

**Swedish Institute for Social Research (SOFI)**

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**IMPROVING THE SCHOOL-TO-WORK TRANSITION FOR  
VOCATIONAL STUDENTS – WHAT CAN WE LEARN FROM  
RESEARCH?**

**by**

**Lena Lindahl**

# Improving the school-to-work transition for vocational students

## – What can we learn from research?

Lena Lindahl

Swedish Institute for Social Research

Stockholm University

[lena.lindahl@sofi.su.se](mailto:lena.lindahl@sofi.su.se)

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### Abstract

Many countries have had to tackle escalating youth unemployment in the aftermath of the financial crisis of 2008, but compared with other countries in the European Union, youth unemployment has increased particularly sharply in Sweden. Currently, Swedish 20-24 year olds are more than three times as likely to be unemployed than are adult workers, which is the greatest such ratio within the EU-15. The bulk of youth unemployment spells starts directly after upper secondary school ends, which in turn suggests special attention should be directed to the interaction of vocational education and labor markets. This paper discusses in the light of international research findings how to ease the transition from school into the labor market for vocational students. The evidence discussed in the paper centers on which educational structures lead to good labor market outcomes for vocational students and especially what we know about the relative merits of workplace- and school-based education and the role of employer contacts.

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## 1. Introduction

Youth unemployment in Sweden has increased during the past decade to an extent that the Swedish rate is currently among the highest in the OECD countries (OECD 2008). In Sweden, as in the other Nordic countries, youth unemployment is largely driven by a large number of short unemployment spells that start after the end of upper secondary education. This would suggest that there is a need for improvement of the school-to-work transition for those who do not intend to continue to higher education, that is, the majority of students in vocational programs. In most European countries, more than half of the student body chose vocational tracks in upper secondary school. The arrangement of non-academic education concerns a substantial fraction of the young and is therefore of major importance for the overall success of the school-to-work transition. With the 2011 Swedish reform of upper secondary school, several changes are directed to vocational education, bringing these questions directly to the policy agenda.

While the OECD makes considerable efforts to review and summarize the organization of vocational education in many countries, the literature falls short of an up-to-date overview of what we can learn from research. This paper provides an overview of which educational structures lead to good outcomes on the labor market for vocational students. The international research findings are then interpreted in the context of the Swedish school system and used to evaluate the part of the school reform that is directed to vocational education.

The evidence discussed in the paper centers on research about the role of employer contacts and whether it matters where the education takes place, i.e., the relative merits of workplace- and school-based education.<sup>1</sup> The latter question can be described as a key water shed in Europe: with the dual system countries (e.g. Germany, Austria and Switzerland) leaning on a long tradition of apprenticeship training on the one hand, and the mainly school-based systems of vocational education in northern countries (e.g. Sweden and Finland), on the other. In a way, this line of research is even more policy relevant for the

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<sup>1</sup> The research summary builds on the author's work in Lindahl, L (2011) "Den gymnasiala yrkesutbildningen och inträdet på arbetsmarknaden", in *Vägen till arbete – arbetsmarknadspolitik, utbildning och arbetsmarknadsintegration*, SOU 2010:88, Fritzes.

Nordic countries than it is in the traditional dual system countries. The reason is that information on the significance of apprenticeships for youth's transition into the labor market has a larger potential to motivate real policy change in Sweden, where apprenticeships have up to now been virtually non-existent.

So, what can we learn from research? Leaning on research that addresses the well-known problem of selection into apprenticeship training, Swedish policy makers have good reasons to be inspired by the dual system countries. There is much to suggest that the education system in Sweden is not designed to facilitate the transition to the labour market for vocational students. The research findings emphasize the importance of employer contacts and workplace experience and indicate that the part of the vocational education that takes place with employers is central to achieving the goal of faster transition into employment. The international evidence suggests that a policy tool for reducing youth unemployment through reforms of vocational education in Sweden would be to increase the share of workplace-based training.

## **2. Background**

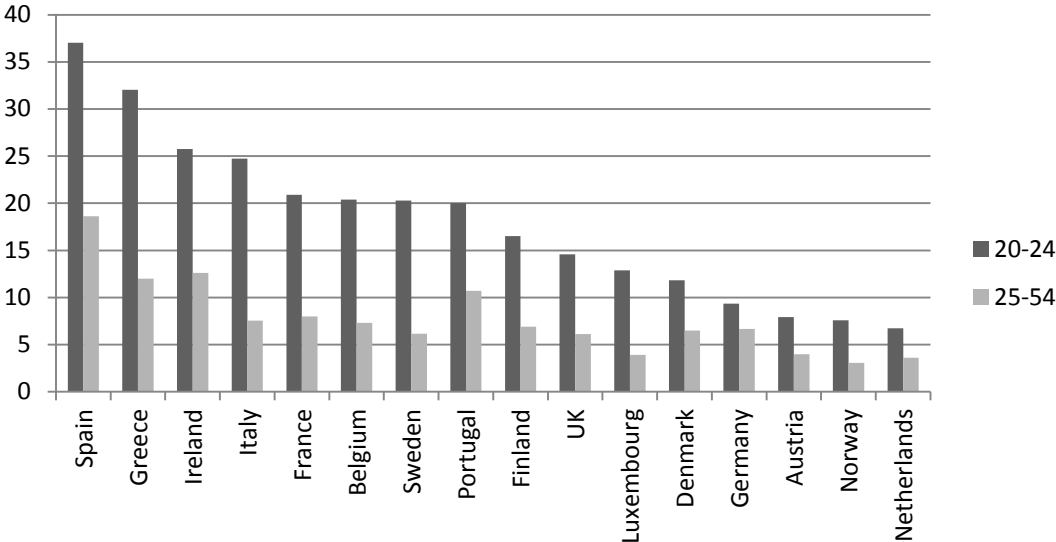
This section starts with a general description of the youth labor market situation in Sweden, the other Nordic countries and the EU 15.<sup>2</sup> Throughout the paper, the analysis of the youth labor market is limited to those of 20-24 years of age. The focus on this group rather than the broader group of 15-24 year olds, which is the convention in many official documents, is due to the fact that most young people attend upper secondary school. Since this level of schooling has become close to the minimum required to get a job, it is natural to analyse school-to-work transition from the end of upper secondary school. Further, the official ILO definition of unemployment includes full-time students who are searching for a job. This means that upper secondary school students who are looking for a job during the summer break are counted as unemployed. This reduces the comparability of the numbers, especially to the extent that young people in different countries differ in their propensity to work

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<sup>2</sup> Sweden, Finland, Norway and Denmark are referred to as the Nordic countries (even though Iceland is excluded). The following countries belong to EU15: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and Great Britain. Throughout this overview, I have also included Norway among the EU countries.

during the summer. Focusing on those who have passed the graduation age of upper secondary school will reduce this problem.<sup>3</sup>

Figure 1 Unemployment rates among youths and adults in EU-15, 2010



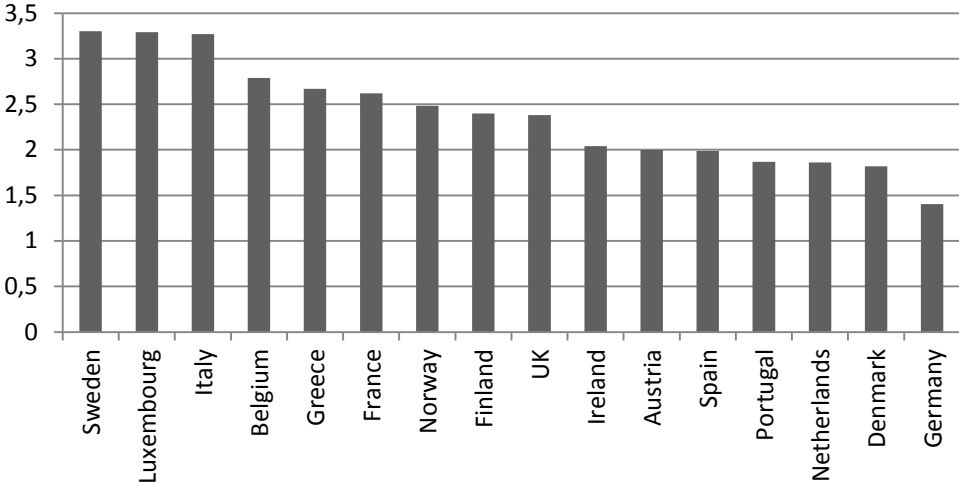
Source: OECD, stat extract

The annual average unemployment rates in 2010 for 20-24 year olds and adults are shown for the EU15. All countries show distinct differences in unemployment between young and adult workers. The youth unemployment rate in Sweden is the highest among the Nordic countries at 20 percent which is nearly twice as high as the Danish rate and three times as high as the Norwegian rate. The level of unemployment is responsive to the business cycle and different countries might be at different stages of the cycle at any given point in time. One way to reduce such variation is to express youth unemployment as a share of unemployment among adults, as in Figure 2. Youth unemployment levels are generally about two to three times as high as those of adults, but we see some distinct country differences. For example, 20-24 year olds in Germany are only slightly more likely to be unemployed than

<sup>3</sup> An additional complication in comparing unemployment rates for the youngest cohorts is that a country with a well-developed tradition of apprenticeship for upper secondary school students will by definition have higher employment levels for the youngest cohorts compared to countries like Sweden, where many vocational students are counted as unemployed (if they are searching for summer jobs while studying).

the older comparison group. In Luxembourg, Italy and Sweden, on the other hand, youths are more than three times as likely to be unemployed as the older group.

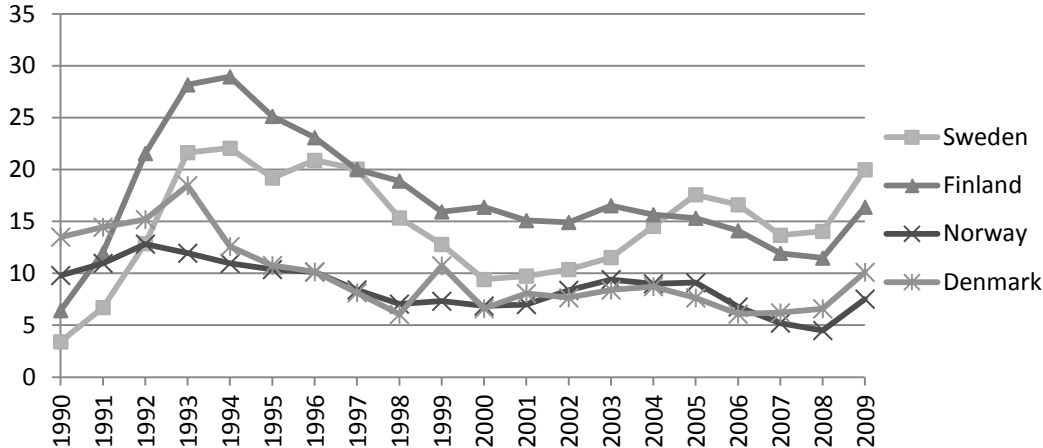
Figure 2 Ratio of youth to adult unemployment in EU 15, 2010



Source: OECD, stat extract

Here, the difference in youth unemployment between the Nordic countries is further emphasized, with Denmark and Sweden being most far apart. This difference is not a new phenomenon: as can be seen in Figure 3, Sweden and Finland have experienced higher youth unemployment levels than Norway and Denmark in all years since the recession of the early 1990s.

Figure 3 Youth unemployment rates over time in the Nordic countries (20-24 years)



*Source: OECD, stat extract*

To further highlight the situation for young people, Figure 4 shows youths by activity status - studying, in work or inactivity - based on information for separate age groups for a selection of countries. The inactive group, i.e. those who are neither enrolled in education nor employed is shown in the area at the top of the figure for each country. On average, 15 percent of the 20-to-24-year-olds in Sweden were neither in school nor in work in 2006. Differences across countries are large: in Denmark, Norway and the Netherlands, less than 9 percent of youth were in this situation. The ratio is substantially higher in France and the United Kingdom, where this share exceeded 18 percent. In Sweden, inactivity is more frequent around age 19, i.e. at the time upper secondary school normally ends, while it is more evenly distributed across ages in most other countries.<sup>4</sup>

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<sup>4</sup> It can also be noted that in most European countries, the share of youth enrolled in education decreases smoothly with age. This is, however, not the case in the Nordic countries. In Sweden, for example, there are more 23 year olds that study than there are 20 years olds who do that. This pattern reflects the fact that Swedish university students start their university-level studies exceptionally late (SOU 2010:88).

Figure 4 Share of youth in education, employment or inactivity, 2006.

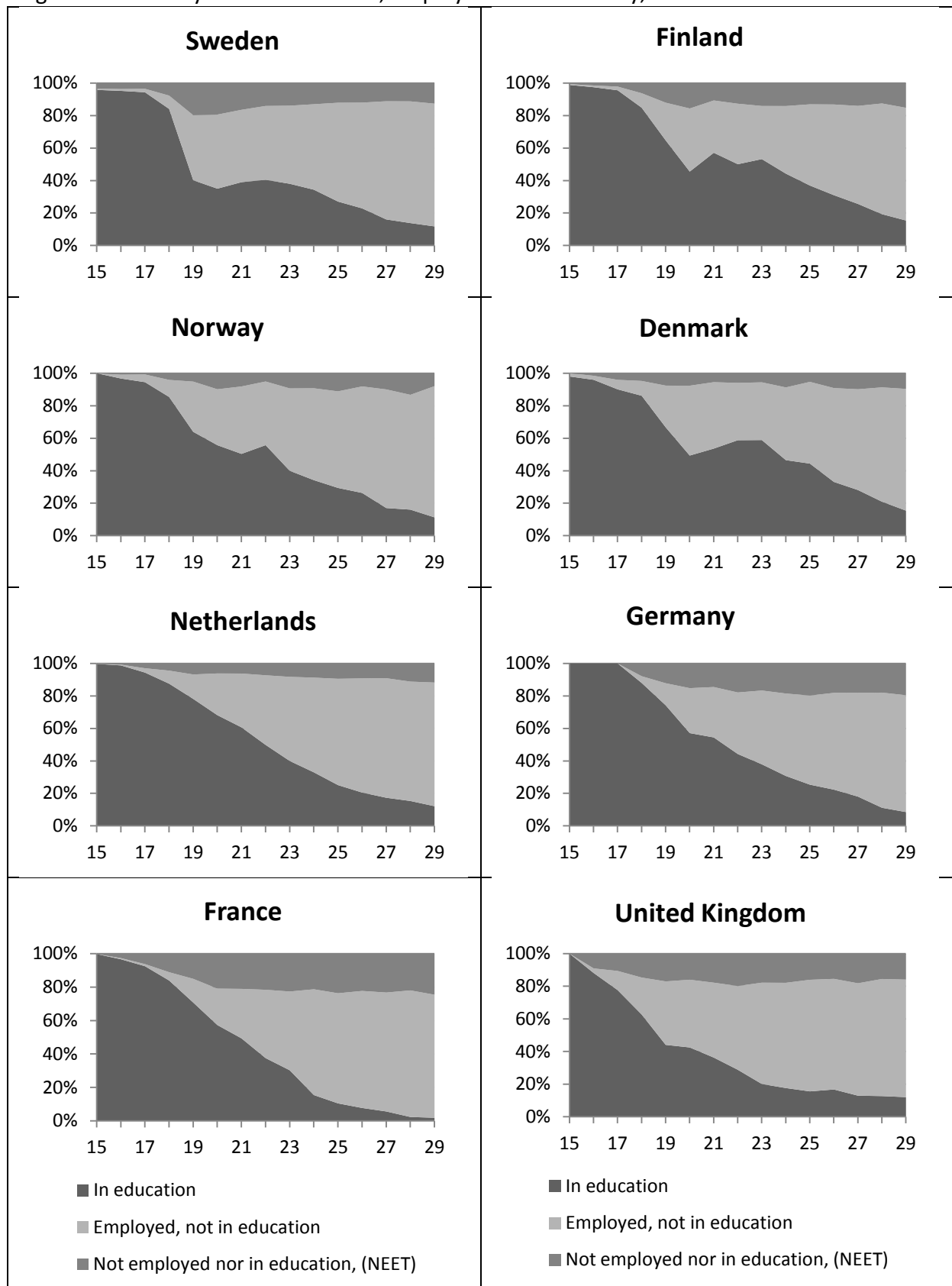
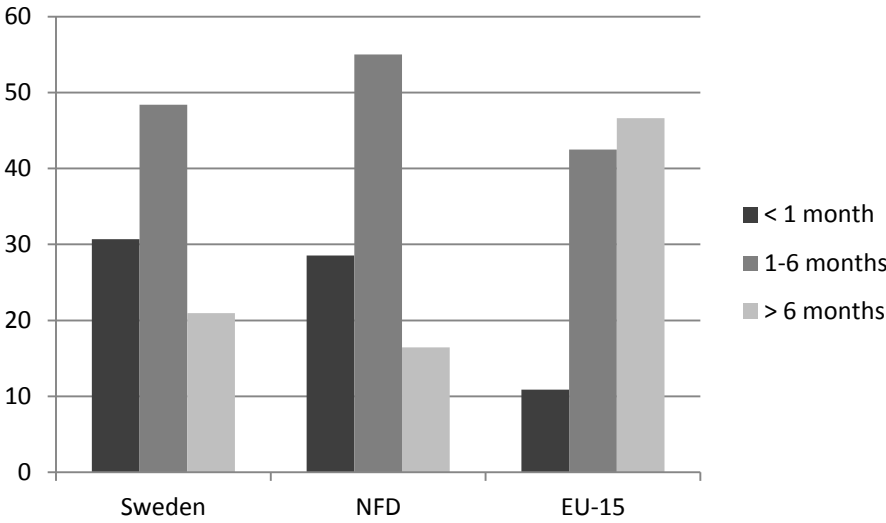


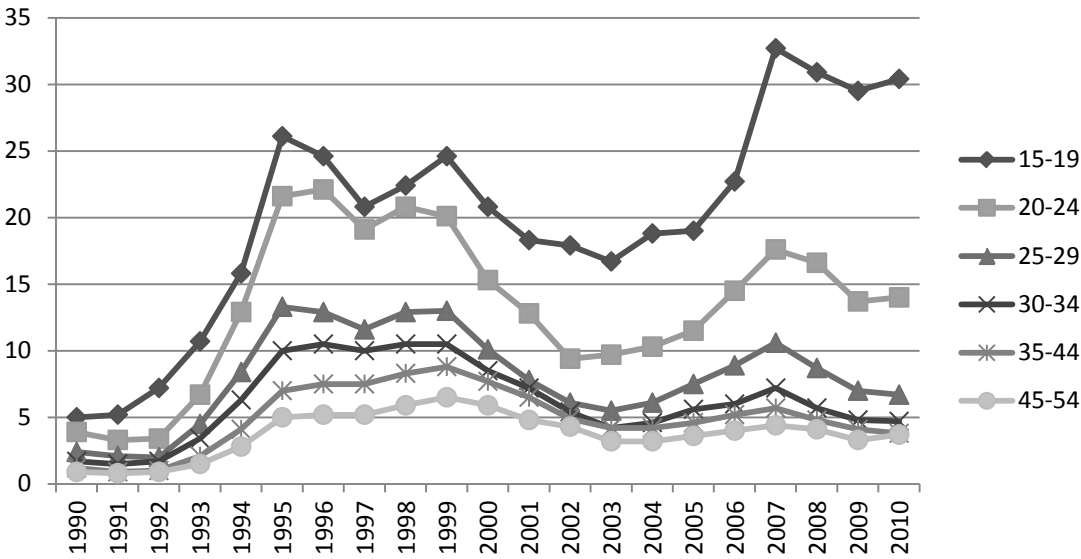


Figure 5 Duration of unemployment for 20-24 year olds, 2009



In Sweden and the other Nordic countries, youth unemployment is to a large extent driven by a high incidence of short unemployment spells - 30 percent of all spells last less than one month. About 20 percent of unemployment is due to spells longer than 6 months (see Figure 5). The Nordic spells are considerably shorter than those in the rest of EU 15. This indicates that youth unemployment in the Nordic countries is due more to problems with entry into the labour market than to young people in general becoming trapped in long-term unemployment.

Figure 6 Unemployment in Sweden by age group



Finally, Figure 6 shows unemployment for different age groups over time in Sweden. It is clear that young people are hit particularly hard by unemployment. Although fewer youths are unemployed for long stretches, the jobless rate for 15-19 year olds is higher than in 1997 and for 20-24 year olds, there is also a substantial increase since the start of the new millennium. The large number of youth unemployment spells starting directly after graduation from upper secondary school is a cause for concern, especially when considering the group of students who have graduated from programs that are supposed to prepare for labor market entry, i.e. vocational educations. The next section provides an overview of the systems for vocational educations in the Nordic countries and EU 15, with a focus on how the characteristics of the Swedish system can be distinguished.

### **3. Systems for vocational education**

Apprenticeship training, which is characterized by a substantial amount of workplace training, is strongly rooted as a traditional part of upper secondary education in countries such as Denmark, Norway, Germany and Austria. In other northern European countries, such as Sweden and Finland, apprenticeships have been virtually non-existent. There are also large differences in the systems for vocational education in Europe, both concerning content and institutional design. By and large, one can order countries by the extent of work orientation in their systems for vocational educations as will be further described in the following two sections.

#### **3.1 Vocational education in Sweden and the Nordic countries**

In an international perspective, the Swedish and Finnish systems for vocational education are characterized by being academically orientated, both in terms of large amounts of theory in the school-based part of the education and the relatively small share of workplace-based learning. In the Swedish case, the required amount of workplace-based learning is 15 weeks during the three years of the program, which is less than in most other countries. Swedish upper secondary schools now face a new set of reforms that will be implemented starting fall of 2011. Parts of the reform, such as the new apprenticeship training (where at least half of the study time will take place in a work place), can be expected to facilitate the transition

into the labour market. The reform also means that some of the compulsory theoretical subjects will be reduced, which is likely to reduce dropout rates. On the other hand, for the bulk of vocational students – those who do not choose apprenticeship training - the reform offers no improvement. The minimum amount of workplace-based training is left unchanged.

As pointed out by Skolverket (2004), there are indications that many schools do not provide even the stipulated minimum amount of workplace-based learning. Lack of time to search for and difficulties to find appropriate slots are cited as reasons for this. The alternative to workplace-based learning is for the student to do “work-practice” at school. This alternative has been found to be more prevalent among students from non-Swedish backgrounds, especially among boys (Arnell Gustafsson 2000). The consequence is that one of the student groups that is most likely to face problems in the labor market also has less access to workplace-based training. As discussed above, the average unemployment spells are quite short, but those youth who do experience long jobless spells are mainly from non-Swedish backgrounds and/or drop-outs from upper secondary education. Therefore, current practice is especially unfortunate for this group of students.

In Denmark and Norway, apprenticeships attract about 35 percent of the cohorts graduating from compulsory school. Compared to Sweden and Finland, the systems for vocational education are far more workplace-oriented, as they are dominated by apprenticeships (Olofsson and Panican 2008). During the education, Danish students alternate between apprentice work and studies at school, while the vocational programs in Norway start with two years of school-based learning, followed by two years at a workplace.

In sum, we see a fundamental difference in education structures between Sweden and Finland on the one hand, and Denmark and Norway, on the other hand, where Swedish and Finnish vocational educations are far less work-oriented, mainly due to the comparatively small amount of work practice.

### 3.2 Vocational education in EU 15

Participation in vocational educations has increased steadily during the last decade (Köditz 2009). The length of vocational educations varies considerably between countries, from two to three years in most countries and up to five years in Italy.<sup>5</sup>

Table 1. Length of vocational educations in various countries

2 years:	Spain, Ireland, Great Britain, Canada, Singapore, Germany (to some extent)
3 years:	Finland, Norway, Sweden, Denmark, Germany (mainly)
4 years:	Switzerland, Austria
5 years:	Italy

Source: Köditz 2009

In countries such as Germany and Austria, the low rate of youth unemployment has traditionally been connected to the presence of apprenticeships. Just like Denmark, these countries practice a dual system, where students alternate between school and a workplace. About 60 percent of German upper secondary school students choose vocational programs. The German vocational educations are directed towards broad occupational areas rather than towards specific trades, which has been pointed out as one of the strengths of the German education system. The German vocational education has, for example, an unusually low share of dropouts and about half of the apprentices end up being employed in their former workplace (Steedman 2001). In Switzerland, a majority of students chose apprenticeship training, but quite a large part of the education is school based (SOU 2010). In sum, there are large differences in work orientation between the European countries.

In light of the divergence of systems for vocational educations in Sweden and Finland as compared to Denmark, Norway and the traditional dual-system countries, together with the differences in youth labor market success between these countries, one might be drawn to the conclusion that the dual-system countries are more efficient in organizing the system of vocational education. Now, the next section examines if this conclusion is supported by international evidence. The focus is on what kind of educational system seems to generate good labor market outcomes for vocational students, in particular what do we know about the relative merits of workplace- and school-based education and the role of employer contacts?

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<sup>5</sup> Vocational educations in Italy that span over five years typically include theoretical studies while work-oriented programs usually last for three years (Borgonovi and Gaspari 2006).

#### **4. Improving school-to-work transition for vocational students – Main research findings**

Workplace-based training is argued to have several advantages. In addition to its potential to provide a good learning environment for students, it also facilitates recruitment by providing employers with insights into the qualifications of potential new workers. It can also provide a link between firms and schools, so that school administrations can learn about the skills that employers demand. Currently in Sweden, all vocational programs are required to include 15 weeks of workplace-based education. In practice, the programs are not always able to provide that training, as teachers have limited time resources. As a consequence, responsibility for organizing vocational-training slots has to some extent shifted from the schools to the students.

There is a large international research literature about students' labor market entry after having completed vocational education which is mainly based on country comparisons. Olofsson and Panican (2008) study youth labor market entry within the Nordic countries and try to interpret differences in relation to each country's education system. While the Nordic countries can rightfully be regarded as homogenous in many respects, this is not true for the school-to-work transition among the young. For instance, as detailed above, there are large differences in the rates of unemployment and inactivity among the young. The young in Sweden and Finland experience larger problems on entering the labor force than their counterparts in Denmark and Norway. The authors argue this difference is in part due to vocational education being less workplace-oriented in Sweden and Finland.

Elias et al. (1994) compare education systems for vocational education in Great Britain and Norway during the 1980s by means of comparing participants' subsequent incomes. At that time, Norway had school-based vocational education for 16-19 year olds, while Great Britain had long had workplace-based education for vocational students of the same age. The results show that completed vocational education was associated with higher income levels for men in Great Britain but not in Norway.

The more extensive comparative study by Van der Velden et al. (2001) uses data for 15 EU countries and finds that youth employment is systematically higher in countries with well-developed apprenticeship systems than in countries that practice apprenticeships on a smaller scale. Gangl (2003) compares labor market outcomes of school- and workplace-based vocational education, including apprenticeship, in 12 EU countries. He finds that

outcomes are better for students who finish apprenticeship training than for students who finish school-based alternatives. The study also shows that countries with well-developed systems of apprenticeships tend to exhibit unemployment rates among apprentices that roughly equal those for university graduates. Further comparative studies in this area lend additional support to the view that apprenticeship training reduces the risk of unemployment (Green 1999, Wolbers 2007). For the most part, countries with well-developed systems of apprenticeships have lower youth unemployment levels, especially during the period up until the end of the 1990s. The effect of apprenticeships on long-term employment and wages is less clear (see e.g. Ryan, 2001).

A general problem in these cross-national comparisons is that the countries may differ in other ways that affect the labor market position of youths, such as differences in wage setting institutions or labor-market legislation. An alternative is to analyze labor market outcomes for youths who have attended different educations within a country. In that case, differences in the skills and abilities that students start out with may confound the results. A way around such selection problems is to conduct an experimental study, in which study slots are randomly allocated among applicants for vocational education, making students in different educations more comparable. There are few such experimental studies, but one example is a study based on evaluations of US Career Academies (Kemple and Scott-Clayton 2004). The Career Academies combine academic learning at the upper secondary level with vocational training at a workplace. The results of this study were that the effects on income were positive for men, but not for women, and dropout rates were lower than at regular schools.

Outside the US, there are few studies that convincingly address the problem of selection to apprenticeship training. One example is Fersterer et al (2008) who use variation in educational length of apprenticeship training. The variation is driven by from apprentices who cannot complete their training period because their firms ceased operations. They find that the estimated returns from apprenticeship training are quite similar to OLS returns in the same sample, being about 15 percent from a three to four year period. They are, however, unable to study effects on employment probabilities after the education.

The only study that has managed to compare the outcomes for students who have finished workplace-based and school-based vocational education in a convincing way is Parey (2008). He exploits the fact that variation in the supply of apprenticeships affects

educational choices among the youth in Germany. The results show that students who finish an apprenticeship experience lower unemployment rates between the ages of 23-36 years than students who finish school-based vocational education. But no effects are found on subsequent wage levels.

To sum up, the existing research on apprenticeships show positive effects on labor market outcomes. This is further supported by the fact that youth employment is systematically higher in countries with well-developed apprenticeships systems. The evidence about long-term effects, on the other hand, is less clear. Nevertheless, the overall picture is that the research supports the view that workplace-based education has positive effects on youth labor market outcomes.

## **5. Conclusions**

This paper discusses how to improve the school-to-work transition for vocational students in the light of international research findings with an emphasis on Swedish youth unemployment. The main results show that at least some vocational education in combination with theoretical education seems to have positive effects on labor market outcomes. The research also points to the importance of well-developed cooperation between schools and workplaces. The failure to adequately provide workplace-based training to students is a major shortcoming of the organization of Swedish vocational education. In the research on apprenticeships, the typical finding is that students who finish apprenticeships seem to suffer less from unemployment than other student groups. In line with this, youth employment is also found to be higher in countries with well-developed apprenticeship systems.

The international evidence suggests that a policy tool for reducing youth unemployment through reforms of vocational education in Sweden would be to increase the share of workplace-based training. Such training is crucial for creating closer contacts between students, schools and the local labor market. Vocational programs that fail to meet the workplace-based training requirements should be discontinued. The 2011 upper secondary school reform is to some extent going in this direction in introducing the possibility to work as an apprentice while attending upper secondary school. However, the minimum amount of

workplace-based training, 15 weeks over three years, is unchanged for those who choose vocational education other than the apprenticeship education.

In all, while the introduction of apprenticeship programmes probably will be an improvement, an increase in workplace-based training for all vocationally-oriented courses is the best way to improve the transition to working life. This gives students better contacts with employers, while at the same time education providers receive information more directly about what employers need in terms of skills.



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