transparency dimension, the results are quite similar to those for the skill acquisition index except that the coefficients for Christian democratic party incumbency becomes unambiguously negative and those for right party incumbency less so. Indeed the coefficients for right party incumbency tend to be more positive than negative.

Discussion and Conclusion

Having completed the fuzzy set and regression analysis, this section compares the results in order to draw some conclusions about the determinants of the two indices of skill acquisition and skill transparency. The two methods have two quite different perspectives of causality: fuzzy set analysis comes from set theory and uses to the concepts of ‘necessary’ and ‘sufficient’ conditions to build arguments about the relationship between set membership in the independent variables

and that in the outcome variable; regression analysis assesses the average, individual effect of an independent variable on the outcome variable.

The fuzzy set analysis produced two ‘paths’ towards high rankings on the skill acquisition index, which could be traced back to cases of the Netherlands, Norway, Denmark, and Sweden. These paths shared strong wage bargaining institutions and low veto points, but differed in every other variable (a variable present in the first path was absent in the second). Since fuzzy set logic allows a variable’s effect to vary across cases, one might come to the conclusion that each component played an important causal role in producing the observed outcome, membership in set SA, but that this role was contingent on the particularities of that individual path.

However, it may also be the case that lack of variation in the independent variables makes it impossible to exclude irrelevant variables. Starting from this idea that some components of these two paths may be more relevant than others, the regression results become interesting in pointing out path components that pass the high hurdle of statistical significance. These results indeed indicated that low veto points, a common variable to both paths, leads to higher scores on the skill acquisition index. Low veto points weaken the capacity of dissenting minorities to block legislation aimed at expanding educational opportunities. Also, the second path contains high left party incumbency and high public sector employment, which were both related to higher scores on the skill acquisition index. Left parties are the historical proponent of working class interests, which can be extended to the education policy field as an explanation for these parties strong relationship to the skill acquisition index. Finally, public sector employment speaks to the responsibility and capacity of the state to train public employees. In sum, the second path identified towards set membership in SA can explained by the high incentives of political and state actors to support the expansion of education opportunities and the relative lack of opportunities for their opponents to block policy proposals.

Whereas these results largely explain the cases of Norway, Denmark, and Sweden in developing education policy that invests highly in cognitive capacity and expands educational opportunity, the question of how the Netherlands managed to develop such education policy is less clear. Outside of low veto points, the results from the regression analysis do not suggest other components of the Dutch path that increase the probability of membership in the SA set. The ‘parsimonious’ solution sets from the fuzzy set analysis provide some insight to this question. In particular, these results from Table 3.4 suggested that high levels of wage coordination led to membership in SA when in combination with weak union density and various combinations of high Christian democratic incumbency, low veto points, and weak employers’ organizations. The Dutch case indeed provides an example of a case where coordinated bargaining institutions at the peak level continue to produce consensual outcomes in terms of education policy, which suggests that wage bargaining situations within the Dutch context could have been conducive to set membership in SA.

Also, the individual scores on components of the skill acquisition index for the Dutch case suggest a relatively larger role for wage bargaining institutions. The Dutch case ranked relatively more strongly on policies related to higher and continuing training rather than investments in initial education. Whereas the high incumbency of left parties and public sector employment in the cases of Norway and Sweden likely explain the high scores in spending on initial education, political support for high investment in initial education are weaker in the Netherlands. Although left parties were often in the opposition, they never managed to dominate the government over consecutive electoral cycles. Indeed, the entire structure of initial education remains characterized by the principle of pillars, where students of different faiths are educated in separate schools. Policies for higher education, however, are not faith-based, and firms’ interest in obtaining university educated students suggests that the social partners may play a role in furthering the creation of policies to expand access to higher education. Coordinative capacity of the social partners is also a potential hypothesis for the highly regulated continuing training legislation as well as reforms in the qualification system.

However, if high levels of wage bargaining coordination proved to be highly relevant in the Dutch case, why was not this factor sufficient in other cases? The high levels of veto points in Germany, Australia, and Switzerland provide a possible explanation why these countries failed to rank highly on the skill acquisition index. The cases of Austria, Belgium, and Japan are more difficult to explain, and the differences between these cases and the Netherlands likely has to do with omitted variables as well as additional characteristics of the included variables that are not captured in the available measures. A tentative suggestion at an omitted variable would be the high electoral success of left parties in the Netherlands, which nevertheless does not translate into high levels of left party incumbency because these parties did not constitute a large part of the cabinet. Also, the existing measure of public employment may not capture well the role of the state in the Netherlands. The state, despite not employing a high percentage of the workforce, nevertheless plays a powerful guiding role in developing a forum for open debate between the social partners as well as placing pressure on these actors to cooperate.

Turning to the skill transparency index, the fuzzy set results suggested again a Scandinavian path as well as a more liberal path towards high skill transparency. The analysis provides substantial evidence for the negative consequences of Christian democracy for skill transparency. All paths towards set membership in ST specified the absence of high Christian democratic incumbency as a necessary component, and the regression results supported these findings by showing that all coefficients for the measure of Christian democratic incumbency were negative, regardless of model specification.

These results also provide an explanation for the ambivalent findings on the wage bargaining, union density, and employer organization variables. Many countries with strong Christian democratic incumbency also score highly on these variables, which suggest that the effect of Christian democratic incumbency on education policy outcomes is stronger than these other factors.

In sum, this chapter sought to draw out the explanatory factors for high rankings on the skill acquisition and skill transparency dimensions, respectively. The analysis applied continuous fuzzy set and regression methods to estimate both the combinations of variables as well as the strength of individual variables in explaining the policy expansion that expands opportunities to acquire skills and ensures the clear certification of skills.

Characteristics typically assigned to the Social Democratic welfare regime appeared to facilitate the development of policies that constitute the skill acquisition and skill transparency indices. In terms of skill transparency, however, a second path also seemed to lead to high rankings on this index. This path included countries with a strong legacy of right party incumbency that nevertheless exhibited some characteristics of coordinated market economies such as organized social partners.

CHAPTER 4

CASE SELECTION

The theoretical chapter used quantitative measures on education policy in order to substantiate two arguments: first, that education systems vary cross-nationally in the extent to which they create opportunities to enter into education and promote skill transparency; and, second, that these characteristics of education systems play a significant role in increasing the workers' skill levels and their capacity to apply these skills to jobs in the labor market. By using comparative historical case study analysis to examine three countries that differ substantially in the structure of their education systems, the next five chapters aim at extending these initial arguments by providing additional validation of the skill acquisition and skill transparency indices, on the one hand, and analyzing causal explanations for variation in education policy, on the other.

With reference to this first goal, scrutinizing the pace, content, and political coalitions of educational reforms in Denmark, Germany, and the Netherlands can validate the measures of education systems created in Chapter 2 by relating the quantitative components of the two indices to political debates and policy outcomes. In terms of identifying causal mechanisms, comparative historical analysis holds the potential to illuminate factors that explain differences between these countries' education systems by way of systematic comparison of the actors and institutions that forged or thwarted reforms in each country.

In particular, in chapters five through nine, I will analyze developments in five broad categories of education policy. The first category is the comprehensive schooling movement, which refers to efforts to remove institutional barriers within primary and secondary school structures that inhibit educational mobility. The second category is state planning, which encompasses investments in primary through tertiary education as well as structural reforms of the education system in order to

respond to changed labor market demands. Firm-based training is the third category and active labor market policies constitute the fourth. The final category refers to the certification system, which focuses on reforms aimed at making the certification of qualifications in the labor market transparent and flexible.

This chapter sets up the comparison of Danish, German, and Dutch education reform in three ways. First, I review the theory of case selection that resulted in the inclusion of these three countries, focusing not only on the strengths but also on the weaknesses of this approach. Second, I link the components of the skill acquisition and skill transparency indices to education policy more generally in order to contextualize the earlier theoretical discussion. Third, I provide an overview of the main trends in education reform in order to create a baseline from which to understand the individual case studies and the comparative analysis.

Case Selection Procedure: Strengths and Weaknesses

Comparative case study analysis excels at analyzing the causal explanations of integrative education policy for a few reasons. First, case studies do extremely well at developing conceptual validity. Just as case studies on democratization expanded understandings of democracy by cultivating what some call ‘democracy with adjectives,’ in-depth analysis of education policy creation can lead to richer understandings of the role of education policy in addressing different types of social needs across diverse sets of communities and historical moments. Education as a social policy has not received much attention in the political science literature and therefore the debate on political contestation over education policy is limited. In this way, considerable room exists to expand the comprehension of the varied distributional consequences of different types of education policy. Moreover, interpretation of political debates surrounding education depends on priors about the expected role of education in that context. In most accounts, the literature identifies two roles of education policy: a redistributive role, in which the focus lies on the equality of educational opportunities between different groups in society, as well as a conflict dimension that depends the types of skills that education imparts, where skills can either be

general or specific. The ideas and political dynamics that structure political debates over education can provide information about the reasons why certain understandings or dimensions of education are more salient in different contexts.

Second, process tracing, or the linking of potential causes with outcomes, demonstrates some advantages that cannot be attained with statistical analysis. For instance, since process tracing focuses on “sequential processes within a particular historical case, not on correlations of data across cases” (George & Bennett 2005, p. 13), the use of process tracing allows the researcher to focus on the complex meaning of a relationship between two phenomenon rather than the probability of two phenomenon occurring in tandem. Whereas correlations are very useful at inference, deeper examination of the intentions, expectations, strategic interaction, and bargaining dynamics, for example, is necessary in order to develop a strong understanding the relationship between cause and effect, an understanding which is particularly important in forming expectations about the implications of a given correlation. Also, many outcomes that we are interested in grow over time, and process tracing allows one to be sensitive to the convoluted nature of many historical policy developments (Mahoney & Rueschemeyer 2003; Pierson 2004).

The comparative historical studies of these three cases aim to explain the different capacities of the generous welfare states of Denmark, Germany, and the Netherlands to reform their education systems. As detailed in Chapter 2, changed economic conditions underscore the need for education policy to create opportunities to acquire skills which, in turn, are most easily applied to jobs in the labor market by certification procedures and other policies that make individuals’ skills transparent. Although all workers portend to benefit from such policy changes, workers who face a high risk of skill obsolescence and therefore marginalization within the labor market stand to receive the highest returns from education policy reform. As such, education policy that facilitates skill acquisition and skill transparency can be thought of as ‘integrative’ education policy.

Despite demands for integrative education policy, countries demonstrate large differences in the extent to which they have enacted such policies. Education reform capacity can be gauged from the two indices constructed and displayed in Tables 2.1 and 2.2 in Chapter 2. As the tables show, Social Democratic welfare states demonstrate high rankings on both indices. Turning to Christian Democratic states, however, the picture is less clear: with respect to the skill acquisition index, Germany appears a distinct laggard; on the skill transparency index, Germany, Austria, Switzerland, and Italy all receive below average rankings. One conclusion of these observations is that differences in reform capacity cannot be fully attributed to conventional factors explaining welfare state generosity. Comparative historical analysis of generous welfare states, with different degrees of integrative education policy, aims to explain why factors traditionally identified for having facilitated the passage of social policy do not necessarily lead to the passage of integrative education policy.

In selecting cases, a central aim is to provide for high variation with respect to rankings on the integrative education policy indices while controlling closely for other factors that influence the passage of generous welfare state policy. As such, I follow John Stuart Mill's method of difference, which abides by the following logic: "If an instance in which the phenomenon under investigation occurs and an instance in which it does not occur, have every circumstance in common save one, that one occurring in the former; the circumstances in which alone the two instances differ, is the effect, or the cause, or an indispensable part of the cause of the phenomena" (Mill 1862 [1843], p. 429). This logic has also been referred to by Przeworski and Teune (1970, p. 33) as the 'most similar systems design' and has been recognized as the strongest of Mill's approaches (Skocpol 1979). To apply Mill's method it is necessary to first identify the 'phenomenon under investigation' as well as the circumstances that countries have in common. According to the method of difference, the remaining differences explain variation among countries in the phenomenon under investigation.

I first identify the phenomenon under investigation as the determinants of integrative education policy understood as the various policies that increase the capacity of individuals to learn, the opportunities to enter education, and the transparency of earned skills. I would like to understand why some countries find it easier to construct or reform their education systems in such a way as to extend opportunities to acquire education as well as make clear the skills that individuals earn either in education or on the job. Although there may be multiple paths to the formation of integrative education policy, I choose to select countries with relatively similar levels of welfare state generosity in order to control, albeit imperfectly, for conventional antecedents to redistributive policies and thereby both address the problem of complex or compound causation as well as contribute to our understanding of the significance of traditional welfare state theories in explaining the passage of integrative education policies. For these reasons, in the following five chapters, I am specifically interested in the determinants of integrative education policy in generous welfare states.

Having identified the phenomenon under investigation, I now turn to the process of case selection. With respect to Tables 2.1 and 2.2, I begin by selecting by the generosity of states' welfare states, which eliminates the Liberal welfare states and East European countries. Although there may be alternative routes to integrative education policy, I am primarily interested in addressing the explanatory power of traditional theories of welfare state expansion. As an aside, however, it should be mentioned that few countries without relatively generous welfare states manage to score highly on both dimensions. From this group of generous welfare states, which consist of the Social Democratic and Conservative (Christian Democratic) welfare regimes as defined by Esping-Andersen (1990), I identify two extreme cases as well as a case that represents the median point between the extremes. The inclusion of a third 'mid-point' case that can provide a point of comparison with the other two cases, because it exemplifies characteristics of both a highly integrative education system as well as a weakly integrative education system.

To start the selection, a case that exemplifies a 'high' extreme includes Denmark, which ranks at the top of both indices. A country that comes closest to a generous welfare state with non-integrative education policy is Germany, which ranks below average on both indices. In addition to ranking almost directly between Denmark and Germany on the two indices, the Netherlands provides a case that embodies characteristics of both countries: on the one hand, the Netherlands has a strong Christian Democratic tradition, similar to Germany; but, on the other, the capacity of the Netherlands to reduce income inequality brings it closer to the Social Democratic ideal type. In this way, the experiences of education reform in the Netherlands not only likely exhibit clear examples of both reform success and failure, as witnessed by its position between Denmark and Germany on the indices, but it also shares institutional structures that provide further points of comparison. The Netherlands is therefore included as a third case which can bridge the differences between Denmark and Germany by providing supplemental evidence of a Christian Democratic welfare state that nevertheless managed to reform its welfare state.

In terms of circumstances common to all three countries, Denmark, Germany, and the Netherlands share well-established workers and employers' organizations as well as a social democratic party that was to share power with more right-leaning parties. The power resources approach identifies the organization of workers in left parties and unions as a key predictor of redistributive policies (Korpi 1983; Stephens 1979) with the logic that workers prefer generous social policy and their political representation improves the likelihood of realizing these goals. In terms of social democratic parties, the Danish SD, German SPD, and Dutch PvdA, developed strong organizational roots during the late eighteen and early nineteen hundreds, which buttressed the passage of generous welfare state policies later in the twentieth century. The incumbency of left parties is highest in Denmark, where social democratic cabinet share averaged 32.18 percent in the post-war period, followed by Germany (14.56) and the Netherlands (13.66). Considering for a moment the frequency with which social democratic parties were present in the cabinet, however, regardless of the percentage of seats they held, the results for the Netherlands increase. Where the Danish social democrats were present in the cabinet 68 percent of the time between 1960 and

2000, the results for the Dutch PvdA and the German SPD are 56 percent and 49 percent, respectively.

In the late eighteenth hundreds, workers also found political representation in the form of trade union organizations. The Danish LO, German DGB (formerly GGD and AGDB), and Dutch FNV (formerly NVV) all provided workers with an association capable of negotiating with governmental agencies, ministries, and political parties.

Besides the strong representation of working class interests, research also underscores the importance of employers in the passage of redistributive policy (e.g. Baldwin 1990; Estevez-Abe et al 2001; Hall & Soskice 2001b; Mares 2003). The varieties of capitalism approach defines the economies of continental and northern Europe as coordinated market economies, in which employers, due to their dependency on specific skills, support the passage of passive social policy (e.g. Estevez-Abe et al 2001; Hall & Soskice 2001a; Iversen 2005). Work building on these ideas relates the organizational capacity of employers to the passage of active labor market policies (Martin 2004a; Martin 2004b; Martin & Swank 2004; Martin 2004c). The countries selected all demonstrate highly developed peak employer associations illustrated by the DA in Denmark, the DBA in Germany, and the VNO-NCW in the Netherlands.

Selecting cases by their common attributes theoretically eliminates the possibility that these characteristics account for variation in the phenomenon under investigation. These common attributes are therefore in a sense control variables. Following the logic of Mill's method of difference, the factors that explain variation in countries' integrative education policy lie in the remaining differences between Denmark, Germany, and the Netherlands. In contrast to a controlled experiment, however, the analysis cannot perfectly control for two contaminating effects. First, these common attributes vary in important ways across countries, which may be relevant for the occurrence of the dependent variable. Second, clear differences between these three cases may alter the behavior of these control variables to such an extreme that the capacity to

claim that these control variables indeed control, in this case, for strength of the welfare state lobby is reduced. The two qualifications to the method of difference will each be discussed in turn.

To approach the first potential contaminating effect, the characteristics previously identified as similar across all three cases, including well established social democratic parties, trade unions and employer associations, despite their relative similarity as compared to all countries in the sample in fact vary in important ways. For instance, Denmark distinguishes itself from Germany and the Netherlands in terms of union structure. Denmark has a Ghent union structure, which means that the unions manage and administrate unemployment insurance. In the period of high unemployment, workers in countries with Ghent systems remained in trade unions or even decided to join trade unions in order to guarantee access to unemployment insurance, whereas workers in countries with state mandated unemployment insurance do not share this incentive (Rothstein 1992). As case in point, according to OECD data on union membership in 1994, 71 percent of the Danish workforce were members, whereas German and Dutch membership levels stood at 32 and 25 percent, respectively.

At the same time, it is important to remember that low membership levels in Germany and the Netherlands mask the strong political presence of trade union organizations in policy-making circles in these countries. As such, although actual membership remains low, the bargaining power of unions stretches beyond union ranks. One example is that collective bargaining coverage remains above 50 percent of firms in all three countries (Tijdens & van Klaveren 2007).

Another qualification to the selection method described above involves the possibility that the three shared characteristics may behave differently due to additional contextual differences between Denmark, Germany, and the Netherlands. On the one hand, these additional contextual factors may simply be considered explanatory factors in their own right. On the other hand, to the extent that they fundamentally alter the preferences of social democratic parties, unions, or

employer organizations, they weaken the degree to which these control variables indeed capture common tendencies between the three countries.

For instance, as the above discussion detailed, the social democratic parties were forced into coalition with additional parties, yet the Social Democrats' coalition partners represented quite different parties in each country. While 'coalition partners' may be seen to constitute a difference between these countries, this factor may also influence the politics of the social democrats in each country and therefore the validity of constrained social democracy as a control variable. In Denmark, the SD was frequently forced into coalition with the Liberals. In Germany, the main competition for the SPD was the Christian Democratic CDU/CSU. Finally, the Dutch PvdA was frequently forced to share power with the Christian Democratic CDA and liberal VVD and D66. As a result, the nature of political competition is expected to be different in these three cases, which could influence the policy objectives that Social Democrats pursue. Table 4.1 below provides information on political parties' ideological positions on education policy. Christian Democratic parties can be understood as occupying a position between the Conservative and redistributive Social Democratic ideologies. The Liberal ideology should assume the greatest importance in Denmark, followed by the Netherlands and then Germany. Conservative tendencies should be present in all three countries, but in different flavors given the strong presence of Christian Democratic parties in Germany and the Netherlands.

Table 4.1. Political Ideologies in Education

| Political Ideology | Core Value | Core Form of Control |
|--|------------|----------------------|
| Liberal | Freedom | Market |
| Conservative | Tradition | Authority |
| Social Democratic: focus on redistribution | Equality | Corporatist |
| Social Democratic: focus on culture | Community, | Democracy 'from |

Source: (Rasmussen 2002)

Soskice and Carlin (2007) also elaborate on another potential contextual factor that reduces the effectiveness of integrative education policy in large countries and therefore the incentives of parties to pursue such policies. Ever since growth rates slowed in the early 1980s, governments

sought ways in which to restore competitiveness and thereby limit unemployment growth. A key reform measure, real wage restraint, was pursued in most countries in this period, but, according to Soskice and Carlin, the size of the economy influences the consequences of this reform measure. Where real wage restraint leads to increased export competitiveness and decreased consumption, the relatively larger non-tradables sector in Germany means that the latter effect overwhelms the former. The export sector flourishes in all cases, but the larger percentage of the population in the German case who receive less money each month become increasingly discretionary in their spending behavior as the incentives to save rise. As a result, domestic aggregate demand in Germany falls far below that of smaller open economies and unemployment remains high. In this context, integrative education policy which equips workers with marketable transparent skills does not reduce unemployment because the jobs simply do not exist. In the context of low domestic aggregate demand, political pressure to develop responses to labor supply are likely to fall second to pressure to address demand issues related to the creation of new jobs.

However, this argument only explains weak political support and weak left party support in particular, towards integrative education policy since 1980. The roots of integrative education reform, however, stretch back at least to the 1950s. Furthermore, the level of vacancies in Germany remains quite high throughout the period since the 1980 despite high levels of in unemployment, which suggests a strong role for integrative education policy in addressing an apparent skill mismatch.

German unification has also presented tremendous challenges to political parties and interest associations in the former West Germany to integrate the population from the new federal states. The goal of maintaining equality understood as the complete transfer of existing labor regulations and social rights to the former East overwhelmed the reform impetus to resolve existing inefficiencies in the West German model. Similar to the argument regarding aggregate demand discussed above, German unification created political problems that assumed priority over educational reform.

Finally, the ‘shadow of the state’ in Denmark and the Netherlands creates incentives for trade unions and employer associations to work together that are not as strong in the German case. In Denmark and the Netherlands, the state frequently threatens to intervene if the social partners do not manage to arrive at a consensus. In the German context, the state is strictly barred from intervening in wage setting due to the principle of *Tarifautonomie*, or the principle that the social partners alone merit the right to collective bargaining. As a result, the coordinative capacity of social partners in Denmark and the Netherlands is more likely to yield results than in Germany.

Although I am unable to ‘control’ in a reliable way for the differences between these three countries, elimination of alternative hypotheses through controlled comparison is by no means the only goal of the case studies. I am also intent on applying process-tracing in order to understand better the variety of factors that were salience in their own right or in combination with other factors in explaining education policy outcomes. Therefore, accumulation of knowledge about the variety of factors related to education reforms in all their complexity stands as a major goal of the case study analysis.

Moreover, reliance on process-tracing as a method for getting at causality is in no way an inferior tool to that of statistical control. Paralleling the statistical logic of experimental control, Mill’s method of difference tells us that the single factor differentiating cases where an outcome is observed from those where it is not can be identified as the cause of that outcome. However, while this method provides an explanation for eliminating competing hypotheses, it does provide an explanation for how the resulting causal factor leads to the given outcome. In other words, statistical control does not provide a clear answer for *why* the factor leads to the outcome.

Historical analysis, on the other hand, does better at providing explanation, hence the oft-heard claim that qualitative analysis aims at causal interpretation whereas statistical analysis aims at causal inference. The value of historical analysis lies foremost in perceiving the nature of causality

as a sequential phenomena that therefore calls for diachronic evidence, which, in turn, also helps to establish agency (Rueschemeyer & Stephens 1997). Moreover, much work in this tradition disagrees with the assumptions of most statistical analysis that causal influence is additive and linear. Rather, the impact of a causal factor may depend on context and the path towards a given outcome may not only proceed but also at times regress. Process-tracing therefore allows the research to gain insight into the precise mechanism by which a given causal factor relates to the outcome in question as well as establish agency.

To summarize, I decide to scrutinize education policy reform in three generous welfare states because process tracing holds the potential to contribute to theory development in the relatively understudied area of education politics. In particular, close analysis of ideas and policy coalitions supporting integrative education policy reform can reveal information about the stakes of such reforms, which can be compared with expectations developed from other theoretical approaches in order to develop a theory of integrative education politics. In terms of case selection, I employ Mill's method of difference in order to explore why relatively similar countries implemented different degrees of integrative education policies. By controlling for characteristics recognized for supporting the expansion of generous social policy, this approach excels at eliminating alternative hypotheses. As the above discussion illuminated, however, issues persist in controlling for constrained social democracy and coordinated employer and worker associations, either because the structure of these organizations differ across countries or because additional contextual factors mediate the preferences of left parties and the social partners and thereby occlude the firm assumption that these actors' preference, under similar circumstances, would align closely.

Overview of Political Party Systems

The role of partisanship was already touched on in the preceding chapters as a critical explanatory factor for differences in education policy outcomes. Beyond the individual programmatic orientation of parties within Denmark, Germany, and the Netherlands, the overall profile of parties

within a given system as well as the rules surrounding the process of government formation and policy-making also structure education policy outcomes. Given the relevance of the party system of these three countries in the policy-making process, I will briefly outline the structure of the party system to provide background information for the case studies.

The most conventional way to categorize party systems is according to the number of parties in government. Denmark, Germany, and the Netherlands are all multi-party systems (Duverger 1954). In terms of size of the governing coalition, Denmark typically forms minority coalitions, Germany usually has minimum winning coalitions, and the Netherlands mainly had over-sized coalitions in the immediate postwar period before forming more minimum winning coalitions since roughly 1980.

In terms of the types of parties present in these three cases, Lipset and Rokkan's cleavage theory provides key insights (Lipset & Rokkan 1967). Lipset and Rokkan argued for the salient role of the sequencing of conflicts revolving around class, religion, and distribution of power between the center and the periphery in the period between the Protestant Reformation and the Industrial Revolution. In particular, they identify four central cleavages: a center-periphery cleavage, a state-church cleavage, a rural-urban cleavage, and an owning class-working class cleavage. These social divisions become political by passing three main thresholds of legitimacy, incorporation, and representation, a process which results in the formation of viable political parties.

The center-periphery cleavage produced regionally distinct political parties in all three cases. The state-church cleavage was not pronounced in Denmark, where religion largely ceased to be a socially divisive issue by the end of the nineteenth century and the state consolidated control over the churches. In Germany and the Netherlands, however, religious differences represented salient social cleavages that the state was unable to attenuate. In Germany, the Catholic Center Party, *Zentrumspartei*, formed in 1870 and dissolved in 1933, gave way to the creation of the modern-day Christian Democratic Union and the Christian Social Union in the post-war period. In the

Netherlands, many small religious parties were formed in 1880. These parties represented different confessions of Christianity, but nevertheless oftentimes formed political coalitions. In 1980, these different parties were united in the formation of the Christian Democratic Appeal, *Christen Democratisch Appèl*.

The rural-urban cleavage resulted in the formation of the agriculture-based party in Denmark, the liberal party *Venstre*. In Germany, agricultural interests were accommodated within religious parties in the former German Empire and in conservative parties in Prussia. In the Netherlands, liberal parties have a long tradition and were a strong political force for free trade. The modern-day People's Party for Freedom and Democracy, *Volkspartij voor Vrijheid en Democratie*, formed in 1948, exhibits roots from a large number of liberal parties that played a large role in Dutch politics in the preceding hundred years.

Finally, the owning class-working class cleavage resulted in social democratic parties in all three cases. In Denmark, the Social Democrats, *Socialdemokraterne*, formed in 1871, whereas the Social Democratic Party of Germany, *Sozialdemokratische Partei Deutschlands*, draws on roots from 1863. In the Netherlands, the Labor Party, *Partij van de Arbeid*, draws on roots from 1894.

Contextualizing the Indices of Skill Acquisition and Skill Transparency

The differences between countries in terms of creating opportunities to obtain new skills and making skills transparency did not develop in the course of one policy-cycle. Although some individual reforms were indeed path-breaking, their passage typically depended on preexisting legislation, policy debates, and political movements. Before turning the discussion to causal origins of integrative education policy in the following three chapters, it is therefore necessary to clarify the policies and their forerunners that underlie the measures used in the skill acquisition and skill transparency indices in order to make clear the various policies that the case studies will analyze.

The skill acquisition index includes eight variables that capture the extent to which education policy increases opportunities to enter into new forms of education. These eight variables cluster into three groups which I will discuss in turn. The first group measures the degree of government investment in education, from the primary to tertiary levels, as well as a variable for class size. Government spending on education speaks to the degree of states' human capital investment. Referencing UNESCO's methodological notes, the total spending variable can be understood as a composite measure of spending on teacher salaries and benefits, welfare services, teaching materials, the construction of schools, furniture and equipment for schools, and telecommunications. Although the measure of total spending per student is inherently meaningful, the statement that 'no one argues over spending per se' rings true (Pierson?). Rather than simply calling for more money, debate over educational reform covered real issues such as the creation of new schools. Along similar lines, the variable for the student to teacher ratio speaks to state investment in teacher salaries and benefits as well as the degree of state planning in education. Therefore, where the spending variable speaks to states' investment in human capital and ensuing consequences for students' cognitive capacity, the empirical evidence of contestation over spending takes the form of political debate over specific policy issues.

The second group of variables in the skill acquisition index captures the degree to which structures of secondary education separate students by vocation and aptitude and, in doing so, influence their opportunities to enter post-compulsory education and training. Evaluations of policies that divide student cohorts along either vocational or aptitude lines, labeled either 'tracking' or 'streaming' in the literature, pay attention to two related consequences of such policies including differentiation between tracks in terms of prestige or labor market outcomes. The literature does not come out fully against or in favor of streaming precisely because of discrepancies in evaluations based on these criteria. As a result, praise or condemnation for streaming tends to reference to a specific case or period rather than directed at the idea itself, although general public opinion towards streaming has become more negative over time. In order to understand why the debate over streaming remains inconclusive, I will discuss aspects of streaming that influence the

aforementioned issues of prestige and labor market outcomes: issues of restricted access to education and of differentials in school funding between different tracks.

Since the beginning of organized education, access to education has been characterized by restrictions based on wealth and intellectual capacity. Even after compulsory education was introduced, the wealthiest families continued to send their children to usually religious-based grammar schools, while poorer children attended village schools. The former schools were better funded, provided a better education, and led to high status, well paid jobs. In short, due to the wealth of their parents, rich children enjoyed education opportunities that far exceeded those of their poorer neighbors. The role of socio-economic background continued to play a strong role over time on access to education and educational attainment, although constitutional rights to compulsory and state financial support for needy families does work to moderate this relationship.

Besides socio-economic background, state-run educational institutions continued to shape children's education opportunities based on criteria established early on in their lives. In particular, although parental discretion and as a result family wealth often plays a large role, aptitude assessments tend to decide whether students follow a general or vocational path. The general path is viewed as demanding a higher level of academic ability, which implicit in the selection mechanism in place in most Germanic countries can be fully assessed at the age of 10. The early division between general and vocational tracks limits occupational choice insofar as students cannot switch tracks later in life. The opportunity to change paths depends on the creation of structural pathways linking different tracks as well as complementary policies that encourage independence in occupational choice. These policies are therefore influential in creating educational opportunities.

A related way to assess the effect of tracking on stratification is to measure the discrepancy between different tracks in terms of school funding and students' future wage differentials. For instance, entering vocational training in Germany in the 1960s typically provided students with

employment in a company that was frequently prepared to offer apprentices long term employment, a good salary, and further training if necessary. More generally speaking, however, a stigma frequently exists with regards to students who choose to enter vocational training. Oftentimes, students who pursue vocational degrees attend relatively under-funded schools and face worse job prospects than their fellow students who attended general education. The relative funding of schools therefore provides an indication of the equality of resource distribution between schools and reputation of different education tracks.

The final group of variables focuses on the financial and regulatory support for post-compulsory education, which includes variables for financial aid in general, costs of tertiary education, regulation of firm-based continuing education, and spending on active labor market policies. The provision of financial aid signifies recognition by the state of enduring inequalities in access to educational opportunities as a result of low income and the provision of financial resources that can be used to reduce these inequalities. The consequence of financial aid for educational opportunities is quite clear and the only addendum necessary to understand the relevance of this variable is the recognition of the strong role of the central state in addressing social inequalities that the passage of such policies infers.

Table 4.2. Measures of Education Systems: From Data to Empirics

| Measure | Policies |
|-----------------------------|---|
| Education spending/ Teacher | • Construction of Schools |
| Student Ratio | • Teachers' Salaries |
| Separation by Ability and | • Cost of Education |
| Vocation | • Parental Discretion Over Division by Ability |
| | • Access to Information in Schools on Occupational Fields Prior to Tracking |
| Post-Compulsory Education | • Financial Aid Policies |
| (Financial Aid, Cost of | • Legislation on Tuition Costs and Possible Exemptions |
| Tertiary Education, | • Key Agreements and Legislation on Continuing |
| Skill Forecasting | • Date of First Forecast |
| | • Regularity of Forecasts |
| Transparency of Skill | • Centralization of Education Authority (or lack thereof) |
| Content (Centralization of | • Responses to EQF |
| Qualifications Framework, | • Establishment of Mechanisms to Recognize (Certify) |
| Transparency in Skill | • Establishment of Framework Linking Occupations |
| Complementarities | • Establishment of Module-Based Learning |
| (Framework Linking | |

The costs of tertiary education and related financial support to students for attendance to university deserve more attention. The measure of tertiary education costs acted as a proxy measure for the facility of entering this level of education. However, a host of factors may inhibit the expansion of tertiary education: the failure of state planning to provide sufficient places; the high costs of doing so; and merit-based prerequisites for tertiary education admissions. In addition to policies governing the costs of acquiring a tertiary education degree, therefore, the case studies will assess a broader array of government policies that influence tertiary enrolment.

The fourth variable that comprises the group on post-compulsory education includes the regulation of continuing training. While the regulation of continuing training increases opportunities for training, the passage of such policies rests on placing the necessity to train throughout the career on the agenda not only of political parties but also of firms. Policies related to regulation of continuing training therefore also speak to recognition among political parties and firms that training is necessary as well as the willingness of firms to fund coordinated training policies and surrender the autonomy required to realize these collective goals. As such, the passage of policies regulating firm-based training was frequently preceded by various informal agreements.

Where the regulation of continuing training addresses the need to create opportunities for training among employed individuals, active labor market policies speak to the support for training and employment among marginalized or unemployed individuals. The measure of active labor market policies is a composite measure of expenditure on employment services, training, job rotation, wage subsidies, disability subsidies, and direct job creation.

Turning to the skill transparency dimension, three groups of variables capture the policies or regulations that promote skill transparency. First, skill forecasting provides information about the establishment of institutions devoted to measuring general trends in skills needs relative to supply. The included variable measures the tradition of skill forecasting within each case and in doing so intends to depict the standardization of forecasting practices and thereby the quality of forecasts. High quality skill forecasts provide valuable information to education policy-makers that can be used to update curricula in initial and continuing education as well as facilitate labor mobility towards growth sectors. The case studies therefore detail not only the introduction and perfection of skill forecasting techniques, but also the ways in which forecasts are used to inform decisions made with regard to school curricula and public policies aimed at promoting labor mobility towards growing sectors.

The second group of variables in the skill transparency index illustrates policies that make clear the skills inferred by qualifications that individuals hold. The variable for the centralization of the qualification framework, accreditation of prior learning, and percent of firm training in public institutions comprise this group. The centralization of countries' qualifications framework finds its roots in quite early decisions about the degree of centralized control over education more generally. Recent EU legislation creates new rules concerning the comparability of education across countries, which has prompted some trends towards centralization in Member States.

The second and third measures included in this group speak to the transparency of skills earned during employment. While the measure for the accreditation of prior learning represents a clear policy outcome pursued by governments since the mid-1980s and more recently as a result of EU legislation, the measure of firms using external training institutions operated as a proxy for the clear certification of formal firm-based training. Rather than necessarily implying a national legislated policy, this latter measure speaks to the development of behavior norms and regulations describing the inter-firm coordination over certification of firm-based training.

The final group of variables speaks to the recognition of complementarities between different occupational skill profiles as measured by the existence of a framework linking occupations and modularized educational courses. Both of these policy initiatives represent recent moves to facilitate occupation mobility, which build on earlier developments most predominantly the centralization of education.

In order to address the causal mechanisms of education policy, I group the aforementioned policies thematically and examine the development of education policy over time within the three cases. The three themes include comprehensive schooling, continuing education policies, and active labor market policies.

Overview of Trends in Education

Although countries ultimately pursued quite distinct paths in educational reform, trends in the political debate around education policy exist across countries. Reviewing these trends provides a baseline for understanding country-specific deviations, which I will discuss in the following three chapters. For sake of clarity, I break up the discussion into three parts which align with structural economic shifts and trends state-building in Europe.

>1950

The first period covers the origins of education systems until 1950. While schooling has roots in religion organizations, the state typically began to assume responsibility in the nineteenth century. During the nineteenth and early twentieth centuries, lasting decisions were reached about the control and financing of state run schools as well as the strength of alternatives to state-run schools, which typically expressed elements of local or religious control.

Another significant development in this period was the organizational developments of vocational education in terms of school development and interest organizations. Issues of control between workers, employers, and the state were debated and the resulting distribution of authority played a fundamental role in the continuing development of the vocational education system in each country.

Relating this period to the policies discussed above that constitute the skill acquisition and transparency dimensions, respectively, this period had massive consequences for the ‘education spending’ and the ‘pupil to teacher ratio’ measures as well as the institutionalization of vocational training and, related, streaming policies. Industrialization and the growing organizational capacity of the working class prompted long-term debates on education policy in all countries and the relative influence of conservative forces played a key role in determining the extent to which popular demands were realized.

The definition of the states' role in funding schools and organizing teacher training received attention in this period. The degree of centralization of the education system was also largely determined during this period. Although adult education received attention, the definition of adult typically referred to children who had completed primary school and was not highly developed in this period.

1950-1980

The period from 1950 to 1980 represents a period of high growth and welfare state expansion. As Lutz (1984) describes, the postwar period experienced such high growth rates that industrial production appeared to reduce differences between social classes. Whereas society in the nineteenth and early twentieth centuries was wrought with occupational divisions (craftsman, tradesman), industrial growth seemed to hold the potential to subsume all workers within an industrial class and education policy was seen as a tool with which to socialize workers in these new economic developments. The theme of equality of opportunity therefore took hold in the immediate postwar period and infused the debate on education policy throughout Europe until the economic slowdown of the 1970s.

A common policy response to the call for equality was comprehensive schooling. Many advocates of democratic reform pushed for these changes, but growing demand for high skilled manpower also supported the call for equal access to secondary education (Ryba 1980, p. 107). The institutionalization of secondary schools developed in this period generally continues until today.

The comprehensive school debate had clear consequences on the educational opportunities of children on the lower end of the ability spectrum. In addition to institutional changes that delayed the division of students until the end of compulsory education, the movement inspired policies that created opportunities for students who had at some point fallen out of the formal education system to restart their education.

1980<

The late 1970s and early 1980s introduced a period of permanent austerity. Low growth rates and international financial liberalization frustrated the capacity of governments to balance their budgets. At the same time, the lofty expectations that many held concerning the potential for education policy to reduce socio-economic inequalities were not fully realized. The relation between educational attainment and social background still appeared to be quite strong, and creating more inclusive education policy did not do away with a existence of a group of low-achievers at the secondary level (Ryba 1980, p. 108). Nevertheless, differentiation of curricula between vocational and general education narrowed in the post-1980 period, and more and more students chose to pursue higher educational degrees.

Given changed economic conditions and higher life expectancy, increased attention has also been given to the issue of lifelong learning. The topic has reached both national and international policy debates.

European integration also prompted a number of policy changes in the field of education during this period. Where as the Lisbon treaty restricts the EU's role in education, youth training, and vocational training, the Bologna Process nevertheless sets an agenda for the full harmonization of the Member States' higher education systems and thereby creates pressure to develop clear definitions of degrees as well as quality assurance methods. The Erasmus program, which has existed since 1987, facilitates mobility of students throughout the Member States on the level of higher education.

The main policy areas effected by developments in this period include financial support for those without sufficient financial means, particularly for those who want to enter tertiary education, and issues related to the promotion of post-compulsory training both on the job through regulation of continuing training as well as for those marginalized in the labor market by way of active labor market policies.

The need to enforce the transparent certification of skills has also received attention. Coordinating efforts of the European Union have played a role in disseminating information about best practices in this area between Member States. Two policies broadly discussed on the European level include the recognition of prior (or informal) learning and dividing the coursework necessary for degree program into thematic components, called modules, in order to facilitate labor mobility.

Conclusion

This chapter has provided an introduction to the case studies of Denmark, Germany, and the Netherlands. First, I explained the advantages of case studies in examining causal processes. In particular, I explained how case studies are able to get to the bottom of issues of complex causation as well as provide insight into the intentions of key actors. Second, I detailed the case selection process of Denmark, Germany, and the Netherlands. Employing Mill's method of difference, I selected countries that varied in terms of their rankings on the skill acquisition and skill transparency dimensions, the dependent variable, and shared similar values on the conventional explanatory variables for the expansion of social policy. Third, I summarized the political systems in each country.

Fourth, turning to education policy, I discussed in greater detail the policies that make up the measures included in the skill acquisition and skill transparency indices in order to clarify the variables to be examined in the comparative historical analysis. Finally, I provided an overview of the three main periods of educational reform in order to place the individual experiences of the three cases in context.

The following three chapters detail and compare the historical development of education policy in Denmark, Germany, and the Netherlands. Drawing on the elements of the skill acquisition and skill transparency indices, these chapters detail the reforms that resulted in or otherwise led to the structure of the education system that exists today and thereby reveal information about the

political coalitions that underlie education reforms. The case studies elaborate on the indices measures of spending effort and regulatory structures to explain more clearly the ways in which the education system created opportunities to learn and developed regulations to certify skills transparently.

CHAPTER 5

COMPREHENSIVE SCHOOLING

The comprehensive schooling movement encompasses efforts to remove institutional barriers within primary and secondary school structures that inhibit educational mobility. In Europe, legislative attempts at a unified primary school occurred in the late nineteenth to early twentieth centuries, whereas the 1950s and 60s witnessed sweeping reform attempts in secondary education.

In general, those advancing the comprehensive school agenda include social democratic parties, liberal parties, and elementary school teachers' associations. Opponents to reform include conservative and Christian democratic parties as well as the teachers and parents' associations of elite schools. The extent of reform success within in each country aligns closely with the relative power resources of those supporting reforms vis-à-vis the opponents of reform.

Background Information

In Denmark, Germany and the Netherlands, formal education largely originated in religious organizations. In Denmark, cathedrals opened Latin grammar schools in the twelfth and thirteenth centuries, which, by the Church ordinance of 1539, were extended to all market towns. Similar Latin grammar schools arose in Germany in the sixteenth century. After breaking with Rome as a result of the Protestant Reformation, churches allied with local princes to establish Latin grammar schools. A similar pattern is observed in the Netherlands, with churches overseeing the foundation of these schools with the aid of local authorities. In all three countries, the Latin grammar schools were the forerunners of the modern day gymnasium or academic high school.

Denmark

The process of state-building led to the expansion of educational opportunities by way of legislation on compulsory schooling. In Denmark, primary education became mandatory in 1789, although cost burdens precluded many municipalities from realizing these statutes (Wright 2000). The Education Acts of 1814 made compulsory seven years of primary education, facilitated largely by ground-breaking land reforms a l of the eighteenth century. State funds ensured the implementation of this new law by establishing schools for the common people, or *almueskolen*, which were the forerunners of the primary school, the *folkeskole*, and built on existing ‘writing-and-counting’ schools that rose up in the middle ages. The clear differentiation between rural *almueskolen* and urban Latin grammar schools, on the primary level, persisted throughout the nineteenth century. On the secondary level, the Latin grammar schools provided secondary education to children from wealthier families and, due to the freedom of trade act in 1857, technical schools grew up alongside existing apprenticeship, and served students who had finished the primary school and wished to pursue further commercial education.

Germany

The political units composing the future German state also established compulsory education during this period, although the structure of the school system was far more differentiated. In 1717, Prussia introduced compulsory education, which only covered 17.5 percent of elementary age children but was nevertheless efficiently enforced. By the nineteenth century, education was made compulsory throughout the future German states. Although the structure of schooling differed largely by political unit, the administrative structure of schools was highly organized by the 1820s and 1830s (Geissler 2005, p. 66; Russell 1899, p. 92). On the primary school level, three types of schools existed that aligned clearly with different social classes and remained strong during the initial fifty years of the German Reich. Wealthy families sent their children to the *Vorschulen*, which prepared students for secondary school and held the unique advantage that its students were not required to take a secondary school entrance exam. Middle class families sent their children to the *Bürgerschulen* and working class children went to the *Volkschulen* (Lamberti

2002, p. 18). Whereas the *Volkschulen* were largely free, the other two more elite-schools charged fees, which restricted entry to wealthy families.

On the secondary level, the school system was even more stratified. The Latin grammar schools became the modern day *Gymnasium* (Geissler 2005). The other main secondary school was the *Realschule* which gained official recognition in 1855 (Russell 1899, p. 104). Compared to the *Gymnasium*, the *Realschule* followed a more practically oriented curriculum and was of a shorter duration. Between *Gymnasium* and *Realschule* four additional types of secondary schools existed, including *Realgymnasium*, *Oberrealschulen*, *Progymnasium*, and *Realprogymnasium*, which varied in their curriculum and the length of study between that of the *Gymnasium* and the *Realschule*. Until the mid-twentieth century, school fees for secondary school were required and totaled approximately ten percent of the gross wage of an average worker (Riphahn 2006, p. 1).

Netherlands

Similar to the Danish and German school systems, the Dutch primary and secondary schools demonstrated class-based divides. Children of lower classes attended a non-compulsory primary school, and children from wealthy families went to the Latin grammar school, which led to university (Velema 1963). Despite legislation establishing state schools in the nineteenth century, compulsory education was only passed in 1900.

Ever since the French invasion in 1795, the Dutch Reformed Church has been officially separate from the state (Sturm et al 1998). This set the stage for growing tensions between progressive forces that viewed the establishment of liberal non-religious schools as the foundation of a new nation state and the Calvinists who rejected these new liberal ideas. These tensions developed into the so-called ‘school war’ or *schoolstrijd*.

State responsibility in the field of secondary education became legally organized in 1863, as a result of the Act on Secondary Education. The Act created an academic school for middle class

families called the *Hogere Burger School*, which was similar to the *Bürgerschulen* in Germany. The Latin grammar schools continued to exist and were seen as the precursor to higher university education. These *Hogere Burger Schools* however acted as preparation for “the faculties of science, mathematics, medicine, and for the Technical College in Delft as well as or even better than the *gymnasia*. As a result, in 1917, the secondary school was given the privilege of qualifying students for these faculties; and the *gymnasia*, without losing their high intellectual standing, lost their exclusive status as pre-university institutions” (Stellwag 1967, p. 361).

Besides these more elite schools for general education, there also existed an advanced primary school, which acted as a bridge for the lower classes to secondary education as well as training colleges for elementary school teachers (World Survey of Education, UNESCO, 1965, Paris). In 1865, an additional school was created for technical education, the *Ambachtschool*, and apprenticeships, which often required a diploma of advanced primary school also provided technical education.

To summarize, in all three countries, elite Latin grammar schools established in the medieval period under ecclesiastical control constructed the founding building block of education systems in all three countries. From these similar beginnings, however, the process of state formation changed the structure of education in important ways in each country. In Denmark, compulsory primary education was established early and liberal values won out over conservative and religious ones. In Germany, the Latin grammar schools were just a stepping stone to the construction of a highly differentiated primary and secondary school system with enduring ecclesiastical roots. In the Netherlands, the degree of differentiation lies somewhere between Denmark and Germany and religious differences were entrenched in the Netherlands, unlike in Denmark, albeit in the form of consociationalism that protected individuals’ freedom with regard to the role of religion in schools (Lijphart 1968).

A Unified Primary School

The permeation of liberal ideas in the field of education followed by the growing momentum of the workers' movement drove movements for unified primary schools in Denmark and Germany. In contrast, the early twentieth century, when Denmark and Germany were unifying primary school structures, saw the legislative protection of school divisions by religion in the Netherlands.

Denmark

Division between free primary school and private primary and secondary school was eradicated by the Liberal party at the turn of the century. The Act on General Secondary Education on 1903 established a four-year middle school to create a link between the primary education and upper secondary education, the *gymnasium*. Middle schools were implemented in both grammar schools (originally only in market towns) and other municipal schools. Following an exam in the fifth year of primary school, students could enter the middle school. After passing the middle school examination at the end of the four years, students had three choices: leave school; continue one more year to prepare for the lower secondary school leaving examination, the *réaleksamen*; or apply to three years of upper secondary education in the grammar school (Eurydice 2006/7, p. 7).

Germany

The Weimar Republic introduced a period of "exuberant pedagogical innovation and optimistic plans to reform the stratified educational system in the name of democracy and social justice" (Lamberti 2002, p. 1). Practically on the eve of the declaration of the Weimar Republic, these ideas were proposed in the form of a draft bill that later became the Primary School Act of 1920, or *Reichsgrundschulgesetz*. The elite secondary school, the *Vorschule*, was abolished, which made way for a single primary school, the *Grundschule*. Attendance was compulsory for four years, and no fees existed. The conservative parties did manage, however, to take advantage of a loophole in the original legislation to retain the religion as a basic component of the curriculum. Besides the Primary School Act of 1920, however, many progressive ambitions during the Weimer period

were not realized. Indeed, Greiner notes that the Act was the only bit of legislation that was able to get passed in this period (Greiner 1994, p. 54).

The responsibility for the success of the Primary School Act of 1920 falls largely with two progressive educational thinkers, Johannes Tews and Paul Oestreich. Oestreich continued working for educational reform after the implementation of the Primary School Act through his work as director of the *Bund entschiedener Schulreformer*. The organization promoted a single comprehensive school, which they discussed broadly in their publication, *die Neue Erziehung*. A central result of this movement was the proposition in 1932 from *Pädagogisches Zentralinstitut* to introduce comprehensive schooling (Robinson & Kuhlmann 1967, p. 319).

Netherlands

At the same time that Denmark and Germany were unifying the structure of their elementary schools, the Dutch government secured the right to differentiation. The *schoolstrijd*, or conflict between religious and liberal views on education, was finally settled by the Act on Primary Education of 1920 that guaranteed equal funding of denominational schools settled the dispute (Kemenade 1991, p. 105). This solution, called the pacification, led to the pillarization or *verzuiling* of Dutch education, which remains a strongly defining characteristic of Dutch education. The consequence of the law was that parents who had previously placed their children in private religious schools switched their children to public religious schools.

The Unified Primary and Secondary School

The postwar period ushered in an economically prosperous period that appeared to provide the means to reduce economic inequality.

Denmark

In general, the 1950s and 1960s are characterized by the belief that education was a 'profit-yielding investment' (Winther-Jensen 1980, p. 128). The comprehensive schooling movement

embodied the belief that extending educational opportunities to all students would greatly reduce inequality as well as buttress economic growth. Swedish reforms in 1950 implemented the comprehensive school system, instigating reform movements in other countries. The 1950s proved to soon, however, for a similar Danish reform.

The popular School Reform of 1958 abolished the geographical distinction between both market town grammar schools and non-market village schools as well as the differentiation between the primary and middle school, thereafter creating a 7 year comprehensive school with some tracking in the last two years. The success of this Reform can be traced to Joerg Joergensen, who held a strong position in the Danish parliament, the *Folketing*, as well as the ideas of the renowned pedagogical thinker Grundtvig, who rejected examinations and ‘bookish’ knowledge. According to the 1958 legislation, there was a ‘mild division’ after the 5th year, where students were divided according to ability with parents’ considerations in mind. There was an exception where parents could delay the streaming until the end of compulsory education two years later; this exception, however, became the rule with 90 percent of students delaying tracking (Winther-Jensen 1980). After compulsory education, students could leave school, move up to the 3 year *real* department with traditional academic curriculum, or continue education in the existing institution for up to three more years (Winther-Jensen 1980). In order to improve access to higher education, the government also added a 2 year general education stream (HF) in 1960, which is for students who have finished 10 years and, along with the *gymnasium*, provides access to tertiary education.

In the mid-1960s, the *Folketing* created a 9-point program, which laid down plans for a 10 year comprehensive school. The plan arose as a result of the ‘social inheritance’ debate that related social inequality to education institutions that reproduced family wealth across generations. The 1975 Act combined primary and secondary to make a compulsory 9 year program with voluntary 10th year. There existed two legal exceptions where streaming could exist: children with exceptional difficulties could be removed for remedial learning and for math, languages and sciences both a general and an advanced course existed where placement depended on parental

prerogative (Winther-Jensen 1980). Despite this clause, however, roughly 400 of the 1400 *folkeskolen* eliminated streaming altogether (Winther-Jensen 1980).

The debate over the 'U-90' Report issued 1978 marks a turning point in education policy, where the focus shifted from equality to quality of education (Rasmussen 2002). First, the content of the report is divided between issues of equality and new issues of linking education to working life. Second, liberal and conservative parties were extremely critical of calls for greater equality in education, unenthused by a larger role of the state in education policy and equating equality with uniformity (Wagner 1978). Wagner elaborates: "In Parliament the debate was mostly negative: 'that everybody should be equal means everybody equally ignorant'; 'the school as an institution to question the values of home means a new authorised 'episcopal church' in which the state becomes the dictator of opinions and ethics'. 'The teacher becomes an instrument of the state.' 'The school may become a self-contained system as we knew the church during the period before the Reformation' (216). After Bourgeois parties won the election in 1982, "the political power balance also shifted and there was no longer a majority supporting educational equality as a dominant goal" (Rasmussen 2002, p. 631). The issue of inheritance and equality in education lost its centrality in the political debate as of the late 1970s and remained dormant throughout the years of Bourgeois rule in the 1980s.

Germany

After the defeat in the second world war, German education policy was established in accordance with the constitution of a newly constituted Germany state. In 1947, Allied Control Commission wrote a directive to the German ministers that called for education to be comprehensive (Robinson & Kuhlmann 1967, p. 312). In the Soviet occupied areas, the *Einheitsschule*, covering eight grades was introduced in 1946, as a result of the Framework Education Act (Mitter 1991, p. 156). These comprehensive schools later became the Polytechnical High Schools, or *Polytechnische Oberschule*, in the German Democratic Republic in 1959. In 1991, the system of

differentiated secondary schools in West Germany was extended to the East Germany as a result of unification.⁹

The recommendation of a comprehensive school did not receive much attention from the West German political parties and interest groups, and the differentiated school system that existed before the war was maintained. The Basic Law, or *Grundgesetz*, which governed West German education, incorporated some of reform suggestions of the Commission, but the calls for a unified primary and secondary school were not addressed.

In 1953, the federal government together with the *Länder* appointed a committee of experts, the *Ausschuss für das Erziehungs- und Bildungswesen*, which assessed necessary reforms. The committee recognized the low ability of the West German education system to respond to demographic changes. In particular, the low percentage of students who completed secondary education motivated the committee's reform proposals, a concern that was echoed in the OECD's negative evaluation of the West German education system in both 1960 and 1970. Among other critiques, the OECD contended the differentiated school system could not manage to cope with changed economic conditions.

As a result of these conditions, the debate over social stratification arising from the educational structure eventually became politicized. In particular, Ralf Dahrendorff played a fundamental role in bringing the issue into the parliamentary debate in his work on the illiberal education policies of the West German state (Dahrendorff 1965). Around this time, various groups came forward with different reform proposals.

Responding to these concerns, the *Ausschuss für das Erziehungs- und Bildungswesen* called for broad reforms, which it presented in the 1959 *Rahmenplan*. Although the recommendations did not fundamentally change the differentiated structure of the secondary schools, the plan did

⁹ Given that the East German states adopted the West German education system after reunification, I will not discuss further the East German education system and focus completely on the West German education system.

recommend a two-year *Förderstufe*, or comprehensive level, that would follow primary education for those students which were not already transferred to the Gymnasium. During these two years, teachers from all the secondary schools would work together to develop the entire cohort's academic potential before allocating students to the different secondary schools (Robinson & Kuhlmann 1967, p. 321).

Two additional reform proposals followed suit, which mimicked the *Rahmenplan* though only in certain respects. The Teachers' Union, *Arbeitsgemeinschaft Deutscher Lehrerverbände*, presented the *Bremer Plan*; the only difference between their proposal and the committee's proposal involved the former's suggestion that all students participate in the *Förderstufe*, and the similarities between the two is an indication of the effect of internal pressure on silencing more reform-oriented opinions (Robinson & Kuhlmann 1967, p. 321). The SPD introduced a more radical proposal in 1964, which retained the *Förderstufe* but only as a forerunner to the eventual unification of all secondary schools in the formation of a comprehensive secondary school, the *Gesamtschule* (Robinson & Kuhlmann 1967, p. 322).

Rather than representing fundamental reform, however, these efforts resulted in small changes and the failure to fully implement a comprehensive secondary school. The Ministers of Education from the different *Länder* arrived at consensus to establish alternative pathways into higher education, *zweiter Bildungsweg*, and to invest more highly in the vocational schools, although only 2 to 3 percent of those who completed higher education in 1967 did so via the *zweiter Bildungsweg* (Robinson & Kuhlmann 1967, p. 323). Those *Länder* with uninterrupted Social Democratic/Liberal governments set up unified, or *Gesamtschulen*, as an alternative to the differentiated secondary school, although the traditional school system remained an option in these areas.

Returning to the discussion about the opposition to comprehensive reforms, explanations for the lack of more far-reaching reforms can be classified as either a manifestation of weak state capacity

or the strength of *Realschulen* and *Gymnasium* teachers' and parents' lobby and its consequences. To begin, weak state capacity is first visible by the lack of institutions present to coordinate education policy. The decision in the Basic Law to shift powers to the *Länder* demonstrated more than an effort to balance centralized state control. As a result of the traumatic experience of total state control over education and culture between 1933 and 1945, any plans for giving the central state capacities in these areas generated strong suspicions (Smart 1975, p. 154). A federal Ministry of Education was only created in 1959, and it was only responsible for vocational and higher education (Geissler 2005, p. 76). Ever since 1950, there also existed the Standing Conference of the Ministers of Education of the States, which met frequently but, due to the veto powers of each *Land* Minister, failed to exercise a strong planning function (Smart 1975, p. 155).

Besides the weak planning capacity of the central state, the organizational lobby of the *Realschulen* and *Gymnasium* teachers and parents' associations, and the relative weakness of the elementary school teachers, presented a considerable obstacle to reform measures (Heidenheimer 1974; Robinsohn & Kuhlmann 1967). The example of the failure of the SPD comprehensive school plan is indicative of the power and preference of this group to retain their position of advantage. Since the more conservative parties opposed the comprehensive school plan by the 1950s (Robinsohn & Kuhlmann 1967, pp. 323-324), the general failure of this reform movement does not appear surprising in their long period of incumbency between 1949 and 1966.

Nevertheless, during this period, Social Democratic incumbency in certain *Länder* paved the way for local proposals for comprehensive schools. Although the Farmers' Association eventually joined the comprehensive school movement, the strong divisions within the teachers' unions and the relatively powerful lobby of the *Realschulen* and *Gymnasium* teachers' associations ultimately led to the defeat of the plan.

The capacity of the *Realschulen* and *Gymnasium* teachers' and parents' associations to stall reform hinged critically on the weakness of the elementary school teachers' associations. The teachers' association that boasted the highest number of elementary school teachers, the Education and

Scientific Workers Union, experienced difficulties recruiting new members due to divisions based on class, religion, and status. For these reasons, the union deferred taking a strong position on the comprehensive school issue, despite stark inequalities between primary and secondary schools; for instance, in 1956, primary school teachers earned roughly half of what secondary school teachers earned and, in 1950, per pupil expenditure at elementary schools was a third of that for secondary schools (Robinson & Kuhlmann 1967, p. 318). Only in the mid-1960s, after the comprehensive school debate had largely run its course, did the Education and Scientific Workers Union declare a preference for a 'differentiated *Gesamtschule*' (Heidenheimer 1974, p. 394).

The *Realschulen* and *Gymnasium* teachers and parents' associations therefore formed a coalition with organized industry and trade, and the church, in defense of the existing differentiated system (Robinson & Kuhlmann 1967, p. 324). A common defense used by these organizations to justify the existing school system was that a comprehensive school promoted *dirigisme* and would be submitting to the needs of social change rather than the intellectual needs of the individual (Heidenheimer 1974, p. 390; Robinson & Kuhlmann 1967, p. 324). In the face of the divided organizations of elementary teachers, the *Gymnasium* teachers' association, the *Philologenverband* was able to "safeguard all the advantages which its members traditionally enjoyed over the elementary teachers" (Fuhrig 1969, p. 106). At the *Land* level, the SPD in Hessen, despite a strong record of electoral success, nevertheless failed to take on 'fortress *Gymnasium*' in their efforts to promote a comprehensive school system due to the veto-powers of the State Parents' Council, of which only one out of fifteen was a member of the SPD (Heidenheimer 1974, p. 395).

The centrality of the organizational structure of both teachers and parents from the different educational levels is examined in an articulate study of comprehensive school reforms in Germany and Sweden by Heidenheimer (1974). Although working class parents and *Gymnasium* teachers represent barriers to reform in both cases, the power of the elementary school teachers in Sweden, Heidenheimer argues, was decisive in securing the passage of the comprehensive school reform in

1950. Whereas the lower expectations of working class parents for their children's' educational attainment became an excuse for anti-reformers in Germany for the futility of comprehensive reforms, the Swedish case proved that parental expectations can change quite quickly: despite initial scepticism around the time of the passage of comprehensive schooling in Sweden in 1950, by the mid-1960s, one-third of working class parents in Sweden hoped that their children would not only finish secondary school but continue on to university (Heidenheimer 1974, p. 391).

When the SPD managed to gain enough votes to join the CDU/CSU in a grand coalition in 1966, they placed education and training firmly on the agenda. On November 27, the Ministers for Education and Culture in the Federal Republic of Germany, *Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung*, set up a pilot program for comprehensive schools. However, in 1982, the review of the pilot programs of the 78 comprehensive schools and subsequent inaction led to the 'consolidation' of the tripartite system (Mitter 1991).

Netherlands

In the immediate postwar period, proposals for a comprehensive lower secondary school were made by social democratic and confessional coalitions (Bronneman-Helmerts 2008). However, none of these proposals developed into actual draft bills.

The Bill on Continued Education (or all post- primary education) passed in the Dutch parliament in 1963. Called the 'Mammoth Act,' the Bill pulled on ideas motivating reforms in other Western European countries at the time. One of the key steps of the Bill was to reduce the previous seven options facing primary school leavers to three, a university preparatory option (VWO), general school option (HAVO), and a vocational school option (VMBO). The vocational track, VMBO, is followed either by SBO or an apprenticeship. The general upper secondary track, HAVO, is followed by professional education, HBO. The pre-university track, VWO, is followed by university, WO. Through this consolidation of higher secondary education, the Act created the structure of education that exists today.

In addition, in order to facilitate the transfer to secondary school, the first year of secondary school was to act as an orientation period, during which all academic topics would be taught (Stellwag 1967). In this way, the Mammoth Act did make some steps to facilitate the introduction of a comprehensive lower secondary school. The Minister of Education Veringa and the Minister of Social Affairs Roolvink, who were both members of ARP, recommended experiments with compulsory education at the lower secondary level (Wolthuis). Although the PvdA and the trade unions supported immediate legislation introducing a comprehensive lower secondary school, the confessional parties wanted to wait for the results of the experiments whereas the right liberals, the VVD, and the employers opposed a full integration of the lower secondary school system (Wolthuis 1999). The ARP stood out as an exception to the remaining confessional parties by becoming more open to ideas of social justice and a strong welfare state in the 1960s.

In 1973, Dr. J.A. van Kemenade from the PvdA became the Minister of Education under a new center left government. His appointment represented the first time since the end of the war that a non-denominational party held the position as Minister of Education (Wolthuis 1999). He drew up plans for a comprehensive middle school, which would replace the existing lower secondary school structures and therefore delay streaming until the eleventh school year when most students are on average 15 years of age. The plan was well received by education ministers outside of the Netherlands (OECD 1976), but drew much criticism from professional groups within the Netherlands (Wolthuis 1999). Although experiments with a comprehensive middle school began in 1976, the election of a new CDA-VVD government in 1977 meant that the topic of a comprehensive middle school was dropped (Wolthuis 1999).

In 1982, Christian Democratic-Liberal government introduced austerity measures in response to unemployment and slow growth, and merging schools became a way to save money. In 1985, primary schools and kindergartens were merged and the government supported the merger of all small primary and secondary schools as well as higher vocational institutions, by raising the

minimum size eligible for government funding. In this way, comprehensive education occurred in many schools as a matter of default.

In 1987, the Scientific Council for Government Policy, or the *Wetenschappelijke Raad voor het Regeringsbeleid*, which had since 1972 provided scientifically based policy advice to governments, published a paper called Basis Education. The policy paper advised the government to legislate a unified lower secondary school. However, the political parties never placed a comprehensive school on their political agendas and the school system remained differentiated.

Comparison and Conclusion

The brief overview of the comprehensive school movement in Denmark, Germany, and the Netherlands draws out the main policy developments that explain modern-day variation between these countries. In Denmark, the liberal party pushed for a single primary school and the social democrats led the movement for the comprehensive primary and secondary school that was eventually established in 1975.

Similar policy initiatives can be seen in Germany. Pressure for a single state-funded primary school existed around the beginning of the twentieth century and was finally realized during the period of exuberant social democratic reformism of the Weimar Republic. The immediate postwar period, however, was one of conservative governments and a weak state. Although the SPD stated a position for a comprehensive school, the *Gesamtschule*, they were only able to build a broad support coalition in Länder in which they held strong incumbency and even there, as the case of Hessen demonstrates, they faced strong opposition from parents and teachers' associations of the *Gymnasium* and *Realschule*.

The Dutch case differs from these two other cases. On the primary level, the intense school wars of the nineteenth century resulted in a compromise, the pacification, that secured equal funding for all schools although school structure was decided mainly by parents. Equal funding guaranteed

equal opportunity to some extent, although the strength of denominational divisions meant that students from different religious backgrounds did not compete in the labor market and information about inequality within religious groups remains quite scarce. In contrast to Denmark and Germany, however, the social democratic PvdA never promoted comprehensive schooling. Primary education did not exhibit class-based divides as a result of the pacification, but rather religious divisions that continue on to the present day. On the secondary level, policy circles advised the construction of a comprehensive lower secondary school, which never materialized. In 1985, however, some comprehensive schools were indeed created by default.

The comprehensive school debate can largely be understood as a conflict between social democratic parties on the one hand and conservative and Christian democratic parties on the other, where the former group of parties stress comprehensive schooling to support individual freedom, fulfill market needs, and reduce educational inequality and the latter group oppose comprehensive schooling in defense of class-based privileges embedded in stratified school structures. This explanatory framework fits quite well for the Danish and German case.

The Dutch case remains quite distinct from these cases since religious issues often took precedence over calls for unified school systems. In the debate over comprehensive reforms of lower secondary schools, however, the divide between the social democratic PvdA and the confessional and right-wing liberal parties are visible.

Relating these results back to the findings in Chapter 3 presents some difficulties, because the measure for dividing students by ability and vocation each constitute only 5 percent of the entire skill acquisition index. Therefore, whereas the finding that social democratic parties represent a key advocate of comprehensive school systems confirms the results in Chapter 3, the finding that Christian democratic parties predominantly blocked reforms at comprehensive schooling does not. To the extent, however, that stressing tracking by ability and vocation creates occupational divisions and therefore impinges upon the potential complementarities between different

occupational skill groups, these results confirm a key finding that Christian democracy is very infrequently part of the causal chain towards policies that promote skill transparency.

CHAPTER 6

CONTINUING TRAINING

Public policies and firm-based initiatives in Denmark, the Netherlands, and Germany reveal vast differences in policy responses to increased demand for firm-based continuing training. This chapter draws out factors that explain these differences.

The first section reviews the heightened need for training, the reasons why individual firms underinvest, and the possible policy responses of the government and business organizations to the dilemma of private underinvestment. The second section analyzes policy responses pursued by governments and business organizations in Denmark, Germany, and the Netherlands in order to expand our understanding of the differing extent to which these countries create opportunities to gain new skills and make these skills transparent.

Literature Review

Relevance of Firm-Based Training

Industrial restructuring and technological change increase demand for training and therein creates a new space for education policy to address the need for lifelong learning. Regulatory developments in the field of continuing training expand the opportunities of workers to enter training courses. For this reason, countries able to regulate firm-based training through a number of policy avenues such as levies or training funds, scored more highly on the skill acquisition index than those that were not. Within the group of countries that managed to regulate firm-based training, countries that negotiated centralized agreements on training, as compared to industry-based, received the highest scoring, because these agreements encompass the largest number of workers. In short, countries that develop training policies, particularly on a centralized level, are

expected to create relatively more opportunities for workers to undergo training and should therefore demonstrate higher levels of training activity.

Problems in Supplying Training Opportunities

Despite the growing need for more training, various issues may preclude the expansion of market responses to meet these needs. The most prominent contribution to this debate includes Becker's (1964) theory for the willingness of firms to invest in training. Becker conceives of skills as either general or specific. According to his model, firms are willing to invest in specific but not general skills, because the latter are mobile and firms cannot guarantee a return on investment in these skills. As such, the theory predicts that firms will subtract training costs from trainees wages in the case of general skill training or establish an apprenticeship contract where initial training costs are high, whereas firms would be willing to share the costs of training for specific skills.

Applied more directly to the case of post-compulsory (post-apprenticeship) training, Becker's theory predicts that firms will be relatively risk-averse in establishing further training opportunities. Where new skill needs are firm-specific, firms may be willing to pay for a share of the costs. However, firms will be unwilling to pay for, either financial or with work time, training that endows workers with marketable general skills, because such training would potentially incite poaching behavior from competing firms.

Contributing to this discussion, Dougherty and Tan (1999) list at least six reasons why market failures occur in the provision of continuing firm-based training. First, firms may exhibit non-profit maximizing behavior. Although identifying specific cases where training would definitively increase profits presents difficulties, it may in fact be the case that firms fail to pursue profit-increasing training opportunities. At the same time, sufficient training institutions may simply not exist to service the specific needs of a given firm. In contrast to irrational behavior on the part of the firm, individual workers may actually bear the responsibility for the failure to invest in training in cases where they underestimate the return on a training investment.

The second set of explanatory factors for why firms may not develop training involves problems in developing financing institutions. Since training must be financed partly from wage costs à la Becker, wage rigidities caused by minimum wage legislation and compressed wage structures remove the regulatory tools to finance training. An underdeveloped risk market precludes investment in training, because the deferred return on training creates a reliance on credit borrowing options that in fact do not exist. Finally, in-firm training may also face severe financing problems because, in contrast to apprenticeship training, workers who have completed initial training will be unwilling to put up with wage cuts in exchange for training and should expect wage increases in line with productivity increases.

Policy Responses to Underinvestment by Individual Firms

Underinvestment in training, caused by the various factors outlined above, can be addressed by public policies such as informational campaigns to promote training, investment in training facilities, and financial incentives. In terms of financial incentives, governments may create levies on firms or design tax deductions. At the same time, employer organizations can create also establish industrial training funds. The next section elaborates on the policy responses of Denmark, Germany, and the Netherlands in order to assess the factors which explain the varied capacity for policy innovation in each country.

Case Study Analysis

Denmark

In Denmark, there is a long history of adult education, or *folkeoplysning*, tracing back to the adult high schools, *folkehojskole*, established in the nineteenth century and government sponsored training programs set up in the 1950s to deal with the high percentage of unskilled workers. The reforms in the 1950s and 60s led to a well established system of adult education courses and management structures. Adult vocational training, *arbejdsmarkedsuddannelser*, was run by tripartite boards in order to bolster the skill level of most workers. On the national level, the

tripartite Educational Council, *Uddannelsesrådet*, oversees the content of training content. There are also fifty Further Training Councils, *Efteruddannelsesudvalgene*, which also help to develop courses and are organized by sectoral or occupational divisions. This structure follows from the 1937 agreement that established a system of ‘occupational self-governance,’ or ‘*det faglige selvstyre*.’

In light of greater training needs in the late 1970s, the Employers’ Reimbursement Scheme, *Arbejdsgivernes Elevrefusion*, was set up in 1977. The scheme was financed from employer contributions and funded training activities. In 1989, contributions totaled 674 million Danish kroner, which grew to 2,323 in 2007. Due to rising training costs in the 1990s, the government subsidies helped to cover additional costs, which first totaled just under 8 billion Danish kroner in 1990 and increased to just over 12 billion in 2007.

Besides supply-side factors leading to higher training activity, increased pressure for training opportunities increased in the 1980s and early 1990s. Developments during this period linked firm-based training to training measures for the low-skilled and unemployed. The adult education support scheme, VUS, was established in 1989 and provide workers with low skills reduced working time funded by unemployment insurance in order to participate in training courses (Compston & Madsen 2001). In 1991, a broad coalition of conservative, liberal and social democratic parties along with the peak collective bargaining organizations complemented this original legislation by allowing an unemployed individual to replace the worker undergoing training. In 1992, the trade unions also managed to push through the Paid Time Off for Education Bill, or *Betalt Frihed til Uddannelse*, which allowed employed workers two weeks off for educational purposes.

Germany

In contrast to Denmark, there is no strong public policy focus on firm-based continuing training in Germany. The system emphasizes rather the initial period of education. However, attempts have

been made to develop the area of adult training since about 1970. In that year, the Education Committee published the Structural Plan for the Education System, *Strukturplan für das Bildungswesen*, which emphasized the need for adult education.

The late 1970s witnessed a host of different policies initiatives, some of which became law, that together tried to expand the role of the state in adult education. Most importantly, the Länder each passed legislation on adult education during this period. Efforts to expand the state's role, however, did not grow deep roots and the movement stagnated in the early 1980s and by 1993 an implicit agreement was struck that adult education would be allocated to the private sector (Nuissl & Pehl 2000, p. 14).

As part of the Alliance for Jobs, Training, and Competitiveness, *Bündnis für Arbeit, Ausbildung und Wettbewerbsfähigkeit*, in 2001 employers recognized the need for more training, but few coordinated solutions to higher training demand had indeed at that point been developed. Workers within the metal-working industry pushed for greater rights in terms of training and qualifications in the 2001 bargaining round. These demands stemmed from a campaign organized by the trade union IG Metall, entitled Decent Work, or *Gute Arbeit*, which involved a survey to several thousand workers in over 400 companies. In April 2006 after much negotiation, IG Metall and Gesamtmetall arrived at a collective agreement that contained an explicit chapter on the responsibilities of the employers to provide training opportunities. Given the lack of coordinated solutions to training needs, it is perhaps not surprising that firms have developed their own individualized training programs or that the private training market remains similarly varied and disorganized.

Netherlands

In the Netherlands, the debate over the need for more firm-based training is embedded in a broader discussion about the importance of employability. While definitions of employability abound (McQuaid & Lindsay 2005), a working definition taken from the Confederation of British Industry

explains: “Employability is the possession by an individual of the qualities and competencies required to meet the changing needs of employers and customers and thereby help to realise his or her aspirations and potential in work” (CBI 1999, p. 1). Given the weaker capacity of employers in the last two decades to guarantee long-term job stability, workers face the a heightened need to maintain their competitiveness on the external labor market despite weak employer incentives to provide training, as detailed above in the theoretical section. Employers share an interest in coordinating training policies that aim at improving employability in the labor market in general, because of their interest in developing high skilled workers. Due to the preference to increase economic growth and reduce labor market marginalization among low-skilled workers, the government also theoretically holds an incentive to support projects aimed at improving employability. In short, employability infers a implicit bargain whereby a relaxation of the commitment towards job stability is met with expanded opportunities for skill-upgrading. Expanding this new employability agenda means developing awareness of the positive aspects of employee mobility as well as overcoming collective action problems within firms with regards to training provision.

In 1984, the government-appointed Wagner Commission agreed that training should be the joint responsibility of the government, employers’ organizations, and training institutions. The consequence of these agreements was a boost in the number of apprenticeship places provided, the presence of business groups on governmental committees on training, and, most importantly, the establishment of a coordinated financing system for firm-based training. In the mid-1980s, sectoral training funds, or *opleidings en ontwikkelingsfondsen*, were formed. The source of funding is a levy on the gross wage costs of firms within that sector. The average levy is roughly 0.5 percent of wage funds, where levies in the retail industry can be as low as 0.1 and in the construction industry as high as 3 percent (Meijers et al 2006, p. 7).

In 1990, a second commission, called the Rauwenhoff Commission, furthered these initial steps by establishing that all workers should hold a defined minimum qualification and calling for greater

coordination between training organizations and firms. The main consequence of these discussions was the Adult Education and Vocational Training Act, passed in 1996 and implemented in 1997. The Act created one coherent structure for initial and continuing education. By 1998, 46 regional training centers, or *Regionale Opleidings Centra*, were created from the approximately 1900 public institutions. Students who successfully completed coursework at these regional centers left with a nationally recognized qualification, and those unable to complete the entire coursework nevertheless received qualifications for the individual courses, or modules, that they did indeed manage to complete, which theoretically facilitates later completion.

Individual companies also developed their own approaches to increase employability. Stork, a Dutch engineering firm, developed a 'mobility centre' called Mobility 2000 which aims to increase internal flexibility by shifting workers within the company to address fluctuations in demand. KLM also boasts an employability center, which facilitates internal as well as external mobility since employees are free to discuss future career plans either inside or outside the company.

Comparison

The overview of firm-based training in Denmark, Germany, and the Netherlands demonstrates that Denmark and the Netherlands have, over the course of three decades, established quite articulate firm-based approaches to addressing demand for training, whereas Germany lags and has only recently witnessed the inclusion of training in an important collective agreement. The differences described above between Denmark, Germany, and the Netherlands can be substantiated by comparative data sets that measure training activity. Conducted in 2000, the Continuing Vocational Training Survey II provides information about the structure and frequency of firm training in these three countries.

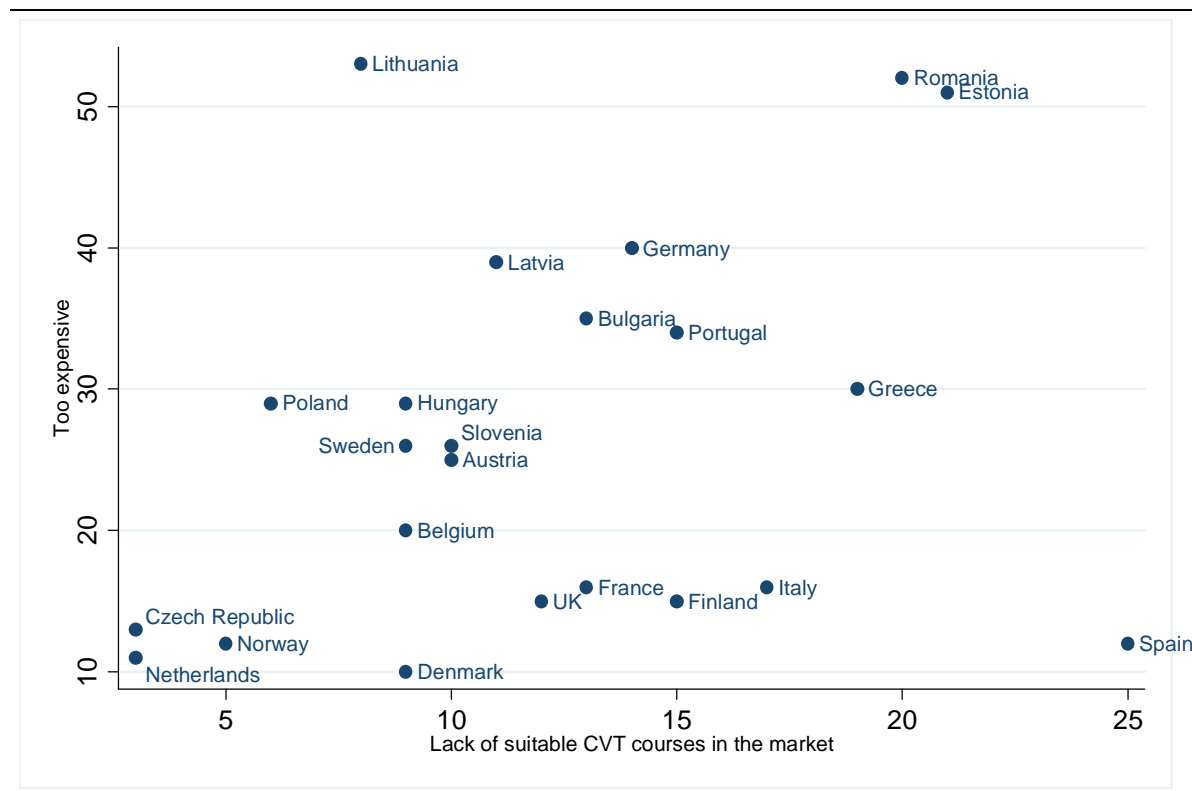
Table 6.1 Training Activity and Forms of Agreements (measures are percent of all firms in sample)

| | Training firms | Firms with impact of public measures on CVT | Firms who establish workers' training needs | Firms with a training budget including provision for CVT | Firms with a training plan including CVT | Firms with an agreement on CVT |
|----------------|----------------|---|---|--|--|--------------------------------|
| UK | 90 | 45 | 81 | 27 | 42 | 10 |
| Norway | 86 | 5 | 55 | 28 | 23 | 20 |
| Denmark | 85 | 33 | 73 | 25 | 24 | 23 |
| Austria | 81 | 43 | 66 | 22 | 20 | 4 |
| Sweden | 78 | 37 | 73 | 34 | 27 | 8 |
| Finland | 77 | 25 | 63 | 23 | | 6 |
| Netherlands | 75 | 52 | 84 | 20 | 17 | 7 |
| France | 74 | 56 | 61 | 42 | 29 | 17 |
| Czech Republic | 72 | 21 | 69 | 19 | 19 | 2 |
| Slovenia | 72 | 30 | 72 | 22 | | 4 |
| Germany | 69 | 18 | 41 | 18 | 15 | 3 |
| Estonia | 67 | 20 | 75 | 14 | 11 | 8 |
| Belgium | 63 | 60 | 66 | 19 | 22 | 2 |
| Hungary | 49 | 0 | 69 | 10 | 12 | 2 |
| Spain | 47 | 38 | 63 | 11 | 16 | 8 |
| Lithuania | 46 | 15 | 68 | 8 | 9 | 1 |
| Portugal | 44 | 54 | 56 | 10 | 19 | 8 |
| Romania | 40 | 8 | 72 | 10 | 7 | 4 |
| Latvia | 36 | 24 | 43 | 7 | 6 | 1 |
| Poland | 35 | 25 | 84 | 6 | 9 | 1 |
| Italy | 32 | 17 | 43 | 8 | | 5 |
| Bulgaria | 29 | 32 | 72 | 6 | 9 | 2 |
| Greece | 21 | 59 | 76 | 7 | 5 | 3 |
| AVERAGE | 59.5 | 31.2 | 66.3 | 17.2 | 17.1 | 6.5 |

As Table 6.1 shows, the number of training firms is high in most all countries. The highest percentage of Danish firms exhibit training activity followed by Dutch and then German firms. Almost double the percentage of firms in Denmark and the Netherlands, or 73 and 84 percent, respectively, assessed workers' training needs, whereas only 41 percent of Germany firms did so. Roughly 20 percent of firms in all three countries have a training budget for continuing training and this corresponds closely with the percentage of firms also drawing up a training plan for their workers. Only in Denmark, however, do firms appear to commit strongly to training by establishing an agreement on continuing training.

Looking more closely at firms without any training activity in Figure 6.1, Danish, German, and Dutch firms report quite different results for the lack of appropriate courses and the expense of existing courses in deterring them from training. In Germany, firms cited these two reasons most often. In Denmark and the Netherlands, the expense of training courses was infrequently cited as a reason, only by roughly 10 percent of firms in both cases. Dutch firms almost never cited the unavailability of training courses as a reason for not training, although roughly 9 percent of Danish firms did.

Figure 6.1. Reasons from Non-Training Firms on Why Not Training



Looking at the provision of training courses in Figure 6.2 also produces some interesting patterns. In Denmark, training is largely a public endeavor with provision by public institutions accounting for 40 percent of all training courses matched by 40 percent of courses provided by private institutions. The public aspect is only slightly weaker in the Netherlands, where 30 percent of training is provided by public institutions and 50 percent by private institutions. In Germany, the role of public institutions is much weaker, as roughly 15 percent, although private institutions provide 55 percent of all courses. The relatively larger role for public institutions in Denmark and the Netherlands confirms the case study data, which detailed the longstanding commitment of the state to training. In both cases, state oversight was matched with strong coordination on the part of the social partners. In Denmark, the highly developed institutional structures at all levels of firm organization generate consensus on training where considerable pressure is exerted from the peak organizations. In the Netherlands, the state has certainly played a central coordinating role and provided a larger percentage of the training courses, although industry organizations govern the financing of training through training funds.

Graph 6.3 provides an additional insight into the German case by demonstrating the relatively large role of the social partners in providing training. Although the role of trade unions is quite small in all cases, Germany, along with Denmark, rank the highest with 4 and 3 percent of training provided by trade unions in each case, respectively. Employer organizations and chambers of commerce provide a high ratio of total training, however. Roughly 22 percent of all training in Germany is provided by these organizations, compared to about 5 and 2 percent in Denmark and the Netherlands. The high percentage of employer-sponsored training suggests a substitute for the relative lack of public training facilities.

Figure 6.2. Relative Use of Public and Private Institutions by Training Firms

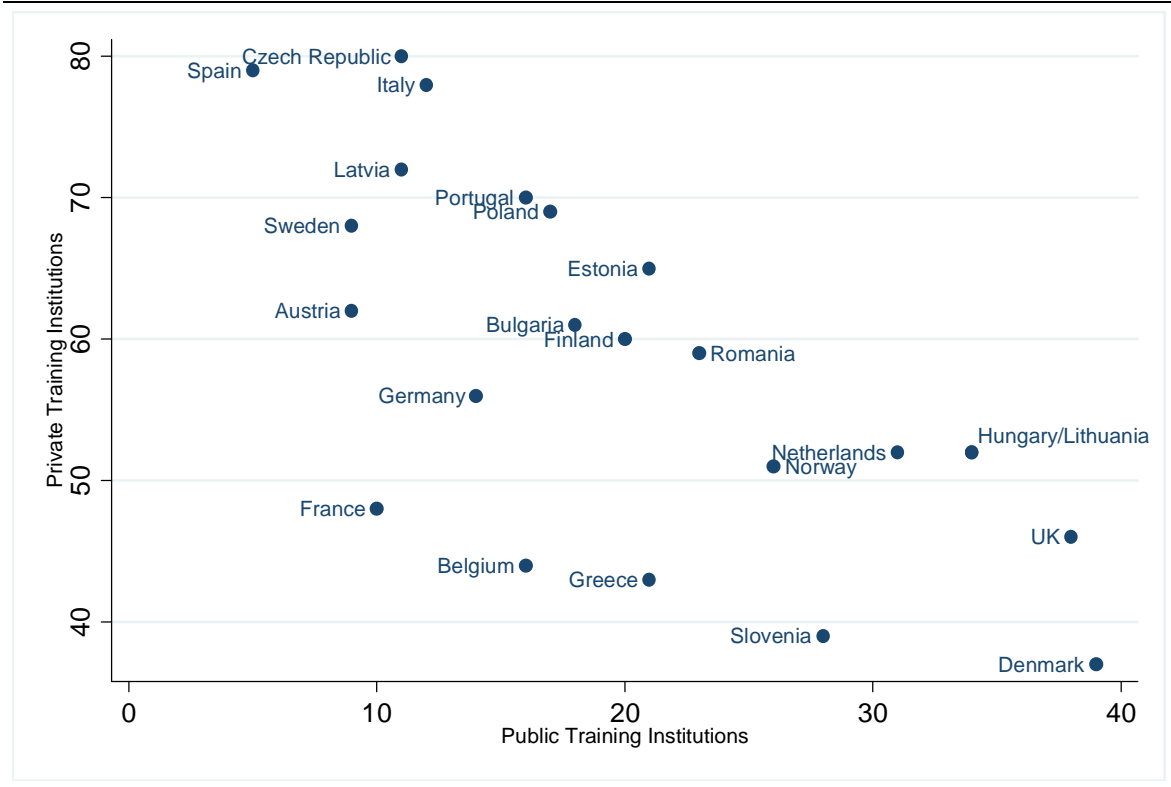
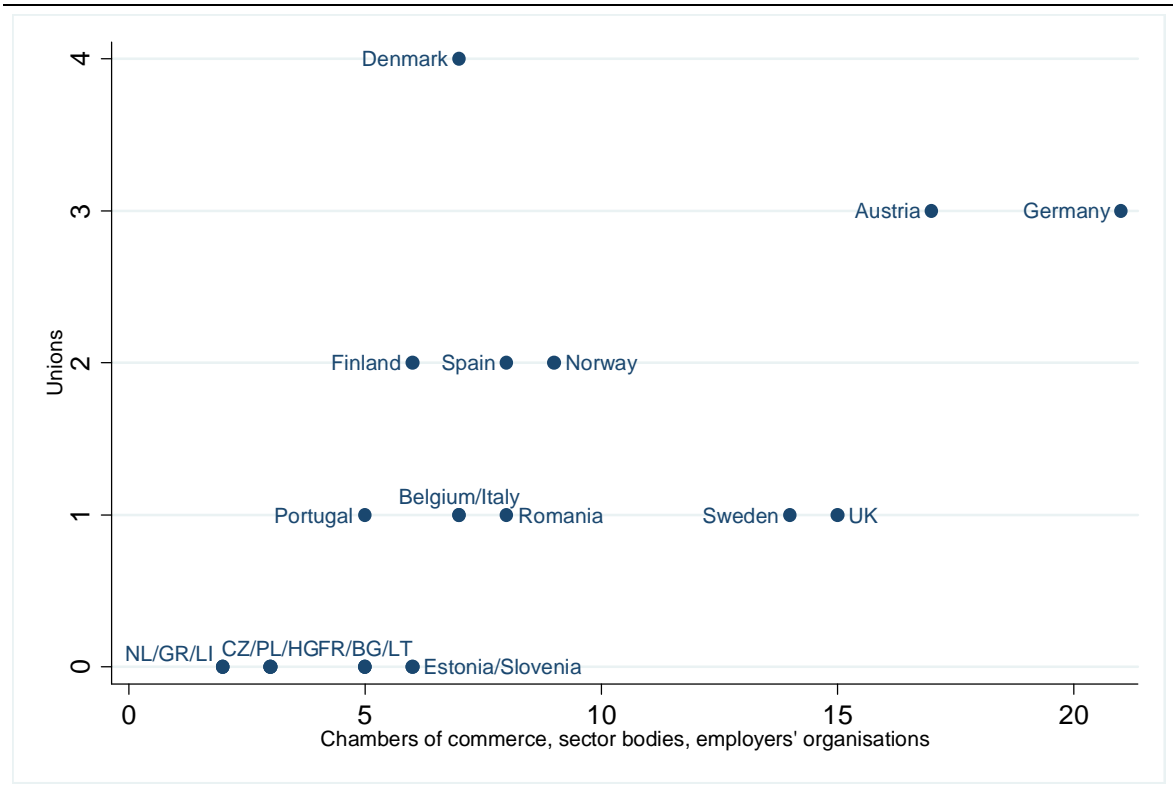


Figure 6.3. Relative Use of Union and Employer Organization Training by Training Firms



Conclusion

Denmark and the Netherlands have managed to create broad consensus for coordinated responses to the demand for higher levels of firm-based training. In Denmark the passage of the Employers' Reimbursement Scheme in 1977 instigated a strong commitment on the part of employers to training, which was coordinated largely through organizational networks at different levels of firm structure, from the individual firm to the peak organization. The state mirrored the employers' commitment to training, but expanding public facilities for training and later by contributing considerable financial support. In the Netherlands, tripartite organization often produced results, such as the training funds established in the mid-1980s, although the management of training policy was oftentimes delegated to local authorities. Finally, in Germany attempts at putting training on the public policy agenda were largely unsuccessful. The state did not appear to have the coordinative capacity to develop collective policy proposals. The social partners do indeed play a role in the provision of training, although these organizations do not appear to have a strong capacity in influencing firm-training as seen in the lack of coordination between firms.

The discussion here provides some validation for the results in Chapter 3 on the determinants of the skill acquisition dimension. In particular, the principal pathway towards education policy that promotes skill acquisition included well organization social partners in a centralized bargaining system, a relatively dominant left party, high public employment, and few veto points. Both Denmark and the Netherlands conform quite well to this path, whereas the high level of veto points and weaker history of left party incumbency means that the German case does not fit very well.

CHAPTER 7

ACTIVE LABOR MARKET POLICIES

Since the mid-1970s, rising levels of unemployment, and long-term unemployment in particular, instigated a policy debate over how to increase both the incentives and capacity of individuals to take up paid employment. Given the traditional passive nature of welfare state policy, increasing employment rates required a comprehensive reassessment of the relationship between the worker and the market (see Peters et al 2004). The new policy debate emphasized the need to ‘activate’ or increase the ‘employability’ of marginalized workers, and this discourse underlined the importance of shifting the focus of social policy from income maintenance during labor market absence to income support for renewed labor market participation. Active labor market policies assumed pride of place within this new policy agenda, and, indeed, throughout the 1980s and 1990s, shifting funds from passive to active labor market policies became an objective of many countries (Blondal & Scarpetta 1998).

Beyond sharing a common objective of increasing employment levels, Denmark, Germany and the Netherlands exhibited marked differences in the policies they each applied to attain these goals, the salience of active labor market policies within this policy kit, and the overall success of these reforms in terms of reducing unemployment. In order to illuminate the factors that account for these divergent reform pathways in these three countries, I review the definition of active labor market policies and explain how changes in active labor market policies fit into the broader process of welfare state change. Second, I sketch the historical development of active labor market policies in Denmark, Germany, and the Netherlands, before analyzing more closely changes in active measures since the mid-1970s.

Active Labor Market Policies: Definitions, Relation to Skill Acquisition, Skill Transparency, and Welfare State Reform

The implementation of active labor market policies stretch back to the labor exchanges of the late middle ages and play a large role during industrial downturns in the early twentieth century. On the other hand, the financial unsustainability of passive social policies combined with the imperative of the state to address unemployment problems carved out a central role for activation policies on the policy reform agenda aimed at adjusting labor market policy to the changed economic climate since the mid-1970s. Welfare state reforms during this period work to attain three theoretical goals, according to Pierson (2001): *recommodification*, which means increasing individuals' work incentives, *cost containment*, which means reducing budgetary costs, and *recalibration*, which means either rationalization, or the realignment of existing programs to new conceptions of the role of social policy, or updating, or the reform of policies to address new social needs.

Table 7.1 below provides a schematic of different policies that influence employment levels. Active labor market policies represent a subset of the policies listed in Table 8.1. Specifically, based on OECD and Eurostat definitions, active labor market policies refer to micro-level policies including wage subsidies, training, counseling, vocational rehabilitation, and direct job creation.

Relating this discussion to the theoretical dimensions of skill acquisition and transparency developed in Chapter 2, active labor market policies correspond mainly to the dimension of skill acquisition, where active policies represent opportunities for participants to acquire new skills. For instance, training programs aim to provide unemployed or marginalized workers with marketable skills. Wage subsidies to private firms and public sector jobs also portend to provide participants with marketable skills through on-the-job experience.

Although active labor market policies were only discussed with reference to the skill acquisition dimensions, they also may relate to the skill transparency dimension. Counseling and guidance

services can, under certain circumstances, help reveal the breadth of skills that individuals hold from both formal education and on-the-job experience. Where public employment agencies simply act as a forum between job-seekers and employers, this function is not likely to exist. However, especially recently, placement counselors conduct examinations of the different competencies of job-seekers, which improves the quality of information with which to assess the fit of an individual to a given job profile. In short, the expansion of active labor policies creates opportunities to gain new skills among marginalized workers and can also work to make these workers skills more transparent.

| Table 7.1. Activation Policies | | |
|--|--|---|
| | Demand | Supply |
| Macro Influencing economic, social and institutional contexts and conditions | <ul style="list-style-type: none"> • National wage policy • Government budget policy • Monetary policy • National investment policy • Trade and industrial policy | <ul style="list-style-type: none"> • National education policy • Health programs • Care provisions • (De)commodification of labor, e.g. pensionable age rules, early exit programs, social insurance policies |
| Micro Influencing individual qualifications, choices and behavior | <ul style="list-style-type: none"> • Wage subsidies • Tax benefits • Quota schemes • Bonuses and penalties • Additional labor (<i>direct job creation</i>) | <ul style="list-style-type: none"> • Training and schooling • Counseling and guidance • Vocational rehabilitation • Bonuses and penalties • Work enforcement • Work related benefit rights |

Source: (van Oorschot 1999). Italicized parts not in original.

The main explanatory factors for the expansion for active labor market policies include changed economic conditions, social democratic incumbency, employer organization, and external pressure from the European Union. Rising unemployment derived from lower growth rates and industrial change constitute a central explanation for the massive growth in active labor market policy expenditure across advanced industrialized countries.

Beyond the changed economic climate, the political science literature explains the expansion of active labor market policies as the result of high organizational capacity of workers as well as employers, which provides leverage in explaining different levels of spending across countries. From within the power resources approach, many studies demonstrate a relationship between social democratic incumbency and spending on active labor market policies (Esping-Andersen 1990; Huber & Stephens 2001; Korpi 1983). Whereas the power resources approach generally views social policy largely as a redistributive policy, scholars from within the varieties of capitalism approach understand social policy as influencing the productive capacity of firms. Citing the positive effects of active measures for worker output and motivation, studies demonstrate a link between employer organization and spending on active measures (Martin 2004a; Martin & Swank 2001; Martin & Swank 2004).

External pressure to expand active labor market policies also originates from the European Union. With the goal of increasing innovation and knowledge accumulation in Europe, the European Union formed a unified approach towards activation. In November 1997, the European Union launched the European Employment Strategy at the Luxembourg Job Summit. The Summit created targets for employment rates in the EU. By 2010, the target rates aim at 70 percent employment for the working age population, 60 percent for women, and 50 percent for older workers. Guidelines developed since the Barcelona Council work to maintain social standards and the functioning of the labor market. Guidelines 5 and 8 are central to the activation approach:

5. Increase labor supply and promote active ageing¹⁰

Member states will promote an adequate availability of labor and employment opportunities to support economic growth and employment, taking into account labor mobility, as indicated in specific guideline 3. In particular, they will:

¹⁰ See Peters M, Dorenbos R, van der Ende M, Versantvoort M, Arents M. 2004. Benefit Systems and Their Interaction with Active Labor Market Policies, European Commission

- Increase labor market participation by using the potential of all groups in the population, through a comprehensive approach covering in particular the availability and attractiveness of jobs, making work pay, raising skills, and providing adequate support measures
- Promote active ageing, notably fostering working conditions conducive to job retention—such as access to continuing training, recognizing the special importance of health and safety at work, innovative and flexible forms of work organization—and eliminating incentives for early exit from the labor market, notably by reforming early retirement schemes and ensuring that it pays to remain active in the labor market; and encouraging employers to employ older workers.

In particular, policies will aim to achieve by 2010 an increase by five years, at European Union level, of the effective average exit age from the labor market (estimated at 59.9 in 2001). In this respect, the social partners have an important role to play. Any national targets should be consistent with the outcome expected at the European Union level and should take account of particular national circumstances and, where appropriate, give full consideration to the additional labor supply resulting from immigration.

8. Make work pay through incentives to enhance work attractiveness

Member states will reform financial incentives with a view to making work attractive and encouraging men and women to seek, take up, and remain in work. In this context, Member States should develop appropriate policies with a view to reducing the number of working poor. They will review and, where appropriate, reform tax and benefit systems and their interaction with a view to eliminating unemployment, poverty and inactivity traps, and encouraging the participation of women, low-skilled workers, older workers, people with disabilities and those furthest from the labor market in employment.

Whilst preserving an adequate level of social protection, Member States will in particular review replacement rates and benefit duration; ensure effective benefit management, notably with respect to the link between effective job search, including access to activation measures to support

employability, taking into account individual situations; consider the provision of in-work benefits, where appropriate; and work with a view to eliminating inactivity traps.

In particular, policies will aim at achieving by 2010 a significant reduction in high marginal effective tax rates and, where appropriate, in the tax burden on low-paid workers, reflecting national circumstances.

These guidelines portray the European Union's view of activation: Member States should increase employment while promoting both the quality of work as well as social cohesion and inclusion. The emphasis of the EU's strategy on both the availability and quality of employment arguably stems from two concerns. The first has to do with a desire to protect the social well-being of European citizens as an inherent good. The second, however, recognizes the domino effect that low-wage competition could have on European trade. While a neo-liberal dimension of European integration exists that promotes European integration without re-regulation at the European level, the regulated capitalism approach promotes regulation at the European in order to create a social democratic dimension to European integration (Hooghe & Marks 1999). The propagation of 'best practices' assembled from various national reform successes as well as the introduction of the 'open method of coordination' provided mechanisms for disseminating recommendations for how Member States should go about implementing activation policies.

Despite these common guidelines and goals, Denmark, Germany, and the Netherlands reveal marked differences with respect to the role of active labor market policies in each country's activation agenda.

In order to understand the different factors that account for these divergences, I will first provide background information on active labor market policies in each country prior to the mid-1970s, before analyzing the post-1970s in greater detail.

Historical Development of Active Labor Market Policies in Denmark, Germany, Netherlands

Assessing the historical development of social policy in Denmark, Germany, and the Netherlands reveals the long history of active labor market policies in these countries, although the salience of these policies in the broad scheme of welfare state policy remained quite small until the recent period. In all three cases, guilds organized the original labor exchanges that formed the foundation for modern-day public employment agencies. Beyond these placement services and other means-tested Poor Laws, active labor market policies remained minimal until the early twentieth century.

Policies constituting the core of the modern welfare state initially developed in the late nineteenth and early twentieth centuries and concerned the passage of passive social policies, which insured against social risks such as unemployment, sickness, and disability. The aforementioned social policies are passive insofar as income support occurs in times when recipients are not working and does not otherwise depend on the willingness of the recipient to work.

Table 7.2. Initial Legislation of Passive Social Policies

| | Unemployment Insurance | Sickness and Maternity Insurance | Old Age, Disability, Survivors Insurance |
|-------------|------------------------|----------------------------------|--|
| Denmark | 1907 | 1892 | 1891 (old age), 1921 (disability) |
| Germany | 1927 | 1883 | 1889 |
| Netherlands | 1949 | 1931 | 1901 |

Economic downturns in the early twentieth centuries witnessed the expansion of state-supported active labor market policies. This period also witnessed the rising political power of the social democratic parties in each country. In Denmark, the Social Democratic party attained a plurality in 1924, which it would remain until 2001 despite periods in governmental opposition. In Germany, the Weimar Republic ushered in a period of electoral wins for the Social Democratic party which only broke with the defeat to the National Socialists in 1932. In the Netherlands, in contrast, the Social Democratic PvdA never managed to collect more votes than the religious or liberal parties in the 1920s or 1930s. The different capacity of social democratic parties to win majorities in

Denmark and Germany provides one explanation for the relative abundance of active measures passed in these countries compared to the Netherlands in the period between the wars.

Contrary to the passive policies described above, these active measures provided income support that depended on and indeed aimed at facilitating labor market participation. In Denmark, besides the passage of the Social Reform Bill in 1933 which increased the universal nature of the aforementioned passive policies, trade unions and municipalities developed extensive work programs, where participants build sports areas, walking paths, and sometimes taught basic courses (Jonasen).

In Germany, the Weimar Constitution established the ‘right’ to work and the obligation of the state to uphold this right (Janoski 1994, pp. 63-64). In light of the growing unemployment problem especially among youth, the constitutional declaration led to the expansion of various state-led active measures. The Labor Exchange Law of 1922 created a employment office funded by contributions from employers and employees and responsible for job creation measures, and subsequent legislation in 1927 shifted the administrative authority to the social partners and the central government, thereby removing the powers of the local communities (Janoski 1994, p. 40 - 45). The Labor Exchange Law also replaced the transfer-based compensation system for unemployment, developed only in 1920, with a system of grants and loans for various job creation policies (Janoski 1994, p. 64).

In addition to building up a stronger system of public employment offices in the Netherlands in the 1920s from the initial nineteenth century labor exchanges (Gerritsz 1923), some municipalities such as Rotterdam also implemented a “two-for-one system” for male workers under 20, whereby this age group were restricted to part-time work in order to create more jobs (Winslow 1937). Beyond the employment services, however, active labor market policies did not represent a tool to fight unemployment, and the state and social partners generally focused on passive income support (Rodenburg 2004).

From these significant yet modest origins, the welfare state in the post-war period grew exponentially. Indeed, the development of welfare state regimes largely occurred in the thirty years between 1950 and 1980. In terms of political parties in government during this period of massive welfare state expansion, social democratic and religious parties experienced the highest rates of government incumbency. The political success of the Danish Social Democrats continued, and they governed for the first three decades of the post-war period either in majority coalitions with the *Radicale Venstre* or alone in minority coalitions. In contrast, in Germany, the religious CDU/CSU and the liberal FDP governed for the first two decades of the post-war period before the SPD managed to gain enough votes to enter into a grand coalition with the CDU/CSU in 1966. In the Netherlands, the government was characterized by oversized coalitions, which usually included one of the religious parties, KVP, CHU, or ARP, and either the social democratic PvdA or the liberal VVD.

Active labor market policies were increased in this period, although the massive expansion of passive social policy generosity eclipsed the small expansion of active measures. A central reason for the relatively small increases in active labor market policies in this period is due to the relatively low unemployment rate across advanced industrialized countries. Policy-makers recognized part of this problem as arising from the high levels of unskilled workers. To respond to this problem, the Social Democratic government developed five schools for unemployed unskilled workers, which were subsumed under the Act on Vocational Training for Unskilled Workers, *arbejdsmarkedsuddannelserne*, in 1960. The law provided for general vocational training for those lacking these skills. It also provided for additional facilities for the State Schools for Semi-Skilled Workers, or *Statens specialarbejderskoler*. From the beginning, these courses were structured as modular classes that were between 1 and 6 weeks in length.

In Germany, expenditures on active labor market policies remained quite low in the 1950s and early 1960s due to the strong economic situation. The recession of 1967-68 along with the new

SPD-CDU/CSU coalition paved the way for the path-breaking legislation of the Labor Promotion Law, or *Arbeitsförderungsgesetz*, of 1969. The law represented a massive expansion in expenditure of active labor market policies, which represented an increase of over 900 percent if comparing the three years before the law with the three years following the legislation (Janoski 1990, p. 118). Training opportunities represented the main policy tool expanded under the Labor Promotion Law, although direct job creation also made up a relatively large proportion of the newly enacted policies.

The development of active labor market policies in the Netherlands was minor in the first three decades of the postwar period. Even in situations of serious industrial restructuring, government programs were not developed to facilitate the movement of these workers into new jobs. Rather, “these workers were helped with negotiated social plans in which the unions tried to cushion the pain of redundancy with extra severance payments above otherwise modest unemployment insurance and social security payments” (Visser & Hemerijck 1997, p. 121). As such, even in periods when retraining measures were needed, passive social policies were used to facilitate adjustment.

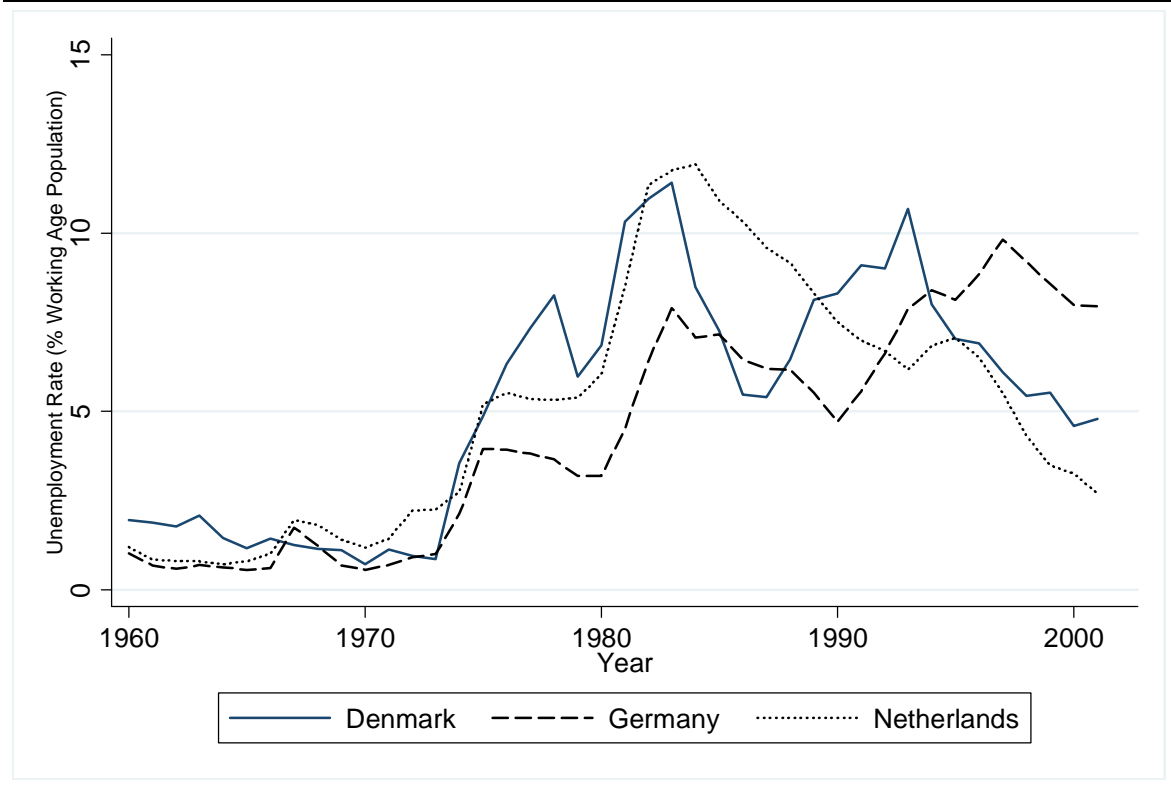
Mid-1970s Onwards: Active Labor Market Policies in the Period of Permanent Austerity

Whereas the golden years of welfare capitalism witnessed an expansion of benefits in most advanced industrialized countries, the mid-1970s ushered in a new era. The social and political foundations of leftist organizations were weakened and trade liberalization and capital mobility threatened to undermine national governments’ control over macroeconomic policy and therefore their capacity to provide social welfare. Moreover, dependency ratios, or the ratio of those drawing on welfare benefits to those paying into the benefits, increased dramatically as a result of lower fertility rates, an ageing population, and structural unemployment; coupled with falling productivity growth, financing the welfare state grew increasingly difficult.

The main labor market consequences of this new context included increased levels of unemployment as well as the heightened risk associated with nonparticipation. Whereas low growth increased unemployment, the inability of the state to absorb this growing risk led to heightened market dependency. In other words, precisely as the availability of working positions decreased, the need to obtain such positions in order to maintain one's standard of living increased.

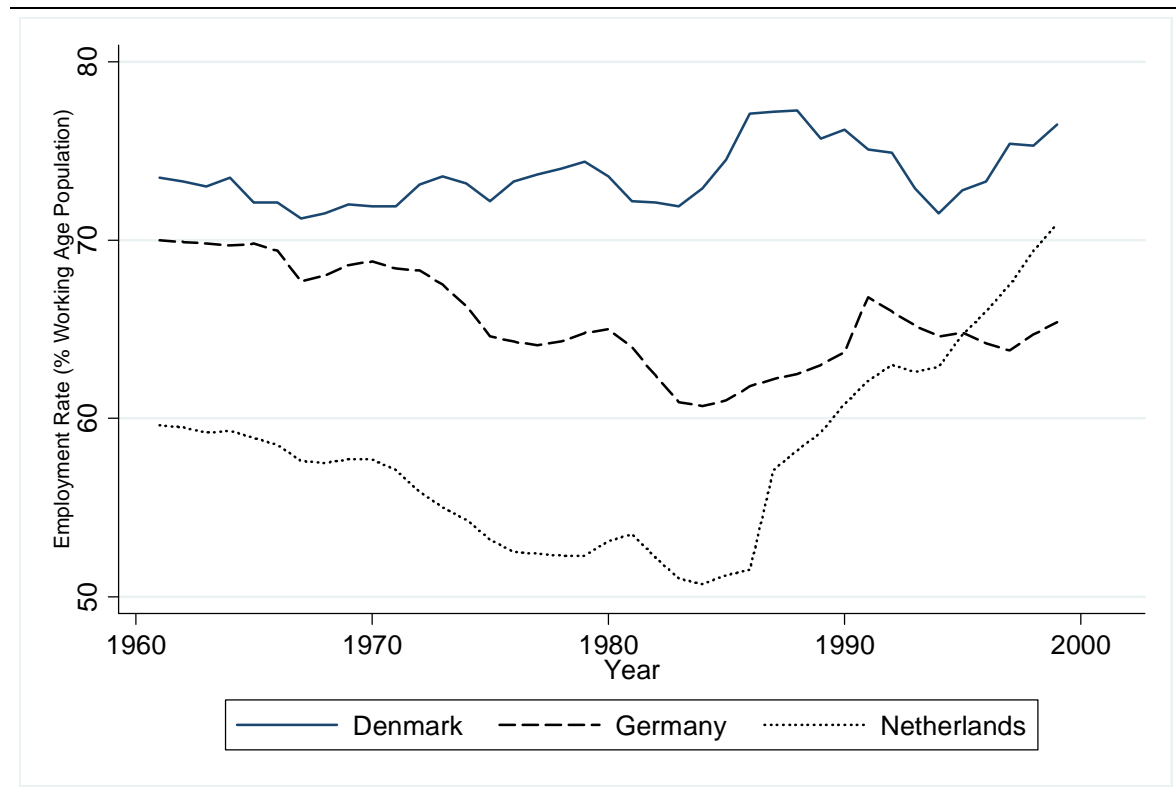
As Figure 7.1 illustrates below, the mid-1970s witnesses a stark increase in unemployment in Denmark, Germany, and the Netherlands. Also, whereas Denmark and the Netherlands demonstrate more serious problems earlier on, they also managed to reduce their levels of unemployment to a much higher degree than Germany by the late 1990s. At the same time, Denmark and the Netherlands differ markedly in the total percentage of the working age population employed in this period. Whereas roughly 73 percent of the Danish labor force was employed between 1960 and 2000, the Dutch labor force declined between 1960 and 1985 from roughly 60 to 50 percent. Only in the late 1980s and 1990s did Dutch employment levels grow rapidly to reach barely 70 percent by the late 1990s. Meanwhile, German employment rates as a whole declined between 1960 and 2000 from 70 to 65 percent. To summarize, despite initial unemployment problems in all countries and a very low employment rate in the Netherlands, both Denmark and the Netherlands managed to increase employment and reduce unemployment to a higher degree than Germany. By tracing social policy change in these three countries from the late 1970s until 2004 in each country, I examine below the political coalitions and related policy reforms responsible for these different outcomes in terms of unemployment and employment levels. In particular, I focus on the development of active labor market policies and their role within an 'active' welfare state agenda.

Figure 7.1. Unemployment Rates Between 1960 and 2000



Source: OECD.

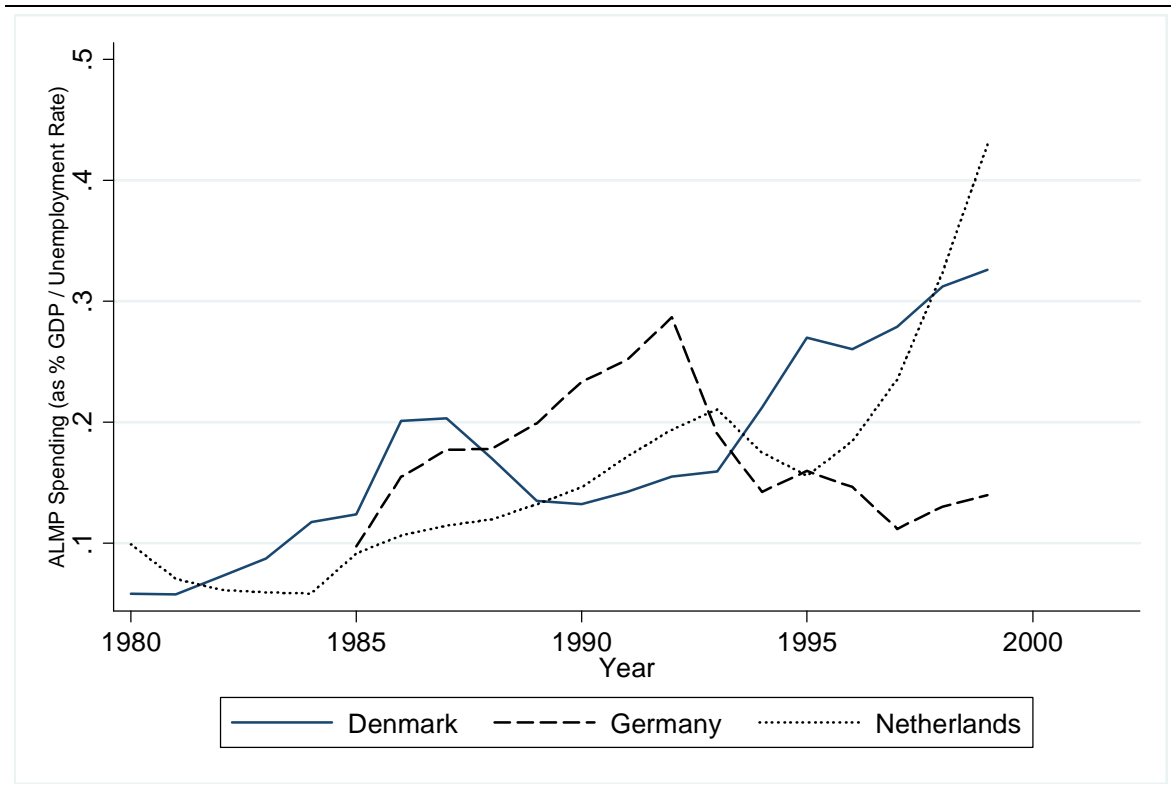
Figure 7.2. Employment Rate of the Active Population between 1960 and 2000



Source: OECD.

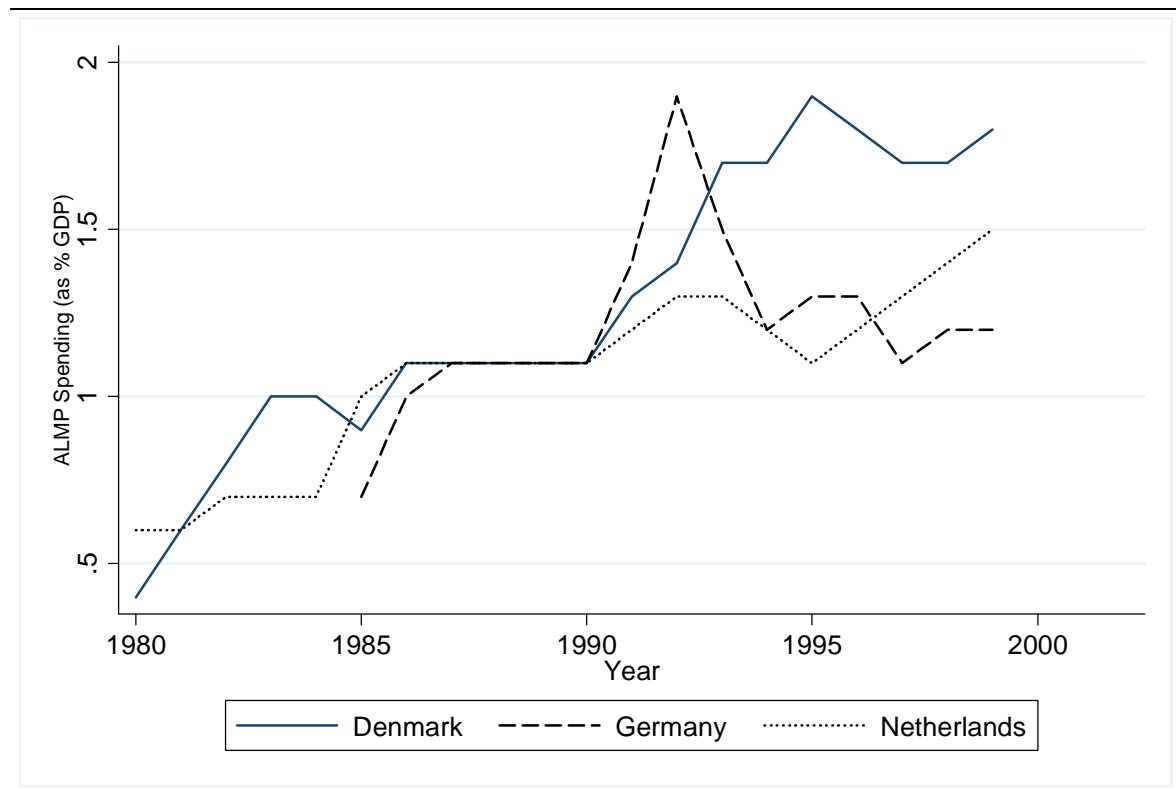
To provide an overview of the developments in active labor market policies in Denmark, Germany, and the Netherlands, Figure 7.3 shows an upward trend in spending between 1980 and 2000, which can be seen in Figure 7.3. All countries begin with quite low spending as a proportion of the unemployed, although Denmark and the Netherlands increase spending considerably at the latter half of the period. Whereas Germany spends highly in the early 1990s as a result of unification, spending decreases from 1992 onwards.

Figure 7.3. Spending on Active Labor Market Policies (as percent GDP/unemployment rate) between 1980 and 2000



Source: OECD.

Figure 7.4. Spending on Active Labor Market Policies (as percent GDP) between 1980 and 2000



Source: OECD.

Denmark

The Danish welfare state reflects the long incumbency of Social Democratic parties throughout the twentieth century. Despite a long tradition of adult training, the Danish welfare state nevertheless remained predominantly passive in nature until the Social Democratic reforms of the mid-1990s, which fundamentally shifted the Danish welfare state by making many forms of social welfare contingent on labor market participation. In contrast to the immediate post-war period, conservative parties governed during the 1980s, early 1990s, and early 2000s.

Social Democratic Coalition, 1977-1982¹¹

¹¹ The coalition included the Liberals, *Venstre*, from 1979 to 1981 and then the Social Liberals, *Radikale Venstre*, from 1981 to 1982.

At the beginning of this period, unemployment had reached 7.3 percent. This represents a massive increase from levels of below 2 percent throughout the 1960s and early 1970s. GDP growth was also suffering, at just 1.6 percent in 1977. The changed economic situation represented a new challenge for the Social Democrats, who had been in government for most of the post-war period. The party system was also under considerable strain since the “earthquake” elections in 1973 when a number of new parties entered the political scene.

The Danish Social Democratic led government embarked on a number of pro-cyclical policies. Part of these projects included wage subsidies to private firms, public employment projects at the local level and early retirement schemes (Torfing 1999, p. 12). From 1978 onwards, long-term unemployed were offered a subsidized job in the private sector for 9 months as part of the Job-Offer Scheme, *Arbejdstilbudsordningen*.

However, despite the active component, these policies were created in order to assure that the long-term unemployed did not lose eligibility for unemployment insurance since they were obliged to have worked at least 26 weeks in the last three years (Madsen 1992; Torfing 1999). This policy design demonstrates the continued dominance of the passive welfare state paradigm, where the main prerogative of social policy was to secure income support. Along similar lines, the post-employment wage scheme was established in 1979 as an early retirement scheme to soak up the excess labor supply.

*Bourgeois Coalition, 1982-1993*¹²

Unemployment had reached an unprecedented 10.3 percent the year as the bourgeois coalition entered office in 1982. Growth rates were at 3 percent in 1982, but this followed two years of negative growth in 1980 and 1981. While in office, the Social Democrats had been unable to

¹² The coalition was the “Four-Leaf Clover” from 1982 to 1988, including the Liberals, *Venstre*, the Conservatives, *Konservative Folksparti*, the Center Democrats, *Centrum-Demokraterne* and the Christian Democrats, *Kristendemokraterne*. From 1988 until 1990, the coalition included *Konservative Folksparti*, *Venstre* and *Radikale Venstre*. From 1990 to 1993, the coalition included *Konservative Folksparti* and *Venstre*.

produce wage restraint and manage the macroeconomic situation more generally. In 1982, they handed government control over to the bourgeois parties without calling new elections.

The bourgeois government in the 1980s managed to bring inflation under control. They froze voluntary early retirement, unemployment and sickness benefits for three years and introduced a waiting day for sickness benefits (Green-Pedersen 1999, p. 247). At the same time, numerous policies were expanded, including maternity leave, national pension, disability pension, child allowances and social assistance benefits (Green-Pedersen 1999, p. 247; Ploug & Kvist 1999).

This coalition maintained the subsidized job programs of the late 1970s, although, still within the passive welfare state paradigm, these programs continued with the main purpose of re-qualifying the long-term unemployed for unemployed insurance. In addition, there was an experimental “Youth Guarantee Experiment” which was to provide all youth with either training, education or a subsidized job, although “[t]he experiment was cancelled in the mid-1980s, and training and education never really became a dominant job strategy” (Torfing 1999, p. 13). In short, ten years of conservative control ushered in many liberal reforms, although, as Green-Pedersen points out, the government also expanded many social policies aimed at addressing new social risks during this period. Nevertheless, the early 1990s saw the worsening of the economic situation in Denmark, which called for more drastic reforms.

*Social Democratic Coalition, 1993-2001*¹³

By the early 1990s unemployment had reached 10 percent in 1993. Growth was at a steady zero percent. After entering government in the context of economic recession, the Social Democratic coalition passed key reforms that fundamentally altered the passive nature of the Danish welfare system. The roots of these reforms can be traced back to a series of White Papers published in the early 1990s (Torfing 1999, p. 14). Although these White Papers had been well-received by the

¹³ This coalition consisted of the Social Democrats, *Socialdemokratiet*, the Social Liberals, *Radikale Venstre*, and the Center Democrats, *Centrum-Demokraterne*.

previous bourgeois government, there had not been any serious legislative reaction to these publications.

The main effect of the Social Democrats' active labor market reforms of the 1990s was to limit considerably the duration of unemployment. These requirements were gradually made more restrictive: the duration of unemployment benefits was lowered from 7 to 5 years in 1993, 5 to 2 years in 1997, and finally to one year in 1999 (and six months for those under 25 years of age). The enforcement of this policy was secured by better counseling services for job-seekers and the massive expansion of wage subsidy and job creation policies that provided job opportunities for the unemployed where regular job placement was not sufficient.

The active labor market reforms consisted of five employment and training options in addition to leave schemes. The employment and training programs included: (1) Job Training that provided employers with a subsidy for hiring an unemployed person; (2) an individual who had been in a Job Training program for more than six months became eligible for training or education; (3) Public Sector Pool Jobs were provided by the Public employment agency and designed to provide employment for up to three years in a public organization; (4) The Entrepreneur Allowance Scheme is designed for those who have been unemployed for over five months and wish to begin their own business; (5) Finally, Job Rotation schemes are those in which employed workers take leave for education or training purposes during which time an unemployed worker fills in. The leave schemes extended the previous early retirement scheme and included three comprehensive leave schemes: the Child Care Scheme, the Sabbatical Leave and Educational Leave. The goal of these policies was fundamentally different than the training and subsidy programs introduced in the early 1980s. Participation in such program no longer functioned to qualify workers for passive rights (Benner & Vad 2000, p. 451).

The reforms garnered the support of all the main actors in the reform process including mainstream political parties and the peak union and employer organizations, LO and DA. The

only dissenter to the reforms was the LO affiliated union SiD, the General Workers Union. The union was disappointed with the additional cutbacks in benefit levels, which would adversely affect many of their members who worked in seasonal and part-time jobs (Petersen 1998).

Liberal Coalition, 2001—2005¹⁴

The new *Venstre* led coalition continued a shift from a rights based to a workfare system. The government also launched a campaign entitled 'Bringing more people into employment,' *Flere i arbejde*, which focused on rationalizing the organization of labor market policies and orientating training policy more closely towards the needs of the market. The government has cut back on the leave programs designed in the mid-1990s. They have also expressed interest in creating a state-run unemployment insurance fund and devolving responsibility for unemployment programs to the municipal level, which both raised the scorn of both LO and DA. Although the government repealed its proposal to create its own unemployment insurance fund and has not made progress on devolving powers to the municipalities, a reform was passed in 2002 that allowed for cross-sector insurance funds.

Germany

During the economic downturn throughout most of the period between the mid-1970s and 2005, the government tended to respond to unemployment problems by reducing labor supply. Active labor market policies were expanded, although the generosity of policies generally decreased during this period, and, contrary to Denmark, active labor market policies did not act as a springboard out of unemployment. Part of the reason for this was that active labor market policies were financed out of unemployment insurance funds, which meant that financial resources for active measures diminished in periods of high unemployment (Manow & Seils 2000).

SPD/FDP Coalition, 1969-1983

¹⁴ This coalition included the Liberals, *Venstre*, and the Conservatives, *Konservative Folksparti*.

At the beginning of this period, unemployment was at .9 percent and growth was at 7.5 percent. The Deutschmark was floated against the dollar in May 1971, and the *Bundesbank* switched to a tight monetary policy almost instantaneously. The immediate effect was an appreciation in the currency and resulting slow-downs in output and increases in unemployment. The government tightened fiscal policy in 1976 and made some cuts in pension and health insurance expenditure. In order to deal with the large amount of workers made redundant by industrial closings, early retirement was facilitated (Manow & Seils 2000, 274).

Active measures already embedded in the recent Employment Promotion Act of 1969 were also expanded. Vocational training was expanded, but was soon cut again as a result of austerity measures. Although active measures had played a role in preventing unemployment in the golden years, since 1975 active measures were generally pro-cyclical (Bleses & Seeleib-Kaiser 2004, p. 51).

CDU/CSU/FDP Coalition, 1983-1998

The Kohl government sought to fight the public deficit, privatize state-owned enterprises, and reduce the levels of taxation. They were mainly successful, not least because the economic recovery after 1983. The government also increased the VAT from 12 to 13 percent in June 1983.

One way that the government managed to control tax increases, was to shift the financial burden of funding social schemes onto the social partners. Contribution rates were increased throughout the early 1980s. The steady increase in contribution rates made more fundamental reforms in the social security system necessary. Both health and pension systems were reformed, but without the national or state governments obligated to pay for the bill, reform in the funding system was avoided (Alber 1996).

The CDU/FDP government initiated the “Qualification Offensive” after coming to office and continued to expand active measures until 1987 although the generosity of these policies was

reduced (Bleses & Seeleib-Kaiser 2004, p. 52). At the same time, the government increased the weeks of previous employment necessary to qualify for unemployment insurance from 24 to 36 months (Clasen 1994, p. 160). This caused a massive number of individuals to shift from the unemployment insurance schemes to locally administered social insurance schemes. Participants in these projects would eventually partake in subsidized job projects that would become requalified for unemployment insurance. In response to these viscous cycles, the government eventually strengthened the work requirements of workfare programs and capped social assistance benefits (Jaedicke et al 1991, p. 58). Exempt from these changes were older workers who were compensated for labor market exit with early retirement programs.

Unification presented an enormous dilemma, because the weak economic structure of the former Eastern German states. Immediately following unification, the federal employment office expanded active labor market policies, which they reduced slowly throughout the 1990s.

The Employment Promotion Act, *Arbeitsförderungsgesetz*, which came into effect on 1 April 1997, included measures for the promotion of employment among disadvantaged groups, support for the foundation of new firms, and restrictions on job-creation schemes. The Act declared that the primary responsibility of employment falls on the employee and employer and that public measures should play only a residual role.

SPD/Grünen Coalition, 1998-2005

In 1998, the SPD returned to government for the first time since 1983, this time, however, in coalition with the Greens. After coming into office, the new government attempted a tripartite agreement in the form of the Alliance for Jobs, or *Bündnis für Arbeit*. Tentative agreements were reached on basic items to be addressed including pensions, working time, and training. In the end, however, the unions walked out of negotiations, because they did not feel that the government or the employers were taking enough responsibility for creating new jobs.

In 2002, the *Vermittlungsskandal* or realization that the public employment office had largely exaggerated the number of job placements they had successfully completed triggered a series of reforms. Of the largest importance, Chancellor Schröder pledged to assign a committee to assess the reforms needed to address inefficiencies in the labor market and to merge the unemployment assistance and social assistance schemes. In addition, expenditure on training was cut drastically. Besides the faulty placement data from the employment agency, training funds for the unemployed were exposed as padding the pockets of the firms that trained rather than leading to stable jobs for training participants. These events provided the political momentum for the passage of the Hartz IV legislation, which merged unemployment and social assistance and thereby greatly reduced the generosity of the unemployment system. Active labor market policies were only weakly reformed by the remaining Hartz legislation.

Netherlands

As in Germany, the Netherlands welfare state system before the 1990s can be characterized as a “benefit producer,” *uitkeringsfabriek*, since social policies were transferred with few contingencies. In the same year that the Danish Social Democrats began their massive reforms of unemployment policy, the Dutch PvdA entered office. Although the PvdA led government did manage to activate the labor market system, they did not expand the role of the state in the provision of active labor market policies to the same extent as in Denmark. In particular, reforms at the end of the government’s incumbency worked to reduce the role of the state in the provision of mediation of unemployed workers.

CDA/VVD Coalition, 1977-1981

The economic situation worsened considerably during this period leading to what some termed the ‘Dutch disease.’ Unemployment jumped from roughly 5 to 13 percent. During this time, the coalition tried without success to induce wage restraint in order to limit aggregate demand. Disagreement between two CDA ministers for Social Affairs and Finance stalled the formation of a unified government position (Hemerijck 1995; Snels 1997; Toirkens 1988), which stalled

negotiations. In the end, FNV lead Wim Kok refusing to sign the wage agreement and the Finance minister Andriessen resigned, because his proposal for more unilateral action did not find support (Hemerijck et al 2000, p. 214).

CDA/VVD/PvdA Coalition, 1981-1982

The 1981 elections resulted in a government coalition that included the PvdA, but the government resulted in deadlock and lasted only nine months.

CDA/VVD Coalition, 1982-1989

New elections returned the CDA-VVD coalition to power. Right away, the social partners announced that they had agreed on a compromise that became known as the Wassenaar Agreement. The agreement called for wage restraint, lower working hours, and more active labor market policies and symbolized a shift towards renewed interest in corporatist negotiations with the understanding that the failure to compromise would result in state intervention. Although Philips Electronics signed the agreement, however, they did not agree in principle to the idea of reducing working hours and, in order to appease the trade unions, constructed a unique program to train difficult to place young workers in exchange for foregoing the requirement to reduce working hours. The designed a one year training plan for students who had completed vocational training and a two-year program for those who had not. By 2004, 10,000 workers had taken part in the employment scheme (van den Heuvel 2007).

More generally, active labor market policies were expanded throughout this period, albeit on a relatively small scale. Until the late 1980s, the main type of active labor market policy was the wage subsidy, *loonsuppletie*, which was replaced by a number of different policy measures between 1986 and 1989 that targeted long-term unemployed and youth (van Oorschot 1999).

The government also made adjustments to the social welfare system during their second term, having achieved the initial goal of macroeconomic stability. In 1987, the government tightened eligibility and reduced benefit levels from 80 percent to 70 percent of previous wages.

CDA/PvdA Coalition, 1989-1994

Lubbers formed a coalition in his third term as prime minister in 1989, along with the PvdA's Wim Kok as finance minister who was the former FNV leader. As the stipulation for joining the coalition, the PvdA reindexed minimum wages and benefits to wage developments. A tripartite Common Policy Framework committee was also formed that focused on growth, employment, tax relief and wage moderation. Employers also promised to provide 60,000 jobs for ethnic minorities.

During this term, the abuse of the disability scheme became impossible to ignore. In 1990, Prime Minister Lubbers described the country as "sick" with almost 1 million individuals on disability insurance (WAO). The trade unions and parts of the Social Democrats protested hard against the reform (Becker 2000, p. 225), but the government still managed to limit the eligibility requirements and make the plan overall somewhat cheaper.

At the end of this term, a New Course agreement was signed between members of the Foundation of Labor, which provided increased decentralization, wage moderation, training for the low-skilled, promotion of part-time work and improved conditions for balancing family and work tasks.

PvdA/VVD/D66, 1994-2002

Both the CDA and the PvdA suffered in the 1994 election, but the losses for the CDA were much larger and made it impossible for them to join the new coalition. The consequence was that, for the first time since 1917, the governing coalition did not contain a confessional party. In addition, the traditionalist wing of the Social Democrats had been weakened to the degree to allow for a coalition with the Liberal party. As such, the first ever "Lib-Lab" government was formed.

The so-called purple coalition maintained the focus of reforming labor market policy, but “the PvdA had a bottom line condition for its cooperation: the level and duration of social policy would not be tampered with. Kok had conceded that this position might have to be reviewed after two years if developments should turn out unfavorably regarding public sector deficits, inactivity on the labor market, and employment. From this very defensive position, the party was entirely committed to the ‘jobs, jobs, jobs’ approach as the only way out. This explains its support for reforms aiming at improvements in efficiency by introducing financial incentives through partial reprivatization of social risks and managed liberalization of social policy administration” (Hemerijck et al 2000, p. 223). Following from these events, the main changes in social policy in the next few years shifted responsibility towards the social partners.

In 1996, the government proposed two new laws that aimed at attaining flexibility and stability in the labor market. The laws, which came into force in 1997, weakened employment protection and allowed for a larger role for temporary employment agencies while simultaneously expanding the social rights of temporary workers.

In efforts to expand subsidized employment, the government also passed the Law on the Integration of Jobseekers, or *Wet inschakeling werkzoekenden*, in 1998, which subsumed the two main preexisting program Youth Employment Guarantee Act and Labor Pools. Alongside these policies existed additional active labor market policies that focused on the long-term unemployed, known as ‘Melkert Jobs’ after the Minister for Social Affairs and Employment Ad Melkert.

Throughout the 1990s, dissatisfaction with the public employment agencies also spurred reform developments, which led to a consolidation of public institutions as well as a privatization of most reintegration services in the Netherlands. A new public employment agency was formed, called Centres for Work and Income, of which there are 130. The responsibility of the Centres is to profile the unemployed to assess their risk of long-term unemployment, direct those at risk to the

benefit agency, and provide information about job openings to the remaining job-seekers. By 2002, the benefit agencies were merged into one organization, UWV or *Uitvoeringsinstituut Werknemersverzekeringen*.

The bulk of the reintegration services, however, were conducted by private reintegration firms that would bid for tenders to reintegrate a given number of unemployed workers. These firms would offer training and placement services, which are adjusted to the individual needs of the clients. Many of the private employment agencies also offer reintegration services, based in part on individual agreements with UWV.

CDA/VVD/LPF, 2002—2003

The 2002 election, following quite closely after the assassination of right-wing leader Pim Fortuyn, led to a devastating defeat for the PvdA and the two liberal parties VVD and D66. The government was extremely unstable and fell after five months.

CDA-VVD-D66, 2003—2006

In 2003, the PvdA regained its electoral position, but nevertheless a center-right coalition was formed. In the midst of an economic slowdown that began in 2001, consensus had grown that wage restraint was necessary to restore competitiveness.

During this period, two important initiatives were undertaken. The Ministry for Education and Social Affairs in conjunction with the Ministry for Education, Culture and Science instigated a program entitled Learning and Working, or *Leren en Werken*, which oversees projects between the social partners, training institutions, and local employment offices to improve training opportunities. Specifically, the program Learning and Working aims to help young people earn a

basic qualification, advice workers on their training opportunities and guarantee that training results in transparent qualifications, and devise policies to tackle new training needs.

Comparison and Conclusion

Since the late 1970s, Denmark, Germany, and the Netherlands have all adjusted their welfare state systems to reflect the new agenda to activate workers marginalized in the labor market. All countries managed to reduce the duration and generosity of unemployment insurance policies and stabilize their financial accounts more generally.

On the whole, however, Denmark and the Netherlands witnessed a larger drop in unemployment than in Germany, and active labor market policies played a more fundamental role in the activation agenda of the former two countries. The 1994 Danish reforms managed to reduce the duration of unemployment largely because of the massive expansion of active measures. The Dutch reforms were involved to a lesser extent with its unemployment insurance policy. Nevertheless, many policies were developed for the reintegration of the unemployed and later reforms, such as the *leren en werken* campaign, demonstrate the attempt at a comprehensive approach to the successful integration of marginalized workers in the labor market.

Similar to the Dutch case, German reforms did not aim to activate the unemployed by necessarily replacing passive policies with active measures. Job creation and wage subsidy schemes existed, as in the Netherlands, but they remained marginal. Whereas the Netherlands eventually a comprehensive activation agenda, as seen with the *leren en werken* campaign, however, the German attempts at tripartite agreements, such as the *Bündnis für Arbeit* failed.

Drawing from the determinants of policies that promote skill acquisition and skill transparency established in Chapter 3, possible explanations for Germany's weak performance include the high level of veto points in the political system and the low level of public employment. The various paths identified as leading to education policy that promotes skill acquisition typically exhibited

many characteristics of the German model, including well-organized social partners, a high degree of wage bargaining coordination, and a historic incumbency of religious parties. Developing consensus over the reform of the passive welfare state system nevertheless proved quite difficult. Due perhaps to the federal structure and low public employment, the state lacked the competencies to implement broad reforms, and the entrenched interests of actors at the federal level weakened resolve to risk far-reaching reforms at the national level.

The comparison of Germany and the Netherlands helps to disentangle the effects of the two potential explanatory variables, because the Netherlands not only share low levels of public employment but also differs from Germany by exhibiting few veto points. As described in Chapter 3, a high level of public employment leads the state to assume responsibility for improving employability of marginalized workers since it employs a large percentage of the workforce itself. The relatively marginal role of the state in designing active labor market policies in these two countries may therefore be related to the low levels of public employment in Germany and the Netherlands. At the same time, the low number of veto points in the Dutch system may providing some leverage in explaining the relatively high degree of consensus between the social partners that allowed for successful reform movements in the 1990s and early 2000s. Therefore, the high level of veto points in the German system appears to be the main culprit responsible for the relative failure to develop a successful activation agenda.

However, assigning all explanatory power to the high veto points in Germany incurs problems, because Germany exhibits additional unique features that may account for its relative inability to develop a comprehensive active welfare state agenda. Unification for instance presented political issues that may have taken precedence over progressive labor market reforms. The legacy of centralized state power during the second world war also undermines the legitimacy of the state, thereby weakening the leverage of the state over the social partners and the as a result the costs of non-reform.

To conclude, the period since the late 1970s is characterized by a changed economic environment that generates high demand for active labor market policies in order to increase and maintain employment levels. Denmark, the Netherlands, and Germany differ, however, in their capacity to establish activation agendas with a strong role for active labor market policies. Analyzing the potential causal factors responsible for these differences illuminates the strong role of public employment levels in carving out a central role for the state in the provision of active labor market policies as well as the impeding role of high veto points in creating national consensus for wide-reaching activation reforms.

CHAPTER 8

PRIVATE FIRMS AND ACTIVE LABOR MARKET POLICIES

This chapter examines more closely the relationship between the causal determinants of the skill acquisition and the skill transparency indices analyzed in Chapter 3 and active labor market policies. I proceed by first clarifying the theoretical link business organizations and firms' propensity to hire from the pool of marginalized workers. I then turn to the cases of Denmark, Germany, and the Netherlands in order to test the theoretical predictions, reviewing the methodology and then the particular experiences with active labor market policies in each case. The final section discusses the findings and concludes.

Theoretical Framework: Private Firm Involvement in the Reintegration of Marginalized Workers

In recent years, increased attention has been given to business interests due to the shift in employers' bargaining power within the national policy-making arena as a result of capital market liberalization and the rise of the neo-liberal agenda. The capacity of firms to relocate or reinvest outside national borders on the one hand and the growing view that private solutions outperform public ones on the other raises concerns about the continued participation of business groups within national policy-making circles. In light of these changes, governments may appear beholden to these ever more powerful groups in order to achieve their own public policy goals, and questions arise about the capacity of governments, if any, to woo business groups: Will employers continue to demonstrate an interest in responding to the concerns of workers and public authorities? Or will employers use their

capacity to relocate or reinvest as a *carte blanche* to pursue their narrow interests without anticipating the need to consider the interests of other economic actors? Will the relative dominance of private over public policy solutions lead to a reduction in the role of the state in the policy-making process or, in a different way, generate greater potential for public-private partnerships?

Studies of business interests in social policy and labor market regulation have increased in recent years. Scholarly attention to business interests resulted in large part from the natural process of theory development, where the elaboration of differences between conceptual frameworks precedes the clarification of similarities (Sartori 1970). Writing in 1993, Colin Crouch describes how, over time, scholarship shifted from juxtaposing the analytical foundation of their particular theoretical approach to synthesizing their approach with others: “The ‘social democratic’ and neo-corporatist schools have, with some surprise, recognized their similarity, amalgamated with ‘revisionist pluralism’, and taken advantage of the theoretical elegance and rigour to be achieved by casting their arguments in terms of rational action and exchange theory” (Crouch 1993, p. 11). As a result of this process, the analysis of business interests began to influence understandings of welfare state development and change.

A central consequence of considering business interests with regards to the welfare state was to recognize the potentiality of employer support for social policy (Baldwin 1990; Hall & Soskice 2001b; Iversen 2005; Mares 2003). Scholars making this link generally share the view that risks associated with the production process motivate employers’ interests in social policy. Those working within the varieties of capitalism framework base their understanding of firms’ preferences over social policy on the dominance of specific versus general skill production within the national economy. In this view, investment in specific skills involves

contracting problems because workers and employers face potentially high costs upon interruption of the employment relationship: workers face difficulties finding new jobs that suit their skills; and employers cannot easily apply their existing assets to new business pursuits. As such, workers with specific skills prefer generous income support, which, in the case of unemployment, will allow them sufficient time to find employment suitable to their skills. For their part, employers would like some guarantee that they will not lose trained workers to competing firms. As a result, in economic contexts where production relies heavily on specific skills, known as coordinated market economies, employers will support generous unemployment insurance to induce workers' investment in industry-specific skills, high employment protection to induce their investment in firm-specific skills, established training standards to ensure the quality of industry-specific skills, and strict social norms buttressing high levels of firm-based training to ensure a high quantity of high trained personnel (Hall & Soskice 2001b, p. 20-27). Employers in liberal market economies, in contrast, will not demonstrate similar support for these social policies and labor market regulations, because their relative dependence on general skills does not require them. The major consequence of this line of reasoning was to identify two possible institutional configurations for efficient capitalist economic organization, and, by extension, the potential for achieving economic efficiency and social equality simultaneously in the form of the 'coordinated market economy.'

Other work focuses on production risks originating from a broader range of factors. Baldwin (1990) examines how labor market risks of middle class workers, such as shop-keepers and the self-employed, played a fundamental role in shaping the passage of solidaristic social policy in Denmark, Sweden, Britain, Germany, and France. Focusing on reforms in France and Germany, Mares (2003) draws on these foundations to develop a model of employer preferences over the expansion of unemployment, sickness, and early retirement benefits, in

which employers' preferences are defined by firm size, skill specificity, and the degree of risk exposure.

The literature cited above predominantly assesses employers' preferences over social policy on the foundation of firm-based characteristics. Other perspectives, however, see employers' preferences as derivative of organizational factors. Business organizations provide the means for coordinating firms' actions and thereby generating cooperative solutions for social issues. For example, business organizations can provide the sanctioning and monitoring mechanisms necessary to ensure compliance where collective action problems exist; these organizations also facilitate the payment of compensation to employers who do worse off as a result of coordinated outcomes but nevertheless lend their support to collective goals. Business organizations may also act as a source of new ideas or disseminate information about other firms and government policies (Culpepper 2003). Finally, members belonging to such organizations may also develop norms of trust and reciprocity that facilitate the formation of coordinated outcomes (Crouch 1993; Katzenstein 1985; Traxler 2000).

These studies on business interests over social policy and labor market regulation have focused almost predominantly on the period of welfare state expansion, during which financial markets were closed and growth rates were on a generally upward trend. In this context, business faced fewer opportunities to invest abroad and, according to studies in the varieties of capitalism approach, supported passive social policies because of their intrinsic role in firms' production strategies. As outlined above, however, firms' competitive environment has changed, and it remains an empirical question how their increased bargaining leverage has influenced their dependence on passive social policies. Also, governments, for their part, are more focused on reducing reliance on passive social policies and shifting the focus towards active labor market policies, which are policies that have the

goal of improving labor market integration by providing income support that is contingent upon and indeed directly promotes participation in the labor market. Such policies include direct job creation in the public sector, training programs, and various wage subsidies directed at private firms.

Compared to passive social policies, however, implementing active labor market policies relies on more than building a winning coalition for the enactment of such policies. As much of the evaluation literature warns, the passage of active labor market policies alone does not guarantee that participants in these programs will acquire stable employment. Rather, evidence shows that active labor market policies may exhibit a range of problems. When participation in an activation policy re-qualifies participants for social benefits the ‘carousel’ effect may arise where individuals rotate between activation policy and passive support. Three other problems may exist that are more related to the interaction between active labor market policies and market efficiency: *deadweight losses* arise when firms would have hired the person in question regardless of the subsidy; *substitution effects* arise when the employment chances of the target group’s hiring prospects improve at the expense of the non-target group; and *displacement* occurs when employment increases in subsidized firms are countered by employment losses in non-subsidized firms. On a general level, these problems suggest the contingency of active labor market policies success at improving the probability of marginalized workers finding stable employment: active labor market policies may just be a transfer to private firms, who hire the same people regardless of the subsidy, and they might benefit some workers or employers to the detriment of others.

Although I do not pretend to address at length the factors accounting for these problems, the evaluation literature does draw on these various problems in assessing the impact of active labor market policies, and I make use of their results. Of particular interest for my purposes

here is the insight of this literature that subsidies for employment in the private sector demonstrate lower economic costs and better employment outcomes for program participants than direct job creation (Boone & van Ours 2004; Martin 2000b). The greater effectiveness of active labor market policies aimed at private firms, and, indeed, the frequently damaging effect of public sector job creation programs on participants' future employment stability motivates the particular focus on the role of private firms in active labor market policies.

Although active labor market policies to private firms stand as the most effective of their kind, relatively little is known about the factors supporting the passage of these policies. The work by C. J. Martin and D. Swank makes considerable headway in this respect into understanding the various factors that explain firms' investment in active labor market policies (Martin 2004a; Martin 2004b; Martin & Swank 2001; Martin & Swank 2004). Their macro analysis demonstrates the strong effect of business organization on total spending effort on active labor market policies across eighteen advanced industrialized countries with potentially complementary effects between social democratic incumbency and business organization. Significant results for different dimensions of business organizational strength, including coordination, centralization, and influence in policy-making, provide evidence for the stability of this finding (Martin & Swank 2001; Martin & Swank 2004).

These findings that business organizational strength corresponds to high spending on active labor market policies suggests, more generally, continuity between theoretical determinants of social policy in the industrial and the more recent period of 'permanent austerity.' The organizational capacity of employers therefore seemingly proves sufficient to overcome internal divisions to create policies that benefit the national economy more generally.

Yet the expectation that contexts with strong business organization can adjust well to changed conditions may not be warranted. High rates and duration of unemployment in Belgium and Germany in the 1990s and early 2000s raise alarms about the apparently weak capacity of these coordinated market economies to activate jobless individuals, particularly given the relatively low employment rates in these countries. The experiences of France and Italy, though not clear-cut cases of coordinated market economies, demonstrated similar trends, raising questions about the capacity of countries to combine social and economic goals more generally. Although the organizational strength of business may indeed lead to higher spending on active labor market policies, the various implementation problems these policies exhibit as well as the inability of countries that indeed spend highly on these policies to reduce unemployment raises doubts about a relationship between business organizations and the successful labor market integration of marginalized workers.

In this vein, literature accounting for the failure of ‘consensual institutions’ (Lijphart 1999) to deliver optimal social outcomes have accumulated in recent years. A key challenge of all these works has been to examine more closely the causal mechanisms linking the existence of formal institutions to social and political outcomes. These studies generally either point to the underlying variation among formal institutions frequently masked in existing measures of coordination or point out that the effects of formal institutions are contingent on broader contextual factors. Martin and Swank (2008) examine the historical determinants of employer associations and illuminate the role of proportional, multiparty systems in promoting, and federalism in impeding, the development of social corporatist associations. Whereas these findings provide an explanation for the more broad differences we witness between coordinated and liberal welfare states, the inhibiting effect of federalism on the formation of social corporatist associations provides a potentially useful tool for exploring challenges for business associations in the federal states of Germany, Belgium, and Italy. As case in point,

Hemerijck points out the strong sectoral, ideological, and linguistic divisions in the Belgian social interest group structures (Hemerijck 2006). Developing theoretical categories for the variety of business organizational structures, Martin Höpner differentiates between ‘organized’ and ‘disorganized’ coordinated capitalism (2007) and Hicks and Kenworthy distinguish between social corporatist processes and enterprise cooperation (1998). Together, these studies illuminate new aspects of business organizations that can help us gain insight into the variation in business support for policies addressing new social risks. Where the bulk of the literature relies on membership density in employer organizations as a key indicator of business organizational strength, these accounts suggest that features of the organizational structure are likely play an important role in shaping the policy goals of members and key leaders.

An additional contextual factor that has been shown to sustain the relationship between formal coordination on the one hand and coordinated adjustment on the other is the role of the state. The role of the state has been identified as playing a key role in reinforcing employers’ coordinative capacity on the one hand and their support for solidaristic policies on the other (Martin & Thelen 2007). The role of the state on sustained coordination embodies three logics: as an employer, the state holds an intrinsic interest in promoting the employment prospects of their workers; the state can also play a role in fostering cooperation among the social partners; finally, the state can negotiate with private sector actors (33-34). To summarize, the different adjustment capacity of generous welfare states to changed economic conditions prompted closer study. One consequence of these efforts was to recognize differences between institutions that analyses had previous discussed as relatively similar, such as business organizations. A second consequence was to illuminate the role of factors previously side-lined in the literature, such as the state, and demonstrate the widespread effects of these factors for other economic actors.

From the above discussion, it is possible to generate some broad hypotheses about the potential variation in the effectiveness of active labor market policies in contexts of high business organization, where effectiveness is understood as the willingness of firms to hire and invest in workers through these policies. First, with regards to business organization, business associations with strong coordination capacity at the peak level should be more successful at establishing effective policies. Strong leadership of peak organizations should have general public concerns in mind as compared to particularistic concerns of a given sector. As such, this leadership will be relatively less concerned about competitive disadvantages that may arise from active labor market policies, such as displacement effects, and, at the same time, in a position to address negative externalities of active labor market policies such as displacement effects. Conversely, in contexts where firm representation is relatively strong than that of the peak organization, local firms may view the efforts of the peak organization to influence firms' involvement in active labor market policies as an attempt to encroach on their territory and may be wary of supporting these policies as a result.

Second, business organizations in contexts of a strong state will be more likely to support active labor market policies, because the state will be more capable of influencing firms' behaviour. In such a context, firms will not be able to compete between federal units, and the centralized state is also the only gatekeeper to a host of public subsidies. Moreover, since the state employs large numbers of workers, it retains an interest in improving the productivity of low-wage workers in order to justify public expenditures (Spicker 1997).

From this discussion, I generate hypotheses about the effects of the aforementioned institutions and actors on the frequency and intensity of private firms' participation in active

labor market policies. First, I start from the finding of scholars within the varieties of capitalism approach that business organization supports the formation of coordinated solutions to common problems. However, drawing on the literature that identifies divisive elements within business organizations, I suggest that the structure of business organization is critical to building broad business support for active labor market policies. Passive social policies arguably resolved collective action problems within the firm between employers and employees that were central to the production process and therefore to the success of the firm. Active labor market policies, on the other hand, can hardly be assumed to play such a pivotal role in firms' core functions. The main beneficiaries of active policies are marginalized workers. The disadvantages facing unemployed workers in the labor market are many: the occurrence and duration of an unemployment spell weakens an individual's self-esteem (Seligman 1975), reduces their skill levels, and incurs a potential stigma among employers, which can be seen in the wage penalty suffered by workers who were unemployed prior to their current employment position.

The potential benefits to private firms are less clear. Tight labor supply and generous subsidies, respectively, may provide firms with incentives to hire workers through active labor market policies. At the same time, these factors will only prove realistic incentives in cases where firms remain open to hiring from the pool of marginalized workers in the first place. Given that employers likely rely on many informal channels to find new workers (Montgomery 1991), inducing firm investment in active labor market policies relies on building awareness about active policies and their potential benefits to firms.

Peak business organizations represent one avenue for building firm support for active labor market policies. On the one hand, these institutions hold an interest in alleviating skill

shortages. They also have the resources to create a campaign to motivate firms to invest in active policies in order to maintain a high supply of well-trained workers.

The state also has the resources to launch a campaign motivating firms to invest in active labor market policies. And, in contrast to peak business organizations, the state holds an intrinsic interest in reducing unemployment. Also, due to its extent resources, the state can therefore place additional pressure on firms to hire unemployed individuals. In short, both peak business organizations and the state theoretically exhibit an interest and the resources to develop a campaign inducing firm support for active labor market policies.

Table 8.1. Hypotheses about Factors Influencing Investment of Private Firms in Active Labor Market Policies

-
1. Business organizations with strong peak-level coordinative capacity will be related to support for active labor market policies aimed at improving the supply of skilled workers, whereas business organizations with relatively more dispersed control will be related to relatively greater difficulties coordinating human capital strategies
 2. The presence of a strong state will be related to the enactment of active labor market policies aimed at improving the integration of marginalized workers into the labor market
 3. The presence of both business organizations with high peak-level coordinative capacity and a strong state will be related to strong business support for active labor market policies
-

aimed at improving the integration of marginalized workers into the labor market

The analysis below will distinguish three separate types of questions regarding the formation and implementation of active labor market policies. First, I will provide an overview of the design of active labor market policies in the last decade. Second, I will explain how active labor market policies interact with other type of labor market reforms to provide some insight into how active labor market policies are used as part of a broader package of reforms. Third, I will assess firms' investment patterns in active labor market policies and explore the consequences for our understanding of firm support for the integration of marginalized workers.

Analysis: Reintegration in Denmark, Germany, and the Netherlands – How Involved are Private Firms?

Case Selection

The three countries of Denmark, Germany, and the Netherlands are selected according to Mill's method of difference. Although all three are generally considered generous welfare states, they differ broadly on the characteristics discussed above including federalism, the structure of their business organizations, and the size of the state. The table below provides descriptive data regarding these characteristics. Germany is the only state that exhibits a strong federal structure. In terms of the business organizations, Denmark and the Netherlands present high levels of tripartite neo-corporatism both in absolute terms as well as compared to the degree of shop floor coordination. Germany exhibits the opposite trend, with higher shop floor coordination than tripartite neo-corporatism. Finally, the public sector in Denmark, as measured by the average share of public sector workers in the 1990s, is markedly higher than

in Germany or the Netherlands. In analyzing the role of private firms in active labor market policies, I will pay particular attention to the role of these particular features.

The ways in which these factors influence active labor market policies and the more comprehensive overview of the paper is demonstrated in the schematic below. As discussed in the theoretical section, the size of the state, political competitions, and employer organizations, through the policy-making process, pass a host of active labor market policies. The success of active labor market policies in facilitating the labor market integration of marginalized workers depends on the broader structure of passive labor market policies and employer organization. The darker boxes indicate the foci of the study, or dependent variables, whereas the lighter boxes indicate the explanatory factors.

Table 8.2. State and Interest Group Structures in Denmark, Germany, and the Netherlands

| | | | Tripartite | |
|-------------|-------------------------|----------------------------|------------------------|--|
| | Federalism ^a | Shop Floor ^{b, c} | Neocorporatism b, d | Size of the Public Sector ^{a, e} |
| Denmark | No | 0.28 | 0.67 | 21.36 |
| Germany | Strong | 0.42 | 0.23 | 8.07 |
| Netherlands | No | 0.09 | 0.41 | 6.01 |

Source: a=(Huber et al 2004a); b=(Hicks & Kenworthy 1998); c=Firm-level cooperation; d=Hicks

and Swank measure for tripartite neo-corporatism; e=average of civilian government employment of the working age population for the 1990s

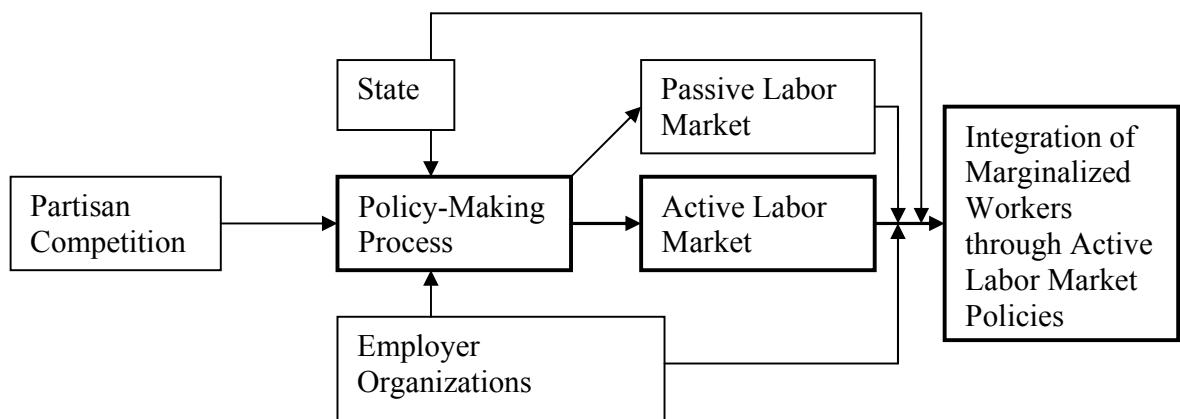


Figure 8.1. Theoretical Framework

Methodology

The methodological approach involves structured interviews based on original Danish research by Cathie Jo Martin (Martin 2004b; Martin & Swank 2004; Martin 2004c). For each country, a random sample of 100 firms was selected from the list of the 500 largest firms in each country.¹⁵ The list of the largest 500 firms was provided by the Børsen list in Denmark, the CDAX list in Germany, and the FEM Business list in the Netherlands. Structured

¹⁵ In Denmark, every fifth firm was selected. In Germany and the Netherlands, firms were divided into groups of five. For each group of five, the firms were assigned random numbers and the firm receiving the highest number in each group was selected.

interviews were held either in person or via telephone and lasted between 40 and 90 minutes. Data collection was completed by Cathie Jo Martin for Denmark in 2001 and by the author in 2006 and 2007 for Germany and in 2007 and 2008 for the Netherlands.

The structured interviews covered roughly two broad groups of questions. The first group of questions covered basic information about the firms' finances, personnel, and organizational networks. The second theme involves the firms' experiences with active labor market policies, including topics such as sources of information about active measures, the firms' actual use of these measures, the experiences of participating firms, and the reasons why firms chose to use or not use these measures.

The list of active labor market policies about which firms were questioned were chosen from the National Action Plan for Employment and Competitiveness from the year prior to the beginning of the interviews. For Denmark, this included leave schemes, job rotation, and programs for workers with permanent disability, including *fleksjobs* and *skaanejobs*. For Germany, this included tax redemptions on part-time work, in the form of *Mini-* and *Midi-Jobs*, relocation subsidies, and subsidies for training regular workers, training additional apprenticeships, and hiring disabled workers. In the Netherlands, this included subsidies for hiring or maintaining disabled workers. There were also large appropriations made to the municipalities for the purpose of reintegration that could be spent at the discretion of the municipality. The Netherlands proved a unique case where private employment agencies played a central role in labor market reintegration, and private firms amongst themselves had developed extensive policies to improve the employability of their own workers.

Active Labor Market Policy Development and the Policy Mix

The main question that this paper seeks to answer includes the factors that explain firm investment in marginalized workers through active labor market policies. This question, however, presupposes the availability of active policies as well as a supply of workers that employers can hire through these policies. Therefore, I review the development of active labor market policies as well as the rules governing individuals' responsibility to be available as subjects of these policies. Both aspects are relevant, because the passage of active labor market policies alone does not ensure these policies even have the potential of being used. As long as workers are able to draw on passive support in cases of unemployment, the incentives to take part in an active labor market program are rather weak. In short, gauging firm investment in active labor market policies prompts questions about the availability of these policies: this section clarifies the policies available to private firms in each case. This discussion fits thematically into the debate on activation, or increasing individuals' incentives to take up jobs and the various policy mixes that produce such incentives.

In Denmark, the reforms initiated by the Social Democrats in 1994 mark a key turning point in the relationship between social policy and labor market activation. The approach adopted in Denmark can be described as a state-led reorganization of the unemployment regime. Active labor market policies were developed that, by definition, limited reliance on existing passive policies. The reforms stipulated the duty of individuals to take up employment within a relatively short period, which was further reduced throughout the 1990s. The 1994 reform targeted only unemployment insurance recipients, whereas the 1996 reform added social assistance recipients. Given the unlimited duration of unemployment benefits of the mid-1980s, this change is quite remarkable.

These activating reforms defined a new role for the state in ensuring the smooth implementation of active measures. The 1994 reform also included the creation of a new

administrative unit, the National Labor Market Council.¹⁶ The National Labor Market Council acts as an advisory institution to the Ministry of Labor and defines goals and output requirements for the Regional Labor Market Councils, which then establish plans to suit local needs (Jensen & Studies 1999). In fact, despite the continued capacity of the national organization to direct policy, the reforms further decentralized authority over labor market policy to the regions (Jensen & Studies 1999). These activating reforms beginning in 1994 therefore placed strong legal requirements on unemployed individuals to enter employment and designed new administrative structures to guarantee the enforcement of these new regulations.

On the firm level, these new regulations created a new role for private firms in the reintegration of marginalized workers into the labor market. The restructuring of the unemployment regime included many active labor market policies, and the much shorter duration of unemployment insurance implied a large role for the private sector in finding jobs for unemployed individuals. Of the 55 firms interviewed in Denmark in 2001, fifty-eight percent agreed that the active labor market policies in place at that time were ‘asking firms to get involved in a new way,’ whereas twenty-one percent had mixed opinions and twenty-one percent found the reforms a clear continuation of previous policies.

Underlying the political decision to endow firms with a strong role in the reintegration of marginalized workers is the expectation that firms would be prepared to assume such a role. I argue here that this expectation about firms’ capacity to help reintegrate marginalized workers is in large part a consequence of the organization of firms and the relationship between firms and the state. Tables 8.3 and 8.4 demonstrate firms’ responses to the questions

¹⁶ The National Labor Market Council was merged with the National Social Council in 2003 to form the National Employment Council. The National Social Council originally aims to create a more inclusive labor market.

of whether the firm should have social responsibility for its own as well as socially excluded individuals. Table 8.3 shows that Danish firms feel overwhelmingly responsible for providing for the well-being of their workers above and beyond the requirements stipulated in law.

Table 8.3. Danish Firms' Responses to the Question: Should firm have social responsibility for own workers?

| Response | Frequency | Percent |
|----------|-----------|---------|
| No | 0 | 0 |
| Maybe | 1 | 2 |
| Yes | 53 | 98 |

With reference to the responsibility of the firm towards socially excluded individuals, the record is more mixed. Still, forty-one percent of firms agreed that firms indeed have such a responsibility and thirty-three percent answered that the firm maybe should hold such a responsibility.

Table 8.4. Danish Firms' Responses to the Question: Should firm take social responsibility for socially-excluded people such as long-term unemployed?

| Response | Frequency | Percent |
|----------|-----------|---------|
| No | 14 | 26 |
| Maybe | 18 | 33 |
| Yes | 22 | 41 |

To account for these perceptions of firms, I argue that the structure of business organizations and their relation to the state explains the willingness of firms to make themselves accountable for social issues. Explaining the development of active labor market policies in the 1990s, Martin elaborates on the relationship between the state and business organizations: “The Danish government strengthened associations by creating corporatist channels in the realm of social policy that mirror those of labour-market policy. Although social policy has traditionally been left to government, the Social Ministry’s efforts expanded the jurisdiction of the social partners. At the same time, the state potentially weakened corporatist organizations by attempting to mobilize firms directly. Yet, while moving beyond the established channels to build networks with firms threatened the traditional hegemony of the employers’ associations, this move paradoxically may have motivated these groups to expand their activities in the social area. The organizations perceived the government’s move as an attack on their jurisdiction; consequently, this move may serve to enhance employers’ involvement with social policy in the long term. Thus, the continuing vitality of the Danish employers’ associations owes something to state activism.” (Martin 2004a, p. 148). Therefore, the state, rather than expanding its authority at the expense of that of firms, has actually created an agenda that creates a new role for private firms and their organizations.

In Germany, attempts to shorten the length of unemployment faced a much stronger opposition than in Denmark, and this opposition manifested itself in the debates over issues of ‘reasonable work’ (*zumutbare Arbeit*) as well as divisions of responsibilities between the federal employment agency and the local employment offices. While unemployment swelled in the early 1980s and then increased again rapidly after unification in the 1990s, governmental reforms failed to address labor market regulation and social policy as a source of depressed labor demand. Rather, reforms primary directed attention to the Labor Promotion Law, *Arbeitsförderungsgesetz*, which focused predominantly on labor supply.

Even after the duration of unemployment insurance was greatly curbed in the Hartz IV reforms in 2003 and 2004, the unemployed did not face obligations to enter into active labor market policies.

On one level, the inability of the government to rally broad support for structural reform is justifiable. In terms of wage restraint, the wage bargaining institutions were quite efficient at producing wage growth below inflation (Hassel 2006). At the same time, the inability of the German system to produce employment growth implied reforms that demanded more concessions from the social partners and workers than those called for by the existing regulatory structure.

Yet the insurance-based system rested upon the idea that risks are more or less internalized by the existing regulations. In addition, the right to *Tarifautonomie* guarantees employers and employees the right to negotiate wages without state intervention. This concept, along with the idea of subsidiarity, or that the lower administrative level is more efficient at regulating public policy, weaken the capacity of the central state to generate support for issues of public concern that are unanticipated by the existing system.

The weak support of firms for social issues above minimum requirements is evident from Tables 8.5 and 8.6. Compared to the Danish firms, who overwhelmingly supported the idea fully that they should have social responsibility for their workers, only twenty-five percent of firms fully agreed with this idea in Germany and only ten appeared somewhat in support. Turning to the results in Table 8.6, a full eighty-three percent of firms disagree with that idea that they should have social responsibility for socially excluded workers. There were some, seventeen percent, who were somewhat in support of this idea, but not a single firm agreed fully that they should bear responsibility for socially excluded workers.

Table 8.5. German Firms' Responses to the Question: Should firm have social responsibility for own workers?

| Response | Frequency | Percent |
|----------|-----------|---------|
| No | 26 | 65 |
| Maybe | 4 | 10 |
| Yes | 10 | 25 |

Table 8.6. German Firms' Responses to the Question: Should firm take social responsibility for socially-excluded people such as long-term unemployed?

| Response | Frequency | Percent |
|----------|-----------|---------|
| No | 33 | 83 |
| Maybe | 7 | 17 |
| Yes | 0 | 0 |

The weakness of firms' self-proclaimed social responsibility for socially excluded workers is reflected by the nature of active labor market policies pursued in Germany. Although active labor market policies have a long history, firms and their organizations, in contrast to the Danish case, do not historically play a large role in the implementation process. Despite the passage of new active labor market policies in 2003, firms did not find that these reforms called for a larger role for private firms in the reintegration of marginalized workers. Eighty-five percent of firms indeed responded that firms did not have a larger role as a result of these changes, and only fifteen percent agreed that there was perhaps a larger role for private firms. No firm fully agreed that these reforms created a new role for private firms.

The role of private firms was arguably larger in previous times, for instance in training programs for the unemployed before 2002. In this period, firms could receive large government subsidies for training unemployed workers. A lawyer at the German Confederation of Skilled Crafts, or *Zentralverband des Deutschen Handwerks*, explained, however, that the vast expenditure in training did not translate in efficient reintegration, because there were never mechanisms set in place to ensure sufficient market demand for skills delivered by training firms.¹⁷ As such, interested firms would take on trainees, but these trainees would frequently fail to find employment after the completion of their training period. After the placement scandal, or *Vermittlungsskandal*, in 2002, when the federal placement agency was revealed as having largely forged their placement statistics, the government embarked on a host of policy reforms which included a seventy percent reduction in the training budget for unemployed workers. In sum, although private firms previously played a larger role in the reintegration of marginalized workers, their participation did not on average improve the employment chances of marginalized workers much at all. Also, since the reduction in the training budget in 2002, the government has not developed innovative ways to involve private firms in the reintegration of marginalized workers. Outside of training policy, the active labor market policies available to private firms in Germany in 2006 did not represent a strong departure from previous policies. Various subsidy programs offered firms financial relief to hire disabled workers, apprentices, and replacement workers for workers on leave (job rotation).

As in Denmark and Germany, Dutch reforms in the 1990s and early 2000s also responded to the growing budgetary crisis brought on by the shrinking active to passive ratio. The Wassenaar Agreement of 1982, which succeeded at guaranteeing wage restraint, was followed by the New Course Agreement in 1993, which broke new ground in terms of

¹⁷ Interview, November 2006.

gaining employers' support for shorter working hours in exchange for union support for more flexible employment protection for workers on a permanent contract.

Although governments continued to developed generous active labor market policies dependent on firm investment throughout the 1990s, the activation strategies currently in place in the Netherlands reflect the growing tendency towards flexibility initiated in the earlier period. Where private employment agencies flourished after reforms in 1996, these and similar firms had nearly completely assumed the main role of reintegrating unemployed individuals by 2001. In fact, in late 2001, the public employment service was officially dismantled and divided into separate parts (Sol & Westerveld 2005), which included the Centres for Work and Income, *Centra voor Werk en Inkomen*, and the Employee Insurance Agency, the *Uitvoeringsinstituut Werknemersverzekeringen*. Private employment agencies developed departments or entire subsidiary firms to handle the reintegration services, such as USG Restart within USG People and Manpower Reintegratie Services within Manpower to name a few. Private reintegration companies also competed for government bids to reintegrate unemployed individuals.

Although these changes were accompanied by an almost complete fading out of existing active labor market policies to private firms, this does not imply that private firms no longer play a role in responding to social issues. For comparison with the Danish and German interviews, Tables 8.7 and 8.8 demonstrate the responses of Dutch firms to the question of whether they should have social responsibility for their own as well as socially excluded workers. The results for Dutch firms' view of their social responsibility towards their own workers are somewhere in between those from Denmark and Germany. Although roughly half of the firms do not believe that they have a role in providing their workers social benefits

above the required legal minimum, thirty percent agree somewhat and twenty percent fully agree that they are responsible in this way.

Table 8.7. Dutch Firms' Responses to the Question: Should firm have social responsibility for own workers?

| Response | Frequency | Percent |
|----------|-----------|---------|
| No | 16 | 47 |
| Maybe | 11 | 32 |
| Yes | 7 | 21 |

Turning to the results for socially excluded individuals, the results change. Again reflecting a distribution that places Dutch firms somewhere in between the highly 'socially responsible' Danish firms and the 'socially non-responsible' German firms, Dutch firms on average did not believe that they should take social responsibility for socially excluded individuals, roughly fifteen percent somewhat agreed and the same percent agreed fully.

Table 8.8. Dutch Firms' Responses to the Question: Should firm take social responsibility for socially-excluded people such as long-term unemployed?

| Response | Frequency | Percent |
|----------|-----------|---------|
| No | 24 | 70.5 |
| Maybe | 4 | 11.5 |
| Yes | 6 | 18 |

Therefore, despite the predominantly small role for regular private firms in the reintegration of marginalized workers through active labor market policies, regular private firms do appear relatively willing to take social responsibility, at least for their own workers. In 2007, the

employers' organization, in pursuit of more flexible employment protection, were ready to accept an agreement that would oblige every firm with over fifty employees to participate in the reintegration of unemployed individuals. Although the deal fell through, some employers interviewed in this study had already begun considering the implications of such a deal during the early negotiations of the 2007 bargaining round. Also, in 2005, the Ministry of Education and the Ministry for Social and Economic Affairs joined efforts in the new campaign called 'Leren en Werken,' in which learning and working are combined to facilitate labor market integration among marginalized workers. Private firms play an advisory role in the activities of this campaign.

Firms' Investment and Opinions

Having reviewed the general development of active labor market policies in each case, I turn now to the usage of active labor market policies in Denmark, Germany, and the Netherlands. For the cases of Denmark and Germany, where private firms remain the predominant actor responsible for reintegrating marginalized workers into the labor market, I generate an interval scale measuring the degree of participation of firms in active labor market policies. The scores 1 and 2 both indicate non-participation, although 1 means non-participation and ideological opposition and 2 means non-participation without ideological opposition. The score 3 means that the firm participation, but only on a marginal level, hiring only one person through the use of a wage subsidy. The scores 4 and 5 indicate more substantial participation, although the score 4 indicates that the firm hired a couple (i.e. more than one) of individuals with an active labor market policies whereas the score 5 was retained for the cases where the firm used active labor market policies to hire many workers. In Denmark, the score of 5 meant that firms had signed a formal agreement to participate in active labor market policies, whereas, in Germany, this meant that the firm used active policies as a human resource

strategy and hired large numbers of individuals with these policies. For the German case, firm participation was coded twice to account for the fact that the main active labor market policies in Germany are frequently not used to hire previously unemployed individuals.

The participation rates of Danish firms are listed below in Table 8.9. Roughly seventy percent of interviewed firms participated and thirty-five percent of firms signed formal agreements to participate.

Turning to the German results for the first coding of firm participation rates, where all active labor market policies were included independent of whether they were used to hire previously unemployed individuals or not, the total percentage of firms participating in active labor market policies does not look too different from Denmark. Sixty-two percent of German firms, compared to Denmark's sixty-nine, hired at least one worker with the use of a wage subsidy. The intensity of German firms' participation, however, is much lower than in Denmark. Most firms only hired one individual with the use of an active labor market policy, and only four percent (two firms) used active labor market policies as a core human resource strategy.

Table 8.9. Firm Participation Patterns in ALMP in Denmark

| Response | Percent | Frequency |
|-----------------------------------|---------|-----------|
| 5 - High participation | 34 | 19 |
| 4 - Marginal participation | 33 | 18 |
| 3 - Weak participation | 2 | 1 |
| 2 - Non-participation | 22 | 12 |
| 1 - Ideological non-participation | 9 | 5 |
| Total | 100 | 55 |

Table 8.10. Firm Participation Patterns in ALMP in Germany (All Policies)

| Response | Percent | Frequency |
|-----------------------------------|---------|-----------|
| 5 - High participation | 4 | 2 |
| 4 - Marginal participation | 12 | 6 |
| 3 - Weak participation | 46 | 24 |
| 2 - Non-participation | 33 | 17 |
| 1 - Ideological non-participation | 6 | 3 |
| Total | 100 | 52 |

Considering now the recoded participation rates of German firms, where participation in active labor market policies is only counted as such when firms hired previously unemployed individuals, the participation rates decrease dramatically.

**Table 8.11. Firm Participation Patterns in ALMP in Germany (Only
Previously Unemployed)**

| Response | Percent | Frequency |
|-----------------------------------|---------|-----------|
| 5 - High participation | 2 | 1 |
| 4 - Marginal participation | 8 | 4 |
| 3 - Weak participation | 31 | 16 |
| 2 - Non-participation | 54 | 28 |
| 1 - Ideological non-participation | 6 | 3 |
| Total | 100 | 52 |

Turning to the Netherlands, gauging firms' participation in active labor market policies presents some difficulties because of the structure of reintegration services in the Netherlands. Of the firms interviewed, four were private employment agencies that provided their own reintegration services. The number of individuals reintegrated with the use of these services numbered in the thousands. The final firm with reintegration services included Philips Electronics, which reintegrates roughly 150 marginalized workers per year. Rather than abide by the reduced working hours agreement that made up part of the Wassenaar agreement, Philips Electronics agreed to take on a number of long-term unemployed each year and train these workers.

Table 8.12. Firm Participation Patterns in ALMP in the Netherlands

| Response (Multiple Responses Possible) | Percent | Frequency |
|--|---------|-----------|
| Private Firms with Reintegration Services | 13 | 5 |
| Firms Hiring Disabled Workers with the Aid of a Wage Subsidy | 28 | 11 |
| Firms with 'Employability Centers' | 5 | 2 |
| Firms Not Participating in Any of the Above Activities | 65 | 26 |

Next, I examine more carefully the factors that explain firms' participation in active labor market policies in Denmark and Germany. The Netherlands is not included in this section for two reasons. First, the small number of participating firms makes it difficult to gain consistent estimates for the reasons why firms participated. Second, the set of active labor market policies that Dutch firms could use was not constant across firms, which makes an analysis of the determinants of firm participation impossible. For instance, if I would regress the variable for the intensity of firms' participation in active labor market policies on a host of explanatory variables, the interpretation of an explanatory variable would read, a one unit increase in that explanatory variable leads to a change in firm participation in active labor market policies equal to the size of the coefficient. Categorical differences between firms coded as high participation, however, and other firms makes such an interpretation meaningless.

Table 8.13. Reasons for Participating or Not in ALMP

| | Denmark | Germany |
|--|---------|---------|
| Subsidies Motivated Participation | 38 | 18 |
| Labor Shortages Motivated Participation | 31 | 34 |
| Social Responsibility Motivated Participation | 51 | 16 |
| Need for Higher Skills Prevented Participation | 36 | 65 |
| Negative Views of the Unemployed Prevented Participation | 20 | 22 |
| Bureaucratic Difficulties Prevented Participation | | 45 |

Besides the differing intensity of firm involvement in active labor market policies discussed above, Table 8.13 above provides some information on the reasons why firms participated in active labor market policies in Denmark and Germany. More Danish firms listed the subsidy as a motivation for participating in active labor market policies than German firms. The interviews substantiate the marginal effect that the subsidy made in the German case. While the employers found the subsidy an added bonus, the majority stated that the decision to apply for financial support arose after the finalization of a hiring decision. The financial benefit that came with using an active labor market policy did not guide employers' hiring decisions.

At the same time, the respective difference in the supply of labor between Denmark and Germany does not appear to account for the greater attractiveness of financial support for Danish firms. In both Denmark and Germany roughly the same percentage of firms listed labor shortages as a reason for participation in active labor market policies. This provides at

least some evidence that the relatively tighter labor market in Denmark does not explain participation levels.

Finally, whereas almost half Danish firms listed corporate social responsibility as a reason for participation, a small minority of German firms did so. These results suggest a difference in corporate culture, where Danish firms appear more engaged in social problems than their Germany counterparts. This difference may influence participation on a number of levels, by inducing a higher level of involvement of firms in the policy-making process or changing the human resources strategy of firms to include greater attention to active measures.

Turning to the reasons why firms limited or decided against participation illuminates further differences between the Danish and German cases. German firms were double as likely to limit participation because of demand for greater skill needs. One possible explanation can be thrown out, namely that the unemployed hold a worse reputation in Germany's slack labor market: Danish and German firms exhibit a similar propensity to avoid participation because of a negative view of the unemployed. Therefore, the common trend among German firms to avoid participation because they cannot find the appropriate skill set provides some evidence for main hypothesis that marginalized workers in Germany do not find access or recognition for skills that employers seek.

The next step of the analysis tests the various characteristics of Danish and German firms that influence firms' level of participation. The results of the analysis are below in Table 8.14.

The measurement of the variables was as follows. Membership in an employers association was a dummy variable where membership was coded as 1. Variables for the skill profile of a firm were coded as percent of total workers. Wages was coded as the amount spent on staff costs divided by the number of employees. The wages variable was divided by 10,000 to

facilitate interpretation. Profit was measured as total profits divided by total revenue. The variables for public sector sales and exports were each measured as a percent of total sales. The variable for union presence was coded as 0 for doesn't know, 1 for no, and 2 for yes. The data for employer organization membership, skill profile, public sector sales, exports, and union presence were attained from the interviews, whereas the data for sales, profits, and wages was derived from firms' annual reports.

The variables for membership in an employer organization, percentage of white collar workers, and percentage of low-skilled blue collar workers are of central interest. In both cases, membership in an employer organization increase firms' level of participation in active labor market policies: in Denmark membership leads to a 1.475 or 1.651 unit increase in participation level, depending on the model. In Germany membership leads to a 0.478 unit increase in participation level. These results support the central claim in the Varieties of Capitalism literature and the work of Martin and Swank that business organization increases support for social policies. Ties to an employer organization make a decisive difference in firms' personnel decisions.

However, considering the skill profile of participating firms, these ties may not necessarily imply a willingness of firms to invest highly in marginalized workers hired through active labor market policies. In Denmark, a 50 percent *decrease* in the percentage of white collar workers led to a 0.75 unit increase in the participation level. Re-running the model using the variable for high skilled blue collar workers, the results provide some support for the hypothesis that Danish firms invest in the skills of participants since workers are likely filling skilled positions within the firm.

In Germany, a 50 percent increase in the percentage of low-skilled blue collar workers leads to a 0.6 unit increase in the participation level. These results imply that Danish firms participate in active labor market policies in order to gain access to skilled personnel, whereas German firms use these policies to gain access to cheap labor. When considering only active labor market policies targeted at previously unemployed individuals, the coefficient for membership in an employer organization becomes small and insignificant.

Table 8.14. Regression Analyses of German and Danish Firms

| | Denmark | | Germany | |
|-------------------------------------|--|---|---|---|
| | White C. Coefficient [Standard Error] | HS Blue Coefficient [Standard Error] | All Coefficient [Standard Error] | Unemp Coefficient [Standard Error] |
| Employer Association | 1.475 ** [0.556] | 1.651 *** [0.575] | 0.475 * [0.271] | .123 [0.245] |
| Low Skilled Blue Collar Workers | | | 1.225 * [0.006] | 1.096 * [0.522] |
| High Skilled Blue Collar Workers | | 0.011 [0.007] | | |
| White Collar Workers | -0.015 ** [0.006] | | | |
| Wages | -0.582 *** [0.174] | -0.693 *** [0.173] | 2.323 [.775] | -1.118 [0.698] |
| Size | -0.069 * [0.032] | -0.072 * 0.034 | 0.057 [0.063] | 0.003 [0.013] |
| Profits | -2.98 [3.575] | -1.315 [3.796] | 0.008 [1.401] | 0.006 [0.006] |
| Public Sector | -0.019 * [0.011] | -0.021 * 0.012 | -0.002 [0.011] | -0.006 [0.010] |
| Exports | -0.004 [0.004] | -0.003 [0.005] | 0.003 [0.004] | 0.002 [0.004] |
| Unions | -0.615 [0.472] | -0.416 [0.478] | 0.026 [0.216] | 0.132 [0.195] |
| Constant | 5.238 *** [1.320] | 3.841 1.275 | 1.616 ** [0.698] | 2.392 ** [0.628] |
| Adjusted Rsquared | 0.394 | 0.112 | 0.113 | 0.114 |
| N | 55 | 55 | 52 | 52 |

* Significant beyond .05 level, two tailed test

** Significant beyond .01 level, two tailed test

Observed in tandem, these results provide evidence that employer organizations in both countries play a central role in motivating firms to participate in active labor market policies. However, the role of employer organizations in these two contexts is quite different. Employer organizations in Denmark influence not only the hiring practices of Danish firms, but their training behaviour as well. In Germany, however, the capacity of employer organizations to influence firms' behaviour is more limited. Firms' human capital strategies are not a matter of public concern. As a result, firms do not consider active labor market policies as a potential aspect of a human capital strategy. In addition, active labor market policies do not appear to influence firms' hiring strategies, since the bulk of firms that participated had already decided to hire the job applicant before applying for the subsidy. Finally, evidence for the weakness of employer organizations in influencing firms' hiring and training policies is also observed when rerunning the regression in Table 8.14 using the recoded participation variable from Table 8.11. The coefficient for membership in an employer organization becomes small and insignificant.

Conclusion

This paper addressed the role of private firms in addressing labor market marginalization. Although generous welfare states generally share political institutions that support the passage of social policies, including active labor market policies, the degree to which these policies in fact improve the labor market chances of marginalized workers varies.

The theory section reviewed the literature on business and the welfare state, paying particular attention to the factors that may reduce the likelihood of business support for active labor market policies. This literature was used to develop hypotheses about the varying role of firms in the integration of marginalized workers in Denmark, Germany, and the Netherlands.

The evidence provided here has shown that political reform in Denmark, Germany, and the Netherlands resulted in vastly different types of policies. In Denmark, private firms, under strong influence from the state, participated highly in the training of unemployed workers, and evidence suggests that participating firms indeed invested highly in the skill of these workers. In Germany, political actors develop active labor market policies, but private firms only used these policies to gain access to cheap labor. Moreover, although the organizational strength of business played a role in motivating firms' participation in active labor market policies generally, this relationship weakened when only considering active labor market policies targeted at unemployed individuals. In the Netherlands, the state has largely privatized reintegration services. Regular firms play little role in the labor market reintegration of marginalized workers. At the same time, firms do remain willing and able to engage in innovative projects to facilitate the reintegration of marginalized workers in the labor market. Firms, however, are not formally required to aid in this process, and therefore maintain a stronger bargaining position than in Denmark.

CHAPTER 9

CONCLUSION

The central argument of this study has been that education policies are the subject of political contestation and structure opportunities not only for workers in the labor market but also for policy makers developing public policies aimed at placing marginalized workers in secure employment. The consequences of education policy for workers and policy-makers are related, because education policies that influence the degree of labor market marginalization also influence the tools available to reduce marginalization. To clarify, education systems that limit opportunities to acquire new skills as well as the transparency of earned skills are likely to increase the relative proportion of marginalized workers within the labor force, who will face difficulties in improving their marginalized status due to the lack of education policies to acquire skills and the low level of transparency of their earned skills. Also, public policy makers within this context interested in creating policy proposals to address labor market marginalization will face weak infrastructural resources such as a lack of training facilities and bad information about not only the skills of marginalized workers but also the types of skills necessary to improve these workers' employment opportunities.

Theoretical Framework

This study of the relationship between education policy and labor market integration began with a conceptualization of education systems for the following reasons. First, the risk of skill obsolescence has increased, where skill obsolescence is understood as the deficiency of skills necessary to fulfill the tasks associated with one's employment position or comparable employment positions. Skill-biased technological change, trade, and financial market

liberalization were discussed as the three main causes of skill obsolescence and influence skill needs in the following ways: by increasing demand for higher levels of skills; by increasing demand for new types of skills including analytical and social skills; finally, by speeding up the rate at which skill demands change. Where the former two causes imply necessary reforms of the content of education policy, the latter suggests the need to redefine the relationship between education and working life, where learning is not restricted to the period of initial education but continues throughout the career. Finally, since education policy potentially influences an individual's skills at many different points throughout the life course, it is necessary to take a comprehensive approach to the study of education policy and its influence on employment stability.

The shortage of the conceptual tools for describing the capacity of the education system to respond to these new skill needs makes up the second motivation for creating a new conceptualization of education systems. Existing conceptualizations of education systems do exist (Campinos-Dubernet & Grandó 1992; de Moura Castro & Alfthan 1992; Green 1991). However, these studies do not speak directly to the question at hand. Rather, they base their typologies on who has control over education policy and how education is delivered rather than on the relationship between education policy and labor market outcomes. The varieties of capitalism approach (Hall & Soskice 2001b) relates education policy to labor market outcomes as well as the broader structure of economic institutions, but the discussion of education policy relates primarily to vocational training and the phase of initial training more generally.

For these reasons, the study set out with the first goal of constructing a new conceptual framework for understanding the relationship between education policy and labor market integration. Focusing on an individual's skill set as the unit of analysis, I was interested in

expressing how education policy facilitates the transition of a partially obsolete skill set to a non-obsolete skill set. I established two theoretical dimensions that express how education policy can reduce the risk of skill obsolescence. The first dimension, called the skill acquisition dimension, aimed to capture the ways in which education policy increases the capacity and opportunities to acquire skills. The capacity to learn is perhaps the most fundamental skill, because it influences the ability to obtain additional skills and thereby adapt when confronted with new tasks. Policies that expand opportunities to enter education constitute the second aspect of the skill acquisition dimension.

Opportunities to enter education were conceived of in three ways: as the degree of streaming in compulsory education that restricts educational choice; as the generosity of financial aid for students; and as the availability of on-the-job training and reintegration measures. When streaming occurs within compulsory education, students who demonstrate lower abilities take a reduced set of general education courses, which has the consequence of limiting their occupational choices later in life. Beyond this first point, however, the debate is divided. On the one hand, there are those that criticize streaming, arguing that dividing students by ability corresponds to relatively weaker resources and career goals for these students. On the other hand, there are those that defend streaming, contending that students' needs are met more efficiently if divided according to ability or that lower ability groups usually enter vocational education in such cases, which leads to the acquisition of practical skills and a high likelihood of participating in continuing vocational training during the working career.

Financial aid was the second policy that expands education opportunities and does so by reducing prohibitive costs of living and tuition. Finally, the availability of on-the-job training and reintegration measures share the common characteristic that they provide opportunities for workers to gain skills who have already begun their working lives. Opportunities for on-

the-job training were expected to increase based on the degree of coordination over firm training policy with nation-wide agreements increasing opportunities the most followed by industry agreements and then firm-based agreements. Reintegration measures provide opportunities for marginalized workers to gain skills and included policy measures such as job counselling, retraining, and subsidized employment.

Where the skill acquisition dimension captured the impact of education policy on individuals' capacity to learn and the availability of learning opportunities, the central role of the certification system on labor mobility motivated the construction of a second dimension. I called this dimension the skill transparency dimension, and it consisted of three parts. The first part assessed countries' skill forecasting policies. The tradition of skill forecasting and the relationship between skill forecasting and education policy were both analyzed in order to understand how countries anticipate and react to changed skill demands. The relevance of such activity for skill transparency lies in providing information about future skill needs, which can be used to inform to update course content, consolidate different qualifications, and develop new qualifications.

The second part of the skill transparency dimension refers to policies that promote the clear certification of skills. The centralization of the qualification system is the first aspect of skill certification that I considered. Centralization should increase transparency by reducing regional or otherwise inconsistent methods of certifying skills. Centralization therefore increases skill transparency among qualifications, which despite similar content, are certified in different ways. Beyond the centralization of the qualification system, two other policy areas are relevant to the clear certification of skills. The accreditation of prior learning is the second aspect of the certification that I included, and it refers to the certification of skills learned informally. The policies that fulfill such a function provide an alternative to costly

and time-intensive formal education for those who already hold the relevant skills. Finally, the decision of firms to train in off-site locations rather than within their own organization should lead to more transparent skill certification, either because external training institutions are more likely than in-house providers to certify training activities or because external institutions are known to a broader community.

The final part of the skill transparency dimension was made up of policies that recognized complementarities between different degree programs, or qualifications. By illuminating similarities in content between qualifications, these policies make clear the coursework necessary to become certified in qualifications requiring relatively similar skills. To be clear, if a worker, who has already earned a qualification or completed some coursework towards this qualification, decides to pursue another similar qualification instead, it is possible to identify the shared coursework between the original and preferred qualification.

Once information about the overlap between different skill sets becomes available, increasing the facility with which individuals can earn new qualifications similar to their own depends on adjusting the certification system to recognize individual components of qualifications. Policies that divide coursework for a given qualification thematically into so-called modules will increase the ease with which individuals can become certified in different qualifications. The reason is simple. If an individual only receives certification for the qualification as a whole, he or she will have to complete all of the required coursework for a given qualification in order to receive certification. In this way, the recognition of shared skill sets between different qualifications may illuminate similar types of qualifications, but, unless parts of qualifications are certified individuals, it will remain relatively cumbersome to become certified in qualifications similar to ones own.

In sum, the construction of the skill acquisition and skill transparency dimensions developed a conceptual framework with which to understand how education policy reduces the risk of skill obsolescence. In countries that score highly on both the skill acquisition and skill transparency dimensions, individuals faced with a high risk of skill obsolescence will be relatively well-suited to cope with this risk. They will know the range of employment positions for which they are suitably certified and will be able to receive certification for skills they earned informally. They will also have good information about coursework necessary to earn new qualifications in order to be eligible for a broader range of employment positions and will be able to complete the coursework relatively quickly because of qualifications are broken down into modules, or thematic units, by which they are also certified. They will have received good cognitive skills from a strong basic education and will, as a result, find it relatively easier to obtain new skills through accessible on-the-job training if still employed and abundant reintegration programs if unemployed. On the other hand, if education systems demonstrate a lack of investment in education, weak opportunities to enter education, and a dearth of policies that support skill transparency, individuals at a high risk of skill obsolescence will find it difficult to earn new skills or apply existing skills to new training and employment prospects.

In order to validate the two indices of skill acquisition and skill transparency, I correlated the indices with measures of their hypothesized observable implications. The results demonstrated significant correlations between the each index and measures of skill levels, training activity, unemployment rates of lower skilled workers, and the employment gap between different skill groups. The significant results for skill levels lent credence to the claim that policy that expands opportunities to acquire skills and ensures skill transparency is related to stronger basic skills as well as skills necessary for getting by in the knowledge economy.

The theoretical discussion also included an elaboration of the consequences of the two dimensions of education policy for the reintegration of marginalized workers. Since marginalized workers face the highest risk of skill obsolescence, education policies that provide opportunities to reduce skill obsolescence will be of relatively greater use to these workers. Moreover, the availability of institutions providing marketable skills and good information about new skill needs will aid the construction of efficient reintegration policies. Correlations between the two indices provided validation for these hypotheses. Both indices correlated highly with total spending on active labor market policies. When taking the relative efficiency of different integration policies into account, the indices were shown to correlate strongly with spending on training policies which have been shown to work well and only weakly with direct job creation policies which do not work well at improving participants' employment prospects. This evidence supports the particular hypothesis about the relationship between the education system and the tools available to policy-makers interested in crafting reintegration policy.

Tracing Causal Origins

The last part of Chapter 2 provided a preliminary examination of the origins of policies constituting the skill acquisition and skill transparency dimensions. Chapter 3 built on these initial findings and conducted an analysis of the origins of the two dimensions using fuzzy set and regression analysis. The results corroborated various existing theoretical arguments about the origins of generous social policy. Providing support for the power resources theory, the results underscored the strong positive relationship between left party incumbency and trade union density on the one hand and education policies that expand opportunities to acquire skills and promote skill transparency on the other. The strong negative relationship between

veto points and the two indices of education policy also support work by Immergut (1990) and others, which links the number of points at which political actors can block legislation to reduced levels of policy creation.

The remaining results paint a more obscure picture of the causal forces leading to education policies that expand opportunities to acquire skills and support skill transparency. Countries dominated by right parties appear opposed to policies that expand educational opportunities. This finding concurs with the theoretical expectation of the power resources approach insofar as such policies are understood as redistributive policies that benefit low income groups at the expense of net costs for high income groups. The results for the effect of right party incumbency on the skill transparency dimension, however, begin to undermine the singular understanding of education policy as a purely redistributive policy, because the relationship between right party incumbency and the abundance of policies that support skill transparency is frequently positive. There are indeed theoretical reasons that explain this positive relationship. The employer constituency of right wing parties potentially holds an interest in increasing the supply of skilled labor. Although policies that expand opportunities to gain skills also fulfill this goal, they impose trade-offs in the form of higher taxes that policies supporting skill transparency do not.

In addition to the strictly interest based assessment of right party preferences over education policy, it is necessary to consider the role of incumbency in shaping the structure of economic institutions in countries where right parties manage to dominate the cabinet share over time. It remains a challenge to differentiate between the interests of a given party family and the consequences of recurrent incumbency on that party family's policy interests, because the former is in part an outcome of the former. Recurrent incumbency changes the center of gravity of the policy agenda by reorganizing political debate around the interests of the

incumbent party (Huber & Stephens 2001, p. 28-32); it also influences the interests of bureaucratic actors responsible for formulating policy where incumbent parties influence the appointment of bureaucratic actors (Huber & Stephens 2001, p. 28-32). The interpretation of the results for right party incumbency therefore touches on a dominant debate with the comparative political economy literature concerning the complementarities between economic organization and social policy and the role of political incumbency in shaping the nature of these complementarities. The results for right party incumbency speak to this debate, because they provide an example of a policy field that holds positive consequences for both business groups and marginalized workers. Countries with a strong record of right party incumbency are, on average, more likely to expand policies that support the transparent certification of skills. These policies help workers by providing both recognition for skill learned informally and access to a broad range of educational and employment opportunities. They also advantage employers by increasing the supply of a skilled workforce.

The illumination of a hypothetical cross-class coalition in countries with strong right wing incumbency over the issue of skill transparency provokes questions about why similar coalitions do not occur in other cases. Despite theoretical reasons for why workers and employers stand to gain from policies that promote skill transparency, the failure to establish these policies across all countries suggests that consent of workers and employers is contingent. Indeed, the negative relationship between Christian democratic incumbency and the expansion of policies that promote skill transparency demonstrates the inability of certain countries to pass these policies.

At the same time, it may be more appropriate to conclude that only employers' consent is indeed contingent, since the two most relevant institutions representing workers correlated positively to both indices. This conclusion nevertheless confronts the dilemma discussed

above, namely the need to distinguish between the *ceteris paribus* micro-level assumptions about the interests of workers and the consequences of long-term political incumbency and organizational roots on the interests of these actors.

To continue, the results for the consequences of both right party and Christian democratic incumbency on skill transparency placed in question the understanding of social policy as purely redistributive, understood as dividing a limited resource. Instead, it may be the case that expanding skill transparency benefits all actors or that a reduction of skill transparency may make everyone worse off. In other words, there may be mutual gains, or positive sum outcomes, over certain policies. The possibility of mutual gains or losses alters the understanding of political contestation over policies related to skill transparency. Since the potential for mutual gains begs the question of how actors' coordinated their preferences, it may be useful to explain how these relate to the relative gains and losses between groups. The question also arises as to the contextual factors that explain the capacity to develop policies that realize mutual gains as well as the importance of the distribution of relative gains for coordination over such policies (see Baldwin 1990, p. 23). Additional questions include: In which cases are policies predominantly redistributive in nature? In which cases do mutual gains or losses exist? Where mutual gains exist, what factors influence actors' capacity to realize these gains?

On a related topic, the results for right and Christian democratic parties also raised doubts that the passage of skill transparency policies can be explained solely by a conflict dimension based on income. Right parties typically gain support from wealthier citizens and business groups, yet long term incumbency of these parties has been shown to increase levels of support for policies that promote skill transparency. An initial interpretation might be that these policies receive support from both workers and employers. However, under the

assumption that workers and employers support policies that increase skill transparency, Christian democratic parties would appear to be the most likely to expand such policies, because they are the proto-type of the cross-class party. Yet countries in which Christian democratic parties were frequently in government appear unable or unwilling to pass policies that promote skill transparency. In this way, the preferences of workers and employers over policies that expand skill transparency are likely contingent on broader contextual factors.

The varieties of capitalism approach provided analytical tools with which to understand the proclivity of right party incumbency to lead to policies supporting skill transparency and the opposite tendency for countries with Christian democratic incumbency. The varieties of capitalism approach explains the structure of education policies with reference to the role of general versus specific skills in the production process. In countries where production processes rely largely on specific skills, contracting problems frustrate high investment in these skills: employers, having invested highly in workers' training, fear losing these workers to competing firms and workers fear, if becoming unemployed, the inability to find work requiring similar skills.

The provision of labor market regulations and social policies resolve these contracting problems. Highly regulated training standards provide quality assurance, and social pressure from industry organizations and other firms ensure that firms train a high number of apprentices. These factors alleviate firms' disincentives to invest in specific skills. In the case of workers, generous social protection provides income support during the period of potential unemployment, which provides workers with sufficient time to find a new employment position that suits their specific skills. For workers, therefore, the provision of generous social policy alleviates the disincentives to invest in specific skills. Countries relying on specific skills are labelled coordinated market economies and generally include the countries of

continental and northern Europe. These countries exhibit strong left and Christian democratic incumbency.

For countries where production relies predominantly on general skills, contracting problems in the skill investments do not exist. As a result, employers do not support generous social policy to the extent of their counterparts in coordinated market economies. While some workers may continue to prefer generous social policy, the support of high income workers for such policies is likely to wane since the risk associated with holding specific skills does not exist and these workers can support themselves through periods of unemployment. Therefore, economies that rely predominantly on general skills exhibit relatively less generous social policy, because these policies are not central to employers' production strategies and the support from high income workers is weaker. Countries that rely predominantly on general skills are labelled liberal market economies and included the Anglo-Saxon countries. These countries exhibit strong right party incumbency.

Using this framework, one could explain the relative propensity of countries with strong right party incumbency to expand policies that promote skill transparency on the one hand and the relative lack of such policies in countries with strong Christian democratic incumbency on the other. Countries with a strong tradition of right party governments are typically liberal market economies. Production in these countries is based on general skills, and, as such, employers do not invest in workers' training, because they cannot guarantee a return on this investment. Compared to their counterparts in coordinated market economies, employers prefer low wage costs and weak employment protection, because they are not defending sunk investments in specific skills and preferences to minimize wage costs and increase flexibility will dominate. The consequence, however, is that employers must come to grips with higher quit rates, since workers will anticipate relatively weaker allegiance from the employer and

will change employers more regularly to avoid accumulating firm-specific knowledge that goes unrewarded on the external market. Employers, however, still want to ensure a large pool of skilled labor in order to keep wage costs down. As such, employers in liberal market economies should hold a strong preference in favor of the expansion of policies that promote skill transparency. These policies will provide workers more opportunities to gain new qualifications more efficiently, which will likely lead to higher numbers of skilled workers particularly in growth sectors. Although some employers may potentially fear that these policies will encourage their workers to pursue alternative careers, employers in liberal market economies already face the expectation of high quit rates and these dissenting employers are likely to be in the minority.

Employers and workers in coordinated market economies face a different set of incentives. Employers rely heavily on specific skills and invest large amounts in training workers with these skills. As a result, they hold a relatively stronger preference in long-term tenure than employers in liberal market economies, because they expect trained workers to return their training investment through productive employment. Workers, for their part, also invest highly in specific skills, and, as a result, are concerned about finding employment positions requiring similar skills (and involving similar wages) in the case of becoming unemployed.

Therefore, employers in coordinated market economies should exhibit strong preferences to oppose skill transparency. Employers in these countries have already created solutions to generate the pool of skilled labor that they need and will not want to encourage their workers to pursue careers outside of their firm or industry. The position of workers in these cases is less clear. On the one hand, workers should be ambivalent to policies that promote skill transparency. As long as these workers receive insurance that reduces the risk of investment in specific skills, policies that further expand opportunities to become qualified in different

skill can only benefit these workers. At the same time, given the central role of specific skills in their employment position, they are unlikely to be strong advocates of policies to promote skill transparency simply because they are unlikely to use these policies. Finally, if skill specificity is related to select benefits for workers holding these skills, stably employed workers may oppose policies to expand skill transparency in order to safeguard these benefits.

There remains one key problem with this explanation. Although it fits well to the case of the liberal market economies, it cannot explain the high support for skill transparency within countries with strong left party incumbency. These countries are also coordinated market economies, reliant on specific skills. Yet these countries largely managed to developed policies that support the transparent certification of skills. The central theoretical question provoked by this finding has to do with the consequences of skill transparency on the provision of specific skills.

As discussed above, employers in specific skill economies generally invest highly in workers skills at the beginning of the employment relationship with the expectation that the long tenure of productive employment by these workers will help them realize a return on this investment. If policies increase the transparency of skills, firms' incentives to train workers are weakened, because the capacity of workers to pursue alternative careers is higher. Maintaining high rates of firm-based training in contexts with high skill transparency therefore depends on subsidization of firms' training costs.

As for workers, they receive more employment opportunities in contexts with high skill transparency, but nevertheless face potential disadvantages. In particular, the expansion of policies that make it easier to gain new qualifications puts a premium on general skills in

contrast to specific skills. As a result, a relatively compressed wage structure may help to maintain high investment in specific skills. The coordinated market economies with strong left party incumbency indeed exemplify these characteristics that theoretically make it possible to combine high levels of investment in specific skills with policy reforms that increase skill transparency.

Comparative Historical Case Studies

The comparative historical case studies of education policy development in Denmark, Germany, and the Netherlands sought to enrich the understanding of the causal origins of policies that expand educational opportunities and ensure skill transparency. I grouped the policies that corresponded to the quantitative variables included in the skill acquisition and skill transparency indices into five thematic groups. These groups included the comprehensive school movement, state planning, firm-based training, active labour market policies, and qualification systems.

Examining the roots of political contestation over these policy areas underscored the implications of political competition for education policy outcomes. Social democratic parties typically represented the main proponent of education reforms that expanded opportunities for skill acquisition and skill transparency. Social democratic parties in all three countries attempted to enact comprehensive schooling reforms, although the success of their attempts depended ultimately on their political incumbency and the strength of conservative forces in blocking these reforms. Social democratic parties were also the key force in the expansion of active labour market policies in each country

Beyond political competition, a second key factor in explaining differences in education policy reform in these three cases includes the coordinative capacity of social actors and the state. In Denmark and the Netherlands, the social partners and the state managed to implement considerable reforms in the structure of the vocational training system and the qualifications system. In Germany, the system has remained quite stable over time, despite growing signs that reforms are indeed necessary.

Firm Interviews

After validating the rankings of Denmark, Germany, and the Netherlands on the skill acquisition and skill transparency dimensions and examining their causal origins, the analysis focused on the implication of the education policy rankings for the integration of marginalized workers by private firms. Structured firm interviews conducted with large companies in each country gauged the intensity of firms' use of active labour market policies as well as the various reasons why firms did or did not participate in these programs.

The findings supported the hypothesis that firms participate highly in countries with education systems that promote opportunities to acquire skills and ensure skill transparency. At the same time, firms' role in the integration of marginalized workers was not the same across countries. In Denmark, the state plays a central role in creating active labor market policies and is able to garner firms' commitment to the implementation of these policies. The idea that firms are indeed responsible for addressing labor market marginalization resonates within the Danish context.

In the Dutch case, firms generally appeared open to the idea of aiding the amelioration of social problems although ultimately normal firms are less engaged in the process than in

Denmark. Part of the reason seems to be that firms retain more autonomy in the Netherlands, which reduces the capacity of the state to control firms' behavior. Moreover, although the state expanded active labor market policies in the nineties, the recent period has seen a large scale privatization of reintegration services. Beyond professional reintegration firms, private employment agencies also engage in state-funded reintegration projects, usually run by a separate wing of their organization and reintegrating thousands of workers per year.

In Germany, the state spends highly on active labor market policies, but these policies do little to improve the employment prospects of the unemployed. Firms that do participate in active labor market policies tend to employ a high percentage of low skilled workers, suggesting that these firms do not invest highly in the skills of these workers.

Concluding Remarks

In many ways, the empirical analysis has raised more questions than it has answered. The conceptualization of education systems as involving redistributive elements introduces a new dimension that in turn encourages a fuller elaboration of how the determinants of the skill acquisition and skill transparency dimensions align with our existing knowledge of the determinants of redistributive policy. Moreover, given the theoretical justification of the necessity of high rankings on these two dimensions for addressing new economic needs, it remains an empirical question how education policy interacts with existing social welfare policies to shape individuals' and firms' decisions to invest in education and facilitate labor mobility.

Beyond the social consequences of redistributive social policies, the research on production regimes, which highlights the impact of social policies on production strategies, draws

attention to the economic consequences of placement on the skill acquisition and skill transparency dimensions. The theoretical framework discussed and the empirical analysis provided evidence for the argument that the expansion of opportunities to acquire skills and the transparency of earned skills increases the average level of skills in the population as well as the distance between the group with the highest and lowest skills. In doing so, workers on average hold more marketable skills and employers find it relatively easier to find skilled personnel. The analysis, however, admittedly assumes a macro perspective that does not pay attention to the particular needs of a given social group or industry, which would prove a fruitful area for future research. The dominant focus on the macro perspective also brushed over power differences within workers and employer groups that certainly deserve more attention.

Finally, by placing attention on the concept of skill transparency, the analysis has raised the issue of incomplete information in the knowledge that various economic actors have about workers' skills as well as their preconceptions about the relationship between individual educational histories and the tasks required to fulfil various job profiles. Many factors are likely to shape the clear certification of skills and the recognition of complementarities between different skill sets, such as the degree of skill specificity and the strength of Christian democratic parties, and additional work is necessary to delineate the causal weight of these factors as well as their social and economic consequences.

APPENDIX A

The construction of the skill acquisition and skill transparency dimensions was completed by using nine variables for the skill acquisition dimension and six variables for the skill transparency dimension. The variables are listed in Tables A1A and A1B, respectively.

Table A1A: Components of Skill Acquisition Dimension

| Dimensions | Definition |
|---|---|
| <i>Basic Investment</i> | |
| Spending on Education | Public expenditure per pupil as a % of GDP per capita for pre-primary, primary, secondary, and tertiary education |
| <i>Inherent Limitations</i> | |
| No Institutional Separation Prior to End of Compulsory Education Dummy * Percent of Each Student Cohort in Apprenticeship Education | The emphasis on apprenticeship training controlling for the potential damaging consequences of dividing students by ability too early in their educational career |
| <i>Cost Barriers</i> | |
| Financial Aid Costs of Tertiary Education | Financial Aid as Percentage of Education Expenditure Degree of Financial Relief in Tertiary Education |
| <i>Continuing Education</i> | |
| Active Labor Market Policies | Spending on ALMP as percent GDP divided by unemployment rate |
| Regulation | Encompassing Nature of Continuing Education Regulation |
| SKILL ACQUISITION | The degree to which education policy supports the capacity and creates opportunities to enter into new forms of education |

Table A1B: Dimensions of Skill Transparency

| Dimensions | Definition |
|--|--|
| <i>Skill Forecasting</i> | |
| Legacy of Forecasting | Legacy and strength of skill forecasting activity |
| <i>Qualification Definition</i> | |
| Centralization of Qualification Network | Degree to which the qualifications system is centralized |
| Framework for Recognizing Non-Formal and Informal Learning | Degree to which there is a clear national system of recognizing non-formal or informal learning |
| Firms' use of External Institutions | Degree to which firms use external institutions |
| <i>Qualification Complementarities</i> | |
| Framework for Linking Different Occupations | Degree to which a country has a clear framework for linking qualifications from different educational and occupational sectors |
| Unitized Qualifications | Qualifications are unitized and units from different occupations can be combined |
| SKILL TRANSPARENCY | The potential of educational institutions to reveal individuals' qualifications and their appropriateness to occupations in the labor force. |

APPENDIX B

Basic Investment

| | |
|-----------|---|
| spendpre | Spending on Education as % GDP for Pre-Primary education. |
| spendprim | Spending on Education as % GDP Per Pupil for Primary Education Source: UNESCO. Missing data for Canada from Education at a Glance 2004, |
| spendsec | Index of Spending on Education as % GDP Per Pupil for Secondary Education Source: UNESCO. Missing data for Canada from Education at a Glance 2004, |
| spendter | Index of Spending on Education as % GDP Per Pupil for Tertiary Education Source: UNESCO. Missing data for Germany from Eurostat. |

Inherent Limitations

| | |
|---------------------|--|
| ability*apprentices | Division by Ability before Completion of Compulsory Education Countries receive 0 if this is true and 1 if this is not true. Source: www.inca.org , http://www.eurydice.org/portal/page/portal/Eurydice This dummy variable is then multiplied by the percent of the school cohort who enters apprenticeship training. Source: OECD, 1999, and OECD, 2007, see www.oecd.org/edu/eag2007 . |
|---------------------|--|

Cost Barriers

| | |
|--------|--|
| teraid | Financial Aid as a Percentage of Government Expenditure on Tertiary Education. Source: Education at a Glance 2007, Table B5.2. |
|--------|--|

| | |
|--------|--|
| finaid | <p>Financial Aid as Percentage of Education Expenditure</p> <p>Source: Eurostat. Missing data for Australia, Canada and New Zealand from Education at a Glance, OECD, 1998.</p> |
| almp | <p>Spending on active labour market policies as a percent of GDP. Source: OECD.</p> |
| conted | <p>Degree of Institutionalization of Continuing Training</p> <p>The values for this variable were derived from the many sources. The coding scheme is the following: 0: training decisions predominantly made on firm level; 1: training decisions predominantly made through collective agreements; 2: training is regulated through legislation or controlled through an obligatory levy on firms.</p> <p>A report from Eiro-online supplied the data for Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Netherlands, New Zealand, Sweden, Switzerland, UK, and US. (Caprile & Llorens 1998)</p> <p>The following shows where the data came from for other countries:</p> <p>Australia: (Cully 2002)</p> <p>Bulgaria: (Neykov 2004)</p> <p>Canada: (Betcherman et al 1998)</p> <p>Czech Republic: (Hála & Kroupa 2005)</p> <p>Estonia: (Karu M & K. 2007)</p> <p>Greece: (Papadogamvros 1998)</p> <p>Hungary: (Whitman 2003)</p> <p>Italy: (D & V. 2002)</p> <p>Japan: (Gasskov 1994)</p> |

Latvia: (Karnite 2004)
Lithuania:(Blaziene & Gruzevskis 2005)
Norway:(Nergaard 1999)
Poland:(Sroka 2005)
Portugal: (de Paz et al 2007)
Romania: (Preda 2004)
Slovenia: (Kanjuo Mrčela & Kajič 2005)
Spain: (Albarracín 2005)

Forecasting

forecast

Legacy of Forecasting

The length and intensity of skill forecasting.

Australia: Manpower planning discussed in national employment report (Isaac 1960); Many firm-based HR studies completed throughout 1980s (Kane & Stanton 1991)

Austria: since the 1960s (Lassnigg 2002)

Belgium: through ROA as with the Netherlands (ILO 2007)

Bulgaria: Weak (2007)

Canada: since 1969 (Ahamad & Blaug 1973; Boswell et al 2004)

Czech Republic: No current forecasting activity (Havlièková 1999)

Denmark: Well developed forecasting methods (Lindskog 2004)

Estonia: Established forecasts began in lates 1990s – first year of data is 1997 (Zukersteinova & Strietska-Ilina 2007)

Finland: Since the end of the 1960s the National Board of Education implemented a manpower forecast (Zukersteinova & Strietska-Ilina, p.73)

France: late 1940s (Ahamad & Blaug 1973; Zukersteinova & Strietska-Ilina 2007, p.15)

Germany: mid-1960s (Havlíková 1999, p.18); by IAB since 1969 (Boswell et al 2004, p. 25).

Greece: early 1980s (Zukersteinova & Strietska-Ilina 2007, p.97)

Hungary: Undeveloped (Schmidt et al 2003)

Ireland: institutionalized since 1993 (Zukersteinova & Strietska-Ilina 2007, p. 18); some early attempts in 60s but didn't really get underway until mid-1970s when the government established AnCO, the National Training and Employment Authority.

Italy: First forecasts were in 2003 (Zukersteinova & Strietska-Ilina 2007)

Japan: Well established methods (Neugart & SchÖMann 2002a)

Latvia: No experience yet (Jakobsons 2006)

Lithuania: Since 1991 (Gruzevskis & Sventickaite 2006)

Netherlands: prior to 1970 (Zukersteinova & Strietska-Ilina 2007, p.17)

New Zealand: There were models in the 1980s (Papps 2001)

Norway: Established practices (Lindskog 2004)

Poland: Though there appears to be good data, a team of experts was just set up in 1998 to develop a forecasting system for Poland (Havlíková 1999, p. 155)

Portugal: early 1980s (Sellin 2000, p. 129)

Romania: Skill forecasting in a “nascent phase” – at last post-1992 (Zukersteinova & Strietska-Ilina 2007)

Slovenia: There is a survey on education and training needs from the national employment service, but this does not lead to good predictions of training needs (Havlíková 1999)

Spain: Weak development (Neugart & SchÖMann 2002a)

Sweden: 1930s (Ahamad & Blaug 1973)

Switzerland: Weak development (Gilomen 2002)

United Kingdom: At least by the early 1970s (Wilson 1994)

United States: early 1950s (Zukersteinova & Strietska-Ilina 2007, p.15); at least 1954 (Boswell et al 2004, p. 32)

Clarity of Qualifications

central

Centralization

See Blog, I. (2007). "Education and Training Policy Qualifications Systems: Bridges to Lifelong Learning Complete Edition-ISBN 9264013679." Countries where the qualifications system is unified throughout its regions and control lies with one main agency or with government: 3. This is definitely true for my country; 2. This is only partially true for my country; 1. There is only limited experience of this in my country; and 0. This is not present in my country.

accred

Accreditation of Prior Learning

See Blog, I. (2007). "Education and Training Policy Qualifications Systems: Bridges to Lifelong Learning Complete Edition-ISBN 9264013679." Countries where there is a clear national programme or system for recognising non-formal or informal learning: 3. This is definitely true for my country; 2. This is only partially true for my country; 1. There is only limited experience of this in my country; and 0. This is not present in my country.

exttrain

Firm Use of External Institutions

All data comes from CVTS except for the following countries. For Australia (Dawe 2003).

Qualification Complementarities

link

Linking Complementarities

Source: Blog, I.(2007). “Education and Training Policy Qualifications Systems: Bridges to Lifelong Learning Complete Edition-ISBN 9264013679.” Countries with an explicit framework linking qualifications from different educational and occupational sectors: 3. This is definitely true for my country; 2. This is only partially true for my country; 1. There is only limited experience of this in my country; and 0. This is not present in my country.

unit

Unitized Qualification

Validity Check of Table 2.3: Correlations with Skill Acquisition Index

Low Adult Literacy: The source of the measure is the Adult Literacy Survey.

Information Age Literacy: The source of the measure is the Adult Literacy Survey.

Percent Early School Leavers (early): The source of this measure is Eurostat (Extracted 30 May 2008).

It includes the percent of the population aged 18-24 with at most lower secondary education and not in further education or training. The measure is an average of data from 2003 to 2007.

Gross Tertiary Enrolment (enroll): The source of this measure is the United Nations Educational, Scientific, and Cultural Organization (UNESCO). It includes the total gross enrolment of students in the International Standard Classification of Education (ISCED) 5 and 6.

Participation in Continuing Education (cvt): The source for this variable includes Eurstat, UNESCO, and two publications reporting specifically for Japan and Slovenia (Kurosawa 2001; Medvešek-Milošević 2007).

Percent in Recent Training Activity (recent): The source of this measure is Eurostat (Extracted 30 May 2008). It includes the percent of the population aged 18-24 with at most lower secondary education and not in further education or training. The measure is an average of annual data from 2003 to 2007.

Unemployment - Primary School (unprim): The source of this measure is Eurostat (Extracted 24 April 2008). It includes the percent of the population aged 15-64 who are unemployed and hold at most a degree equivalent to ISCED levels 0 to 2 (Pre-primary, primary and lower secondary education). The measure is an average of quarterly data from 2000 to 2007.

Unemployment - Secondary School (unsec): The source of this measure is Eurostat (Extracted 24 April 2008). It includes the percent of the population aged 15-64 who are unemployed and hold at most a degree equivalent to ISCED levels 3 to 4 (Upper secondary and post-secondary non-tertiary education). The measure is an average of quarterly data from 2001 to 2007.

Employment Gap - Tertiary – Secondary (diffem): This measure is the difference between the employment level of those with tertiary degree minus the employment level of those with a secondary school finishing degree. The source of this measure is Eurostat (Extracted 22 May 2008). Both employment data measures include the percent of the population aged 25-64 who are employed. The measure for tertiary education includes those with a degree of equivalence ISCED 5 or 6, the measures for secondary degree includes those with a degree of equivalence ISCED 3 to 4. The measure is an average of annual data from 2003 to 2007.

Table B2. Data Included in Table 3.

| country | lowlit | inage | early | enrol | cvt | recent | unprim | unsec | diffem |
|----------------|--------|-------|-------|-------|-------|--------|--------|-------|--------|
| Australia | | | | 67.20 | 24.00 | | | | |
| Austria | | | 9.50 | 49.20 | 33.00 | 11.80 | 8.30 | 3.80 | 10.10 |
| Belgium | 0.06 | 0.72 | 12.50 | 57.90 | 26.50 | 7.70 | 12.40 | 7.70 | 10.40 |
| Bulgaria | | | 19.70 | 41.60 | 15.00 | 1.30 | 25.20 | 12.50 | 10.30 |
| Canada | 0.10 | 0.62 | | 67.50 | 28.00 | | | | |
| Czech Republic | 0.07 | 0.69 | 6.00 | 35.00 | 37.50 | 5.60 | 23.40 | 6.90 | 10.30 |
| Denmark | 0.04 | 0.72 | 10.10 | 64.00 | 40.00 | 27.10 | 7.10 | 4.20 | 6.00 |
| Estonia | | | 13.40 | 57.10 | 24.00 | 6.50 | 19.10 | 10.20 | 8.80 |
| Finland | 0.03 | 0.80 | 8.50 | 82.80 | 42.00 | 22.80 | 14.60 | 9.10 | 9.60 |
| France | | | 12.70 | 52.80 | 46.00 | 7.30 | 12.80 | 7.80 | 7.40 |
| Germany | 0.08 | 0.63 | 13.10 | 33.80 | 30.00 | 7.30 | 17.10 | 9.60 | 12.40 |
| Greece | | | 14.90 | 66.40 | 14.00 | 2.10 | 9.00 | 12.50 | 13.50 |
| Hungary | 0.19 | 0.45 | 12.00 | 46.10 | 15.00 | 4.00 | 13.50 | 6.10 | 11.50 |
| Ireland | 0.17 | 0.53 | 12.30 | 50.90 | 10.00 | 6.90 | 7.30 | 3.80 | 10.00 |
| Italy | 0.16 | 0.52 | 21.60 | 54.40 | 14.00 | 5.80 | 9.60 | 7.80 | 7.40 |
| Japan | | | | 48.90 | 40.00 | | | | |
| Latvia | | | 16.10 | 61.90 | 11.00 | 7.60 | 17.00 | 10.00 | 10.60 |
| Lithuania | | | 9.90 | 60.00 | 15.00 | 5.20 | 16.50 | 11.90 | 12.70 |
| Netherlands | 0.06 | 0.74 | 13.30 | 53.80 | 29.00 | 16.20 | 5.40 | 3.10 | 7.40 |
| New Zealand | 0.16 | 0.55 | | 70.10 | 36.00 | | | | |
| Norway | 0.06 | 0.75 | 5.40 | 70.70 | 37.00 | 17.80 | 7.40 | 3.30 | 8.40 |
| Poland | 0.29 | 0.36 | 5.60 | 53.50 | 16.00 | 4.80 | 25.30 | 18.00 | 20.60 |
| Portugal | | | 38.80 | 49.10 | 28.00 | 4.00 | 6.70 | 6.70 | 7.00 |
| Romania | | | 21.20 | 32.20 | 17.00 | 1.30 | 7.90 | 8.50 | 14.90 |
| Slovenia | 0.21 | 0.43 | 4.50 | 62.70 | 35.60 | 14.90 | 9.60 | 6.50 | 12.70 |
| Spain | | | 30.90 | 59.90 | 33.00 | 8.10 | 12.20 | 10.40 | 8.20 |
| Sweden | 0.04 | 0.79 | 10.30 | 70.50 | 46.00 | 32.30 | 10.70 | 5.70 | 5.70 |
| Switzerland | 0.08 | 0.67 | 9.20 | 39.80 | 15.00 | 25.70 | 6.40 | 3.30 | 9.30 |
| United Kingdom | 0.20 | 0.50 | 14.70 | 56.70 | 38.50 | 27.60 | 8.40 | | 6.70 |
| United States | 0.26 | 0.41 | | 77.10 | 35.00 | | | 4.80 | |

Table 2.4. Validity Check: Correlations with Skill Transparency Index - All variables in Table 4 are also in Table 3. Please refer to above descriptions.

Table 2.5. Active Labor Market Policies and Indices of Education Mobility

Spending on Active Labor Market Policies (total): This measure is the spending on all active labor market policies as a percent of GDP divided by the rate of unemployment. The source of this measure is data on active labor market policies downloaded from the Organization for Economic Cooperation and Development (OECD) (Extracted 1 June 2008) and

unemployment data from the OECD (Extracted 1 June 2008). The data is an average of annual data between 2001 and 2005.

Subsets of ALMP: Training (train): This measure is the spending on the subgroup of active labor market policies entitled training policies as a percent of GDP divided by the rate of unemployment. The source of this measure is data on active labor market policies downloaded from the Organization for Economic Cooperation and Development (OECD) (Extracted 1 June 2008) and unemployment data from the OECD (Extracted 1 June 2008). The data is an average of annual data between 2001 and 2005.

Subsets of ALMP: Recruitment (recruit): This measure is the spending on the subgroup of active labor market policies entitled recruitment policies as a percent of GDP divided by the rate of unemployment. The source of this measure is data on active labor market policies downloaded from the Organization for Economic Cooperation and Development (OECD) (Extracted 1 June 2008) and unemployment data from the OECD (Extracted 1 June 2008). The data is an average of annual data between 2001 and 2005.

Subsets of ALMP: Disabled (support): This measure is the spending on the subgroup of active labor market policies entitled supported employment and rehabilitation policies as a percent of GDP divided by the rate of unemployment. The source of this measure is data on active labor market policies downloaded from the Organization for Economic Cooperation and Development (OECD) (Extracted 1 June 2008) and unemployment data from the OECD (Extracted 1 June 2008). The data is an average of annual data between 2001 and 2005.

Subsets of ALMP: Direct Job Creation (direct): This measure is the spending on the subgroup of active labor market policies entitled direct job creation policies as a percent of GDP divided by the rate of unemployment. The source of this measure is data on active labor market policies downloaded from the Organization for Economic Cooperation and Development

(OECD) (Extracted 1 June 2008) and unemployment data from the OECD (Extracted 1 June 2008). The data is an average of annual data between 2001 and 2005.

Table B3. Data Included in Table 2.5.

| country | total | train | recruit | support | direct |
|----------------|-------|-------|---------|---------|--------|
| Australia | 0.05 | 0.01 | 0.00 | 0.01 | 0.01 |
| Austria | 0.11 | 0.07 | 0.01 | 0.01 | 0.01 |
| Belgium | 0.13 | 0.03 | 0.01 | 0.02 | 0.06 |
| Bulgaria | | | | | |
| Canada | 0.03 | 0.01 | 0.00 | 0.00 | 0.00 |
| Czech Republic | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 |
| Denmark | 0.31 | 0.12 | 0.10 | 0.09 | 0.00 |
| Estonia | | | | | |
| Finland | 0.09 | 0.04 | 0.01 | 0.01 | 0.01 |
| France | 0.10 | 0.03 | 0.01 | 0.01 | 0.03 |
| Germany | 0.10 | 0.04 | 0.01 | 0.02 | 0.02 |
| Greece | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 |
| Hungary | 0.03 | 0.01 | 0.01 | 0.00 | 0.01 |
| Ireland | 0.15 | 0.06 | 0.02 | 0.00 | 0.06 |
| Italy | 0.07 | 0.02 | 0.03 | 0.00 | 0.00 |
| Japan | 0.04 | 0.01 | 0.00 | 0.00 | 0.00 |
| Latvia | | | | | |
| Lithuania | | | | | |
| Netherlands | 0.33 | 0.05 | 0.01 | 0.16 | 0.06 |
| New Zealand | 0.07 | 0.04 | 0.01 | 0.01 | 0.00 |
| Norway | 0.15 | 0.09 | 0.01 | 0.03 | 0.02 |
| Poland | 0.02 | 0.01 | 0.00 | 0.01 | 0.00 |
| Portugal | 0.09 | 0.04 | 0.03 | 0.01 | 0.01 |
| Romania | | | | | |
| Slovenia | | | | | |
| Spain | 0.06 | 0.01 | 0.02 | 0.01 | 0.01 |
| Sweden | 0.21 | 0.08 | 0.07 | 0.04 | 0.00 |
| Switzerland | | 0.07 | 0.02 | 0.07 | 0.00 |
| United Kingdom | 0.07 | 0.02 | 0.00 | 0.00 | 0.00 |
| United States | 0.02 | 0.01 | 0.00 | 0.01 | 0.00 |

Table 6. Political Factors and Indices of Skill Acquisition and Skill Transparency

Cumulative Left Cabinet Share (left): This measure is the cumulative proportion of seats that left parties held in government since 1946. The data sources is Evelyne Huber, Charles Ragin, John D. Stephens, David Brady, and Jason Beckfield, Comparative Welfare States Data Set, Northwestern University, University of North Carolina, Duke University and Indiana University, 2004.

Cumulative Christian Democratic Cabinet Share (Christian): This measure is the cumulative proportion of seats that Christian and catholic parties held in government since 1946. The data sources is Evelyne Huber, Charles Ragin, John D. Stephens, David Brady, and Jason Beckfield, Comparative Welfare States Data Set, Northwestern University, University of North Carolina, Duke University and Indiana University, 2004.

Employer Organization (employer): The measure is a compilation of three other measures of employment organization: Traxler et al index of employer association integration in national policy process; Z-score index of existence of national employers association and powers of that association; and Soskice scale of coordination of employers associations in collective bargaining. The source of the data is the dataset used for Martin and Swank (2004).

Table B4. Data Included in Table 2.6.

| country | left | christian | employer |
|----------------|-------|-----------|----------|
| Australia | 19.94 | 0 | -0.16 |
| Austria | 33.38 | 20.75 | 0.63 |
| Belgium | 18.98 | 28.32 | 0.25 |
| Bulgaria | | | |
| Canada | 0 | 0 | -1.78 |
| Czech Republic | | | |
| Denmark | 32.18 | 0.42 | 0.63 |
| Estonia | | | |
| Finland | 22.93 | 0 | 0.82 |
| France | 16.17 | 3.97 | 0.22 |
| Germany | 14.56 | 28.99 | 0.75 |
| Greece | | | |
| Hungary | | | |
| Ireland | 5.98 | 0 | -0.37 |
| Italy | 8.56 | 39.7 | -0.29 |
| Japan | 1.37 | 0 | -0.03 |
| Latvia | | | |
| Lithuania | | | |
| Netherlands | 13.66 | 30.08 | 0.07 |
| New Zealand | 17.33 | 0 | -0.76 |
| Norway | 40.54 | 3.44 | 1.03 |
| Poland | | | |
| Portugal | | | |
| Romania | | | |
| Slovenia | | | |
| Spain | | | |
| Sweden | 44.86 | 0.45 | 0.52 |
| Switzerland | 14.4 | 15.11 | 0.35 |
| United Kingdom | 19.83 | 0 | -0.72 |
| United States | 0 | 0 | -1.78 |

REFERENCES

- Bulgaria – Education and Skills for the Knowledge Economy A Policy Note Executive summary, World Bank
2007. Bulgaria – Education and Skills for the Knowledge Economy, World Bank
- Adsera A, Boix C. 2000. Must we choose? European unemployment, American inequality, and the impact of education and labor market institutions. *European Journal of Political Economy* 16:611-38
- Ahamad B, Blaug M. 1973. *The Practice of manpower forecasting: a collection of case studies*: Jossey-Bass, San Francisco
- Albarracín D. 2005. Continuing training and collective agreements.
- Alber J. 1996. Selectivity, Universalism, and the Politics of Welfare Retrenchment in Germany and the United States. *Manuskript. San Francisco*
- Allan J, Scruggs L. 2004. Political Partisanship and Welfare State Reform in Advanced Industrial Societies. *American Journal of Political Science* 48:496-512
- Allen J, De Grip A. 2005. Skill Obsolescence, Lifelong Learning and Labour Market Participation. *SOLE/EALE Conference, San Francisco, June:3-5*
- Allen J, van der Velden R. 2002. When do skills become obsolete, and when does it matter? *The Economics of Skills Obsolescence: Theoretical Innovations and Empirical Applications:5*
- Ansell B. 2006. University Challenges: Explaining Institutional Change in Higher Education. *Unpublished manuscript. Minneapolis, MN: University of Minnesota*
- Arnesen AL, Lundahl L. 2006. Still Social and Democratic? Inclusive Education Policies in the Nordic Welfare States. *Scandinavian Journal of Educational Research* 50:285-300
- Arum R, Shavit Y. 1995. Secondary vocational education and the transition from school to work. *Sociology of Education* 68:187-204
- Autor DH, Katz LF, Kearney MS. 2006. The Polarization of the US Labor Market. *American Economic Review* 96:189-94
- Autor DH, Katz LF, Krueger AB. 1998. Computing Inequality: Have Computers Changed the Labor Market?*. *Quarterly Journal of Economics* 113:1169-213
- Baldwin P. 1990. *The Politics of Social Solidarity: Class Bases of the European Welfare State 1875-1975*. New York: Cambridge University Press
- Barro RJ. 1997. *Determinants of Economic Growth: A Cross-Country Empirical Study*: Mit Pr
- Barro RJ, Lee JW. 1996. International Measures of Schooling Years and Schooling Quality. *American Economic Review* 86
- Baum MA, Lake DA. 2003. The Political Economy of Growth: Democracy and Human Capital. *American Journal of Political Science* 47:333-47
- Becker GS. 1964. *Human capital; a theoretical and empirical analysis, with special reference to education*. New York,: National Bureau of Economic Research; distributed by Columbia University Press. xvi, 187 p. pp.

- Becker U. 2000. Welfare state development in the Netherlands in comparative perspective. *Journal of European Social Policy* 10:219-39
- Bell D. 1973. *The Coming of Post-Industrial Society: A Venture in Social Forecasting*: Basic Books
- Bengtsson J. 1993. Labour Markets of the Future: The Challenge to Education Policy Makers. *European Journal of Education* 28:135-57
- Benner M, Vad TB. 2000. Sweden and Denmark: Defending the Welfare State. In *Welfare and work in the open economy*, ed. FW Scharpf, VA Schmidt, p. v. <1 >. Oxford ; New York: Oxford University Press
- Betcherman G, Leckie N, McMullen KE, Canadian Policy Research N. 1998. *Barriers to Employer-sponsored Training in Canada*: Canadian Policy Research Networks
- Billett S, Smith A. 2005. Enhancing enterprise expenditure on VET: policy goals and mechanisms. *Journal of Vocational Education & Training* 57:5-23
- Blaziene I, Gruzevskis B. 2005. Annual Review for Lithuania. 2004.
- Blechinger D, Pfeiffer F. 2000. Technological Change and Skill Obsolescence: the Case of German Apprenticeship Training. *Education and Training in a Knowledge-Based Economy*:243–76
- Bleses P, Seeleib-Kaiser M. 2004. *The dual transformation of the German welfare state*. Basingstoke, Hampshire ; New York: Palgrave Macmillan. xii, 192 pp.
- Blog I. 2007. Education and Training Policy Qualifications Systems: Bridges to Lifelong Learning Edition complete-ISBN 9264013679-Fr. a paraitre. *SourceOCDE Enseignement et compétences* 2007
- Blondal S, Scarpetta S. 1998. The OECD Jobs Strategy Under Scrutiny. *The OECD OBSERVER* 209
- Boix C. 1998. *Political Parties, Growth and Equality: Conservative and Social Democratic Economic Strategies in the World Economy*: Cambridge University Press
- Boli J, Ramirez FO, Meyer JW. 1985. Explaining the Origins and Expansion of Mass Education. *Comparative Education Review* 29:145-70
- Bonoli G. 2007. Time Matters: Postindustrialization, New Social Risks, and Welfare State Adaptation in Advanced Industrial Democracies. *Comparative Political Studies* 40:495
- Boone J, van Ours J. 2004. *Effective active labour market policies*: Centre for Economic Policy Research
- Borghans L, van Loo J, de Ruyter E, De Steur M, Sanders J, Vlasblom JD. 2000. Organisatieveranderingen en Competentie-ontwikkeling, Verslag van een Enquête bij Het Kantoor, ROA
- Boswell C, Stiller S, Straubhaar T. 2004. Forecasting Labour and Skills Shortages: How Can Projections Better Inform Labour Migration Policies. *European Commission, DG Employment and Social Affairs. Hamburg: Migration Research Group*
- Bradley D, Stephens J. 2007. Employment Performance in OECD Countries: A Test of Neo-Liberal and Institutional Hypotheses. *Comparative Political Studies* 40

- Bresnahan TF, Brynjolfsson E, Hitt LM. 2002. Information Technology, Workplace Organization, and the Demand for Skilled Labor: Firm-Level Evidence*. *Quarterly Journal of Economics* 117:339-76
- Bronneman-Helmerts HM. 2008. Vijftien Jaar Onderwijsvernieuwingen in Nederland *Rep. 31 007, nr. 7*, Tweede Kamer der Staten-Generaal, 's-Gravenhage
- Brown DS, Hunter W. 2004. Democracy and Human Capital Formation: Education Spending in Latin America, 1980 to 1997. *Comparative Political Studies* 37:842
- Brynjolfsson E, Hitt LM. 2003. Beyond Computation: Information Technology, Organizational Transformation and Business Performance. *Inventing the organizations of the 21st century*. MIT Press. Cambridge, MA–London:71-99
- Busemeyer MR. 2007. Determinants of public education spending in 21 OECD democracies, 1980–2001. *Journal of European Public Policy* 14:582-610
- Busemeyer MR. 2008. Social Democrats and Education Spending: A Refined Perspective on Supply-Side Strategies. *Journal of European Public Policy*
- Campinos-Dubernet M, Grando JM. 1992. Construction, constructions: a cross-national comparison. *Bartlett International Summer School Proceedings* 11
- Caprile M, Llorens C. 1998. *Collective bargaining and continuing vocational training in Europe*. <http://www.eurofound.europa.eu/eiro/1998/04/study/tn9804201s.htm>
- Carlin W, Soskice D. 2007. Reforms, Macroeconomic Policy and Economic Performance in Germany.
- Castles FG. 1989. Explaining public education expenditure in OECD nations. *European Journal of Political Research* 17:431-48
- CBI CoBI. 1999. Making Employability Work: An Agenda for Action, CBI, London
- Chusseau N, Dumont M, Hellier J. 2008. EXPLAINING RISING INEQUALITY: SKILL-BIASED TECHNICAL CHANGE AND NORTH-SOUTH TRADE*. *Journal of Economic Surveys*
- Clasen J. 1994. Social Security: the Core of the German Employment-Centered Social State. *Social Policy in Germany*:61-82
- Colardyn D, Bjornavold J. 2005. *The learning continuity: European inventory on validating non-formal and informal learning: national policies and practices in validating non-formal and informal learning*: Luxembourg: Office for Official Publications of the European Communities
- Compston H, Madsen PK. 2001. Conceptual Innovation and Public Policy: Unemployment and Paid Leave Schemes in Denmark. *Journal of European Social Policy* 11:117-32
- Crouch C. 1993. *Industrial relations and European state traditions*. Oxford England ; New York: Clarendon Press. xx, 407 pp.
- Cully M. 2002. The cleaner, the waiter, the computer operator: Job change, 1986–2001. *Australian Bulletin of Labour* 28:141-62
- Culpepper PD. 2003. *Creating Cooperation: How States Develop Human Capital in Europe*: Cornell University Press

- D P, V. R. 2002. Intersectoral Continuing Vocational Training Funds Established.
- Dahrendorff R. 1965. *Bildung ist Bürgerrecht*. Hamburg: Nannen
- David PA. 1990. The Dynamo and the Computer: An Historical Perspective on the Modern Productivity Paradox. *American Economic Review* 80:355-61
- David PA, Foray D. 2003. Economic Fundamentals of the Knowledge Society. *Policy Futures in Education* 1:20-49
- Dawe S. 2003. Determinants of successful training practices in large Australian firms, National Centre for Vocational Education Research (NCVER), Adelaide.
- de Bruijn E, Howieson C. 1995. Modular Vocational Education and Training in Scotland and The Netherlands: Between Specificity and Coherence. *Comparative Education* 31:83-99
- de Grip A. 2004. Evaluating human capital obsolescence. *Research Centre for Education and the Labour Market (ROA), Maastricht University*
- de Grip A, van Loo J, Mayhew K. 2002. *The Economics of Skills Obsolescence: Theoretical Innovations and Empirical Applications*: JAI Press
- de Moura Castro C, Alfthan T. 1992. Five Training Models. Training Occasional Paper No. 9.
- de Paz M, Lima C, R. N. 2007. Trends in collective bargaining in 2006.
- DiPrete TA. 2002. Life Course Risks, Mobility Regimes, and Mobility Consequences: A Comparison of Sweden, Germany, and the United States 1. *American Journal of Sociology* 108:267-309
- Dougherty C, Tan J-P. 1999. Financing Training: Issues and Options. *Journal of European Industrial Training* 23:416-36
- Dustmann C, Rajah N, Soest A. 2003. Class Size, Education, and Wages. *The Economic Journal* 113:99-120
- Duverger M. 1954. *Political parties*: Methuen London
- Epstein J, Duerr D, Kenworthy L, Ragin C. 2007. Comparative Employment Performance: A Fuzzy-Set Analysis.
- Esping-Andersen G. 1990. *The three worlds of welfare capitalism*. Princeton, N.J.: Princeton University Press. xi, 248 pp.
- Esping-Andersen G. 2005. Education and equal life chances: investing in children. *Social Policy in a Development Context: Social Policy and Economic Development in the Nordic Countries*. London: Palgrave
- Estevez-Abe M, Iversen T, Soskice D. 2001. Social Protection and the Formation of Skills: A Reinterpretation of the Welfare State. *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*:145–83
- Eurydice. 2006/7. *The Education System in Denmark*.
http://www.eurydice.org/ressources/eurydice/eurybase/pdf/0_integral/DK_EN.pdf

- Finlay I, Niven S. 1996. Characteristics of Effective Vocational Education and Training Policies: an international comparative perspective. *International Journal of Vocational Education and Training* 4:5–22
- Fuhrig W, ed. 1969. *West Germany*. Urbana: University of Illinois Press
- Gangl M. 2004. Welfare States and the Scar Effects of Unemployment: A Comparative Analysis of the United States and West Germany 1. *American Journal of Sociology* 109:1319-64
- Gasskov V. 1994. Learning and Training for Work in the Knowledge Society.
- Geishecker I. 2002. Outsourcing and the Demand for Low-skilled Labour in German Manufacturing: New Evidence. In *DIW Discussion Paper*. Berlin
- Geissler G. 2005. The Interrelationship Between the State and the Local Community in the German School Tradition. *European Education* 37
- George AL, Bennett A. 2005. *Case Studies and Theory Development in the Social Sciences*. Cambridge: Mit Press
- Gerritsz J. 1923. Measures to Combat Unemployment in the Netherlands. *International Labour Review* 6
- Gilomen H. 2002. Bildungsindikatoren Schweiz: Strategien der Zukunft. Bundesamt für Statistik, Neuchâtel
- Green-Pedersen C. 1999. The Danish Welfare State under Bourgeois Reign: The Dilemma of Popular Retrenchment and Economic Constraints. *Scandinavian Political Studies* 22:243-60
- Green A. 1991. The reform of post-16 education and training and the lessons from Europe. *Journal of Education Policy* 6:327-39
- Green F, Ashton D, Burchell B, Davies B, Felstead A. 2000. Are British Workers Becoming more Skilled? In *The Overeducated Worker? The Economics of Skill Utilization*, ed. L Borghans, A De Grip, pp. pp. 77-106. Cheltenham: Edward Elgar
- Greinert W-D. 1994. *The >>German System<< of Vocational Education*. Baden-Baden: Nomos Verlagsgesellschaft
- Grollmann P, Ruth K. 2006. The 'Europeanisation' of Vocational Education between Formal Policies and Deliberative Communication. *Research in Comparative and International Education* 1:366-80
- Gruzevskis B, Sventickaite K. 2006. Lithuania: Forecasting Skills and Labour Market Needs. *Forecasting Skills and Labour Market Needs*. Helsinki
- Hála J, Kroupa A. 2005. 2004 annual review for the Czech Republic. *Eironline*, <http://www.eiro.eurofound.eu.int/2005/01/feature/cz0501103f.html>
- Hall BH, Jaffe AB, Trajtenberg M. 2001. The NBER Patent Citations Data File: Lessons, Insights and Methodological Tools.
- Hall PA, Soskice DW. 2001a. *An introduction to varieties of capitalism*. 1-68 pp.

- Hall PA, Soskice DW. 2001b. *Varieties of capitalism : the institutional foundations of comparative advantage*. Oxford England ; New York: Oxford University Press. xvi, 540 pp.
- Hall R, Buchanan J, Considine G. 2002. " You Value What You Pay For." Enhancing Employers.
- Hanson GH, Mataloni RJ, Slaughter MJ. 2001. Expansion Strategies of US Multinational Firms. *NBER Working Paper*
- Haskel JE, Slaughter MJ. 2002. Does the sector bias of skill-biased technical change explain changing skill premia? *European Economic Review* 46:1757-83
- Havlíčková V. 1999. Forecasting Education and Training Needs in Transition Economies: Lessons from the Western European Experience, National Observatory of Vocational Training and Labour Market, Prague
- Hecló H. 1974. *Modern Social Politics in Britain and Sweden*. New Haven: Yale University Press
- Heidenheimer AJ. 1974. The Politics of Educational Reform: Explaining Different Outcomes of School Comprehensivization Attempts in Sweden and West Germany. *Comparative Education Review* 18
- Hemerijck A. 1995. Corporatist immobility in the Netherlands. In *Organized Industrial Relations in Europe: What Future?*, ed. C Crouch, F Traxler, pp. 183-226. Aldershot: Avebury
- Hemerijck A. 2006. Redirecting Continental Welfare in Belgium and the Netherlands. In *A Long Goodbye to Bismarck? The Politics of Welfare Reforms in Continental Europe*. Minda de Gunzburg Center for European Studies Harvard University
- Hemerijck A, Unger B, Visser J. 2000. How Small Countries Negotiate Change. Twenty-Five Years of Policy Adjustment in Austria, the Netherlands, and Belgium. In *Welfare and Work in the open Economy. (Vol. II) Diverse responses to common challenges*, pp. 175-263: Oxford University Press
- Hibbs D. 1977. Political Parties and Macroeconomic Policy. *American Political Science Review* 71
- Hicks A, Kenworthy L. 1998. Cooperation and Political Economic Performance in Affluent Democratic Capitalism 1. *American Journal of Sociology* 103:1631-72
- Hicks AM. 1999. *Social democracy & welfare capitalism : a century of income security politics*. Ithaca, N.Y.: Cornell University Press. xii, 276 pp.
- Hooghe L, Marks G. 1999. Making of a Polity: European Integration since the 1980s. *Continuity and Change in Contemporary Capitalism*
- Höpner M. 2007. *Coordination and Organization: The Two Dimensions of Nonliberal Capitalism*: Max-Planck-Institut für Gesellschaftsforschung
- Huber E, Ragin C, Jd S. 2004a. Comparable Welfare State Dataset. *Northwestern University and University of North Carolina*
- Huber E, Ragin C, Stephens John D, Brady D. 2004b. Comparative Welfare States Data Set. Northwestern University, University of North Carolina, Duke University and Indiana University

- Huber E, Stephens JD. 2001. *Development and crisis of the welfare state : parties and policies in global markets*. Chicago: University of Chicago Press. 416 pp.
- Huber Stephens E, Ragin C, Stephens JD. 1993. Social Democracy, Christian Democracy, Constitutional Structure, and the Welfare State. *American Journal of Sociology* 99:711-49
- ILO. 2007. *National Initiatives Concerning Research on Education/ Training - Belgium*. http://www.oit.org/public/english/employment/skills/hrdr/topic_n/t21_bel.htm
- Immergut E. 1990. Institutions, Veto Points, and Policy Results: A Comparative Analysis of Health Care. *Journal of Public Policy* 10:391-416
- Isaac JE. 1960. Manpower planning in Australia'. *International Labour Review*
- Iversen T. 2005. *Capitalism, democracy, and welfare*. New York: Cambridge University Press. xvii, 312 pp.
- Iversen T, Stephens J. 2008. Partisan Politics, the Welfare State and Three Worlds of Human Capital Formation. *Comparative Education* 41:600-37
- Jacobson LS, LaLonde RJ, Sullivan DG. 1993. Earnings Losses of Displaced Workers. *American Economic Review* 83:685-709
- Jaedicke W, Ruhland K, Wachendorfer U, Wollmann H, Wonneberg H. 1991. *Lokale Politik im Wohlfahrtsstaat: zur Sozialpolitik der Gemeinden und ihrer Verbände in der Beschäftigungskrise*: Westdeutscher Verlag, Opladen
- Jakobsons A. 2006. Latvia: Forecasting Skills and Labour Market Needs. *Forecasting Skills and Labour Market Needs*. Helsinki
- Janoski T. 1990. *The Political economy of unemployment : active labor market policy in West Germany and the United States*. Berkeley, CA: University of California Press. xxvi, 351 pp.
- Janoski T. 1994. Direct State Intervention in the Labor Market: the expansion of active labor market policy from 1950 to 1988 in social democratic, conservative and liberal welfare states. In *The comparative political economy of the welfare state*, ed. T Janoski, AM Hicks, pp. 54-92. Cambridge, UK ; New York, NY: Cambridge University Press
- Jensen P, Studies AUCfCWS. 1999. *Activation of the unemployed in Denmark since the early 1990s: welfare or workfare*: Centre for Comparative Welfare State Studies (CCWS), Department of Economics, Politics and Public Administration, Aalborg University
- Jonasen V. 2004. *Social Work in Denmark 1790-2003: A Brief History*, University of Aarhus, Aarhus
- Kahn LM. 2000. Wage Inequality, Collective Bargaining, and Relative Employment from 1985 to 1994: Evidence from Fifteen OECD Countries. *The Review of Economics and Statistics* 82:564-79
- Kane RL, Stanton S. 1991. Human Resource Planning: Where are we now? *Asia Pacific Journal of Human Resources* 29:5
- Kanjuro Mrčela A, Kajič B. 2005. Annual Review for Slovenia 2004.

- Karasek R, Brisson C, Kawakami N, Houtman I, Bongers P, Amick B. 1998. The Job Content Questionnaire (JCQ): an instrument for internationally comparative assessments of psychosocial job characteristics. *J Occup Health Psychol* 3:322-55
- Karnite K. 2004. *Annual Review for Latvia*.
<http://www.eurofound.europa.eu/eiro/2004/01/feature/lv0401102f.htm>
- Karu M, K. N. 2007. *Industrial relations developments 2006 — Estonia*. .
<http://www.eurofound.europa.eu/eiro/studies/tn0703019s/ee0703019q.html>
- Katzenstein PJ. 1985. *Small states in world markets : industrial policy in Europe*. Ithaca, N.Y.: Cornell University Press. 268 pp.
- Kaufman HG. 1974. *Obsolescence & Professional Career Development*.
- Kaufman HG. 1989. Obsolescence of Technical Professionals: A Measure and a Model. *Applied Psychology* 38:73-85
- Kemenade JAv. 1991. Netherlands, OECD, Paris
- Kenworthy L. 2003. Do Affluent Countries Face an Incomes-Jobs Trade-off? *Comparative Political Studies* 36:1180-209
- Kenworthy L. 2009. Institutions, Wealth, and Inequality. In *The Oxford Handbook of Comparative Institutional Analysis*, ed. G Morgan, J Campbell, C Crouch, PH Kristensen, OK Pedersen, R Whitley. Oxford: Oxford University Press
- Kerckhoff AC. 2001. Education and Social Stratification Processes in Comparative Perspective. *Sociology of Education* 74:3-18
- Korpi W. 1983. *The democratic class struggle*. London ; Boston: Routledge & K. Paul. vii, 277 pp.
- Kurosawa M. 2001. The Extent and Impact of Enterprise Training: The Case of Kitakyushu City. *The Japanese Economic Review* 52:224-42
- Lamberti M. 2002. *The Politics of Education: Teachers and School Reform in Weimar Germany*. New York: Beghahn Books
- Lassnigg L. 2002. 9. Projections of qualifications and occupations in Austria: short-term approaches, macro perspective and emphasis on the supply side. *Forecasting Labour Markets in OECD Countries: Measuring and Tackling Mismatches*
- Lijphart A. 1968. *The Politics of Accommodation: Pluralism and Democracy in the Netherlands*: University of California Press
- Lijphart A. 1999. *Patterns of democracy*: Yale University Press New Haven and London
- Lindskog M. 2004. Labour market forecasts and their use-practices in the Scandinavian countries/Magnus Lindskog. In *WZB Discussion Paper*. Berlin
- Lipset S, Rokkan S. 1967. *Cleavage structures, party systems, and voter alignments: an introduction*: The Free Press
- Lloyd C, Payne J. 2002. Developing a Political Economy of Skill. *Journal of Education and Work* 15:365-90

- Lutz B. 1984. Der kurze Traum immerwährender Prosperität. *Eine Neuinterpretation der industriell-kapitalistischen Entwicklung im Europa des 20*
- Madsen PK. 1992. *ATB: Bedre end sit rygte-men ikke go' nok*. Skaelskor: Forlaget HOW
- Mahoney J, Rueschemeyer D. 2003. *Comparative Historical Analysis in the Social Sciences*: Cambridge University Press
- Manow P, Seils E. 2000. Adjusting Badly: The German Welfare State, Structural Change, and the Open Economy. In *Welfare and work in the open economy*, ed. FW Scharpf, VA Schmidt, p. v. <1 >. Oxford ; New York: Oxford University Press
- Mares I. 2003. *The politics of social risk : business and welfare state development*. Cambridge ; New York: Cambridge University Press. xvii, 319 pp.
- Markusen JR. 2002. *Multinational Firms and the Theory of International Trade*: MIT Press
- Markusen JR, Maskus KE. 2002. Discriminating Among Alternative Theories of the Multinational Enterprise. *Review of International Economics* 10:694-707
- Martin CJ. 2000a. *Stuck in neutral : business and the politics of human capital investment policy*. Princeton, N.J.: Princeton University Press. x, 262 pp.
- Martin CJ. 2004a. Corporatism from the firm perspective: employers and social policy in Denmark and Britain. *British Journal of Political Science*:127-48
- Martin CJ. 2004b. Reinventing Welfare State Regimes: Employers and the Implementation of Active Social Policy. *World Politics* 57:39-69
- Martin CJ, Swank D. 2001. Employers and the Welfare State: The Political Economic Organization of Firms and Social Policy in Contemporary Capitalist Democracies. *Comparative Political Studies* 34:889-923
- Martin CJ, Swank D. 2004. Does the organization of capital matter? employers and active labor market policy at the national and firm level. *American Political Science Review* 98:593-611
- Martin CJ, Swank D. 2008. The Political Origins of Coordinated Capitalism: Business Organizations, Party Systems, and State Structure in the Age of Innocence. *American Political Science Review* 102:181-98
- Martin CJ, Thelen K. 2007. The State and Coordinated Capitalism: Contributions of the Public Sector to Social Solidarity in Postindustrial Societies. *World Politics* 60:1
- Martin CJO. 2004c. Corporatism from the Firm Perspective: Employers and Social Policy in Denmark and Britain. *British Journal of Political Science* 35:127-48
- Martin JP. 2000b. What works among active labor market policies. In *OECD*. Paris
- McQuaid RW, Lindsay C. 2005. The concept of employability. *Urban Studies* 42:197-219
- Medvešek-Milošević M. 2007. http://www.stat.si/eng/novica_prikazi.aspx?id=871.
- Meijers F, van den Berg N, Sprengers M. 2006. More Vocational Education and Supplementary Training through Equalization of Costs? An Analysis of a Training and Development Fund in The Netherlands. *Human Resource Development International* 9:5-24

- Mill JS. 1862 [1843]. *A System of Logic, 2 vols.* London: Parker, Son, and Bourn, West Strand.
- Mincer J, Ofek H. 1982. Interrupted Work Careers: Depreciation and Restoration of Human Capital. *Journal of Human Resources* 17:3-24
- Mitter W. 1991. Comprehensive Schools in Germany: concepts, developments, and issues. *European Journal of Education* 26
- Montgomery J. 1991. Social Networks and Labor-Market Outcomes: Toward an Economic Analysis. *The American Economic Review* 81:1408-18
- Müller W, Shavit Y. 1998. The Institutional Embeddedness of the Stratification Process. *From School to Work. A Comparative Study of Educational Qualifications and Occupational Destinations*:1-48
- Nergaard K. 1999. Parliament Adopts Legislation on Further and Continuing Education Reform.
- Neugart M, SchÖMann K. 2002a. Employment Outlooks: Why Forecast the Labor Market and for Whom. *Wissenschaftszentrum Berlin (WZB) Discussion Paper, FS I:02-206*
- Neugart M, Schömann K. 2002b. *Forecasting Labour Markets in OECD Countries: Measuring and Tackling Mismatches*: Edward Elgar Publishing
- Neuman S, Weiss A. 1995. On the effects of schooling vintage on experience-earnings profiles: Theory and evidence. *European Economic Review* 39:943-55
- Neykov I. 2004. 2003 Annual Review for Bulgaria. *Brussels: EIRO*
- Nickell S, Bell B. 1995. THE COLLAPSE IN DEMAND FOR THE UNSKILLED AND UNEMPLOYMENT ACROSS THE OECD. *Oxford Review of Economic Policy* 11:40-62
- Nonaka I, Takeuchi H. 1995. *The Knowledge-Creating Company*. New York 1:995
- Nuissl E, Pehl K. 2000. *Portrait adult education Germany*: Bertelsmann
- OECD. 1976. Netherlands : contours of a future education system, OECD, Paris
- OECD. 1996. *The Knowledge Based Economy*, Organization for Economic Cooperation and Development, Paris
- Papadogamvros V. 1998. *Collective Agreements on Training. The Case of Greece*.
www.eurofound.europa.eu/eiro/1998/04/word/gr9801153s.doc
- Papps K. 2001. Occupational and Skill Forecasting: A Survey of Overseas Approaches with Applications for New Zealand. *New Zealand Labor Market Policy Group Occasional Paper*
- Peters M, Dorenbos R, van der Ende M, Versantvoort M, Arents M. 2004. Benefit Systems and Their Interaction with Active Labor Market Policies, European Commission
- Petersen KfV. 1998. *Tripartite agreement reached on content of new labour market reform*.
<http://www.eurofound.europa.eu/eiro/1998/10/feature/dk9810187f.htm>
- Pierson P. 2001. Coping with Permanent Austerity: Welfare State Restructuring in Affluent Democracies. In *The New Politics of the Welfare State*, ed. P Pierson, pp. 410-56. Oxford England ; New York: Oxford University Press

- Pierson P. 2004. *Politics in Time: History, Institutions, and Social Analysis*: Princeton University Press
- Pine BJ. 1999. *Mass Customization: The New Frontier in Business Competition*: Harvard Business School Press
- Ploug N, Kvist J. 1999. Continuity or Change in the Danish Social Security System,'. *Managing the Danish Welfare State under Pressure: Towards a Theory of the Dilemmas of the Welfare State*. Forthcoming
- Popkewitz T, Lindblad S, Strandberg J. 1999. Review of research on education governance and social integration and exclusion, Uppsala University, Uppsala
- Powell WW, Snellman K. 2004. The Knowledge Economy. *Annual Review of Sociology* 30:199-220
- Preda D. 2004. Important industrial relations laws adopted.
- Prusak L. 1997. *Knowledge in Organizations*: Butterworth-Heinemann
- Przeworski A, Teune H. 1970. The Logic of Comparative Social Inquiry. *New York*
- Ragin C. 2004. Qualitative Comparative Analysis (QCA): State of the Art and Prospects. *Qualitative Methods* Fall:3-13
- Ragin C. 2007. Qualitative comparative analysis using fuzzy sets (fsQCA). *Sage Publications*. Thousand Oaks, CA. In press. Available at <http://www.u.arizona.edu/~cragin/fsQCA/software.shtml>
- Rasmussen P. 2002. Education for everyone: secondary education and social inclusion in Denmark. *Journal of Education Policy* 17:627-42
- Riphahn RT. 2006. The effect of secondary school fees on educational attainment, mimeo
- Robertson SL. 2005. Re-imagining and rescripting the future of education: global knowledge economy discourses and the challenge to education systems. *Comparative Education* 41:151-70
- Robinson SB, Kuhlmann JC. 1967. Two Decades of Non-Reform in West German Education. *Comparative Education Review* 11
- Rodenburg P. 2004. Tracing the Changing Measures of Unemployment in Dutch Unemployment Statistics 1900-1940. *Revised version of Tinbergen Institute Discussion Paper*:1
- Romer PM. 1990. Endogenous Technological Change. *Journal of Political Economy* 98:71
- Romer PM. 1994. The Origins of Endogenous Growth. *Journal of Economic Perspectives* 8:3-22
- Rosen S. 1975. Measuring the Obsolescence of Knowledge. NBER
- Rothstein B. 1992. Labor-market institutions and working-class strength. In *Structuring Politics: Historical Institutionalism in Comparative Analysis*, ed. S Steinmo, KA Thelen, F Longstreth, pp. 33–56. Cambridge: Cambridge University Press
- Rueschemeyer D, Stephens J. 1997. Comparing Historical Sequences-A Powerful Tool for Causal Analysis. *COMPARATIVE SOCIAL RESEARCH* 16:55-72

- Russell JE. 1899. *German Higher Schools: The History, Organization and Methods fo Secondary Education in Germany*. New York: Longmans, Green, and Co.
- Ryba R. 1980. The Context of Curricular Change in Europe at the Lower Secondary Level [I]. *Compare: A journal of comparative education* 10:101-16
- Sartori G. 1970. Concept Misformation in Comparative Politics. *American Political Science Review* 64:1033-53
- Scharpf FW. 2001. 7 The viability of advanced welfare states in the international economy Vulnerabilities and options. *Welfare State Futures* 8:399-425
- Scherer S. 2005. Patterns of Labour Market Entry Long Wait or Career Instability? An Empirical Comparison of Italy, Great Britain and West Germany.
- Schmidt SL, Schomann K, Tessaring M. 2003. Early Identification of Skill Needs in Europe. CEDEFOP Reference Series.
- Schmitter P. 1981. Interest intermediation and regime governability in contemporary western Europe and North America. In *Organizing interests in western Europe*, ed. S Berger, pp. 287-327. New York: Cambridge University Press
- Seligman M. 1975. *Helplessness: on depression, development, and death*: WH Freeman
- Sellin B. 2000. Anticipation of Occupation and Qualification Trends in the European Union, CEDEFOP
- Shavit Y. 2007. *Stratification in Higher Education: A Comparative Study*: Stanford University Press
- Shavit Y, Müller W. 2000. Vocational secondary education, tracking, and social stratification. *Handbook of the sociology of education*:437-52
- Shavit Y, Müller W, Tame C. 1998. *From School to Work: A Comparative Study of Educational Qualifications and Occupational Destinations*: Oxford University Press, USA
- Shearer RL, Steger JA. 1975. Manpower obsolescence: A new definition and empirical investigation of personal variables. *Academy of Management Journal* 18:263–75
- Skocpol T. 1979. *States and Social Revolutions: A Comparative Analysis of France, Russia and China*: Cambridge University Press
- Skocpol T. 1988. The Limits of the New Deal System and the Roots of Comtemporary Welfare Dilemmas. In *The Politics of Social Policy in the United States*, ed. M Weir, AS Orloff, T Skocpol. Princeton: Princeton University Press
- Smart KF. 1975. Vocational Education in the Federal Republic of Germany: current trends and problems. *Comparative Education* 11:153-63
- Smith A, Billett S. 2006. Mechanisms for enhancing employer investment in training: a comparative perspective. *Research in Post-Compulsory Education* 11:1-18
- Snels B. 1997. Political Mechanisms and Institutional Interaction: Politics in the Dutch Economy. In *Dissertation*. Utrecht

- Sol E, Westerveld M. 2005. *Contractualism in Employment Services: A New Form of Welfare State Governance*: Kluwer Law International
- Solow RM. 1957. Technical Change and the Aggregate Production Function. *Review of Economics and Statistics* 39:312-20
- Sorensen AB. 1970. Organizational differentiation of students and educational opportunity. *Sociology of Education* 43:355-76
- Spicker P. 1997. The Welfare State and Social Protection in the United Kingdom. In *The Politics of Social Policy in Europe*, ed. M Mullard, S Lee, pp. 90-106. Lyme, NH: Edward Elgar
- Sroka J. 2005. Thematic feature - collective agreements on changes in work organisation.
- Stasavage D. 2005. Democracy and Education Spending in Africa. *American Journal of Political Science* 49:343-58
- Stellwag HWF. 1967. On Reform of the Educational System in the Netherlands. *Comparative Education Review* 11:360
- Stephens JD. 1979. *The transition from capitalism to socialism*. London: Macmillan. vii, 231 pp.
- Streeck W. 1992. *Social institutions and economic performance : studies of industrial relations in advanced capitalist economies*. London ; Newburg Park, CA.: SAGE Publications. xiv, 248 pp.
- Sturm J, Groenendijk L, Kruithof B, Rens J. 1998. Educational pluralism: a historical study of so-called 'pillarization' in the Netherlands, including a comparison with some developments in South African education. *Comparative Education* 34:281-97
- Swenson P. 1991. Labor and the Limits of the Welfare State: The Politics of Intra-class Conflict and Cross-Class Alliances in Sweden and West Germany. *Comparative Politics* 23
- Thelen KA. 2004. *How Institutions Evolve: The Political Economy of Skills in Germany, Britain, the United States, and Japan*. Cambridge: Cambridge University Press
- Tijdens K, van Klaveren M. 2007. Collective Bargaining Coverage, AIAS, Amsterdam
- Toirkens J. 1988. Schijn en Werkelijkheid van het Bezuinigingsbeleid 1975-1986. *Deventer: Kluwer*
- Torring J. 1999. Workfare with Welfare: Recent Reforms of the Danish Welfare State. *Journal of European Social Policy* 9:5-28
- Traxler F. 2000. Employers and employer organisations in Europe: membership strength, density and representativeness. *Industrial Relations Journal* 31:308-16
- van den Heuvel S. 2007. *Philips, the Netherlands: Integration into the labour market of people at risk of exclusion – early school-leavers*.
- van Kersbergen K. 1995. *Social Capitalism: A Study of Christian Democracy and the Welfare State*: Routledge
- van Loo J, de Grip A, de Steur M. 2001. Skills obsolescence: causes and cures. *International Journal of Manpower* 22:121-38

- van Oorschot W. 1999. Work, work, work. Labor market participation policies in the Netherlands 1970-2000. *The Modernization of Social Protection and Employment*. European University Institute
- Velema E. 1963. Primary and Post-Primary Education in the Netherlands. *Comparative Education Review* 7:119
- Visser J, Hemerijck A. 1997. *A Dutch miracle : job growth, welfare reform and corporatism in the Netherlands*. Amsterdam: Amsterdam University Press. 206 pp.
- Wagner K. 1978. 'U 90'-An Ode to Equality: Educational Long-Term Planning in Denmark. *Comparative Education* 14:211-21
- Whitman MvN. 2003. *American capitalism and global convergence*. Washington, D.C.: Group of Thirty. 42 pp.
- Wilensky H. 1975. *The Welfare State and Equality*. Berkley: University of California Press
- Wilson R. 1994. Modelling and Forecasting the Structure of Employment in the United Kingdom. *Forecasting the Labour Market by Occupation and Education: The Forecasting Activities of Three European Labour Market Research Institutes*
- Winch C. 2003. Education and the Knowledge Economy: a response to David & Foray. *Policy Futures in Education* 1:50-70
- Winslow WT. 1937. International Aspects of Modern Youth Problems. *The ANNALS of the American Academy of Political and Social Science* 194:165
- Winther-Jensen T. 1980. Lower Secondary Education in Denmark. *Compare: A journal of comparative education* 10:127-32
- Wolthuis J. 1999. *Lower Technical Education in the Netherlands 1798-1993*, Groningen
- Wood A. 1994. *North-South Trade, Employment, and Inequality: Changing Fortunes in a Skill-Driven World*. Oxford: Clarendon Press
- Wood A. 1995. How Trade Hurt Unskilled Workers. *Journal of Economic Perspectives* 9:57-80
- Wright S. 2000. *Community and Communication: The Role of Language in Nation State Building and European Integration*: Multilingual Matters Ltd
- Zoppè A. 2002. « Patent activities in the EU: towards high tech patenting 1990 to 2000», Statistics in focus, Theme 9-1/2002, Eurostat.< [http: www. europa. eu. int/comm/eurostat](http://www.europa.eu.int/comm/eurostat)
- Zukersteinova A, Strietska-Ilina O. 2007. Towards European skill needs forecasting, Office for Official Publications of the European Communities, Luxembourg