

The emergence of vocational education and training in Sweden in a European perspective

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Introduction

Sweden went through massive transformations in the period 1870–1920, socially, politically, and economically. A big demographic pressure induced large-scale emigration, but also urbanisation and the formation of a working class, from which an organised labour movement gradually emerged. Changes in the political field were late in a European perspective, but gradually the franchise was enlarged to include also women in 1921. Underlying these and many other changes was the massive transformation of the Swedish economy, from a predominantly agrarian society in 1870 to one of the leading industrial nations in the world in 1920. A large number of new enterprises and even entirely new branches of industry were founded. The combination of successful export and an expanding domestic market resulted in economic growth rates that were high even in an international perspective (Schön 2000).

The economic and social transformation increased the demand for skilled labour. In pre-industrial times, such demand had first and foremost been met by apprenticeship within the guild system, but guilds and regulated apprenticeship had been abolished in 1846. However, unregulated apprenticeship continued to be the norm in handicraft professions, and by 1870 this constituted one part of a haphazard ‘system’ of vocational education and training. The other part was called Technical Sunday and evening schools. It resembled the system for vocational training that prevailed in the United Kingdom but was considered inadequate by many actors. In this paper, the actions taken to put in place a proper VET system by handicrafts, industrial firms, trade unions, and the state are discussed. The period starts about 1870 and ends about 1920, when a formalised system came in place. The paper is organised the following way. In the following section, three model for vocational education and training that emerged in Europe in the late nineteenth and early twentieth centuries are presented. In the following five sections, the development of vocational education and training in Sweden are presented, ending with a major reform in 1918. In the concluding discussion, the Swedish development is compared to the European models.

The emergence of skill formation systems in Europe

Around 1870, vocational training in most European countries was not very organised. Guild privileges and other regulations in the handicraft sector had been eradicated by 1870. That included regulated apprenticeship training. As a result, free-riding was a constant problem. "*The master is no longer bound to train the apprentice; the apprentice, even where the name is retained, can usually leave at a week's notice; there is no tie between the two*".¹ As long as manufacturing industry remained a relative small sector, the deficiencies in vocational training were not apparent to all. After all, the United Kingdom had managed not only to industrialise but also to remain the leading industrial nation for a century without formalised vocational training.

Towards the end of the nineteenth century, the demand for skilled labour increased. Technological and organisational changes in manufacturing were so strong that the period from about 1890 is labelled the Second Industrial Revolution. To cope with the increasing demand for skilled labour, various actors became involved. They included first and foremost governments, big firms, handicrafts, and trade unions. Depending on the relative strength of those actors, and of historical legacies, several systems for vocational training emerged. These differences have been systematised into different *skill formation systems* (Thelen 2004, Bussemeyer & Trampusch 2012).

In the *liberal system*, the state is involved in vocational education to a very limited extent and most training takes in firms. The liberal system is associated with the United Kingdom. Guilds had never had a strong position and they were formally abolished in 1815 when the Statute of Artificers was abrogated (Greinert 1999). The handicrafts suffered early from the competition from manufacturing industry and by the end of the nineteenth century they did not have much influence on the political agenda. In addition, the liberal ideology was more influential in the United Kingdom than in continental Europe, and all sorts of regulation were regarded with scepticism. Instead, the normal market forces were supposed to take care of possible skilled labour shortages (Thelen 2004).

In France the development was quite different. Guild privileges had been abrogated already during the French revolution and they were never re-instated. Despite a long tradition of centralisation and reliance on interventions by the State, it was not until around 1880 that vocational schools (*Écoles Nationales Professionnelles*) operated by the State, were founded. Other vocational schools were added a little later, including shorter programmes (*Cours Professionnelles*) (Greinert 1999). Thus, in

¹ Thelen (2004), p. 103-104 (the quote is taken from Reginald Bray in *The Economic Journal* 1909, vol. XIX, p.413).

France vocational education became school-based and operated by the State. France is considered to be an outstanding example of a *statist system*, where vocational education is primarily school-based and where the labour market parties play a secondary role (Thelen 2004).

In countries where the labour market parties have had a strong position and industrial relations have been characterized by a high degree of collective bargaining, such as Germany or Denmark, vocational education has evolved into *collective skills formation systems*, where firms, intermediary associations, but also the state cooperate (Busemeyer & Trampusch 2012). A cornerstone in the German development was the Crafts Law (*Handwerkergesetz*) from 1897. It did not re-instate the old guilds' privileges but created Craftsmen's Associations with extensive power, not least in relation to apprentices. Their training was guaranteed by the Craftsmen's Associations and in return the apprentices committed himself to a Master and took part in school-based education provided by the State. Thus the interests of craftsmen were taken care of, and even big firms became involved in this system. They had an interest in the State-financed vocational schools (Hansen 1997). The trade unions were initially hesitant to these regulations which placed far too much strength in the hands of employers. However, they were gradually involved in monitoring workplaces and in setting standards for vocational education (Busemeyer & Trampusch 2012).

Vocational education and training in Sweden in the 1850s.

In 1846, most guild privileges were abrogated. Craftsmen could operate without being member of a guild, and the conditions to become a Master were relaxed. From the point of view of vocational training, the new legislation denied the Masters all formal possibilities to keep an apprentice in a workplace, should a conflict between them occur. To many craftsmen, this implied that their incentives to train apprentices diminished. However, there were few if any alternatives to become a craftsman, and in the handicrafts unregulated apprenticeship became the norm. It included in most cases a contract between the master and the apprentice, but as stated above this was not legally binding.

Manufacturing industry was still in its infancy in the 1850s. Its demand for skilled labour was to a large extent met by recruiting apprentices and journeymen from the handicraft sector. Workers such as smiths, watchmakers, and carpenters, to name but a few, possessed skills that were very useful also in factories. But as manufacturing industry grew the demand for skilled labour soon outstripped the supply from the handicraft sector. The manufacturing sector became its own primary source for

skilled labour. That took place through an apprentice-like system, very similar to the one in the handicraft sector.

As a supplement to apprentice training, a small number of technical Sunday- and evening schools existed. The first of these was the Mechanical school in Stockholm which existed for about 25 years after its start in 1799 (Larsson 1989). A few more 'technical' schools were started in the 1820s, but in reality they seem to have functioned as primary schools for older boys (Wernlund 1965). A well-known investigation concluded that in 1850, only about ten schools provided lower technical education, what today would be called vocational education (Wallmark 1851). They were often operated through private initiatives or by cities. At this point in time, the State was not involved in vocational education. The total number of students in the lower technical schools was about 500 (Nilsson 2008).

The development of vocational education and training 1870 – 1900

The rapid development of manufacturing industry from the 1870s onward increased the demand for skilled labour. It led to, among other things, demands that the State should take initiatives, and in 1872 a committee was set up to investigate the extent of lower technical education. The committee concluded that it was much neglected in Sweden. Only 17 technical schools were identified, and the educational content was only to a very limited degree of a technical character. Most teaching concerned subjects such as mathematics, writing, and drawing. Almost all of them were Sunday- and evening schools, in other words the education was conducted on a part-time basis. About 6,000 students were enrolled. Following the committee's suggestions, State subsidies to lower technical education were introduced in 1878. By the year 1900, at least 41 lower technical schools existed and the number of students had increased to about 7,000 (Nilsson 2008).

The introduction of State subsidies induced more actors to operate lower technical schools. In the 1850s, the few schools that existed had been established either by rich families (for example the school founded by William Chalmers in Gothenburg in 1829) or by the city councils in Stockholm and Gothenburg. The subsidies convinced councils also in smaller towns to establish schools. By 1885, lower technical school operated in at least 18 towns, most of them municipal schools. The geographical spread was substantial, from Malmö and Ystad in the south of Sweden to Härnösand and Umeå in the north (Nilsson 2008).

Expansion in numbers did not imply changes in the curriculums of the lower technical schools. Education was almost exclusively part-time and dominated by general rather than technical or vocational subjects. It was also dominated by men but courses for women did exist. In addition, certain other schools such as dairy schools were predominantly female.

Whereas changes took place in lower technical education, very little happened in apprenticeship training until the 1890s. But in 1895 an official inquiry was set up by the Swedish Parliament to investigate the possibilities for apprenticeship legislation. There was widespread discontent with the prevailing unregulated situation among employers as well as among workers. However, when the inquiry's proposals were presented, the trade unions rejected them. In their view, the proposals could imply that apprentices would be used as strike breakers. In addition, there were no guarantees against the employment of many apprentices in one firm, which would risk that they would simply be used as cheap labour. The craft employers, on the other hand, were satisfied with the proposals and put pressure for its implementation, but in vain. But the year 1900 it became clear that Parliament would not consider the proposals for apprenticeship legislation (Hellstrand 2020).

New attempts to reform vocational education and training

Even though the attempts to legislate apprentice training had failed, there was a more or less general agreement that the state of affairs in vocational education was not satisfactory. The craft employers complained that it was difficult to recruit apprentices and that many of them left before they were fully trained. They probably had some ground for their complaints, for manufacturing industry was booming (at least up to 1907) and could offer better pay to young people. In addition, those years were characterised by large emigration, not least by young men. The trade unions argued that misuse of apprentices had increased, not only in the handicrafts but also in manufacturing industry. Young people were employed as apprentices with low wages, but little or no training took place. Instead the young men were exploited as cheap labour (Nilsson 2008). Furthermore, even though the number of vocational schools had increased, their standards were regarded as too low.

In 1907, a committee was set up with the task to propose reforms in vocational education and training. Their job was to propose reforms among the 'technical', i.e. vocational schools but also to propose regulations for apprentices. It was called the Technical Committee (*Tekniska kommittén*) and their proposal was submitted in 1909. It included some changes among vocational schools, but not very drastic. The general attitude to schooling was well summarised in a subsequent report from 1912:

Vocational education is mainly practical and should take place primarily through professional work in workshops under the guidance of a master or employer. The theoretical knowledge that a skilled worker needs as a supplement should be provided in specially designed vocational schools where instruction is restricted to a moderate number of hours, not to encroach on the hours spent in work. (*Utlåtande* 1912, pp. 70-71, authors' translation).

The Technical Committee recommended that apprenticeship legislation should be introduced for the handicrafts, but this idea was becoming less attractive outside the handicraft sector. The conditions in many factories resembled that of a handicraft work shop, and the difficulties in defining a 'pure' handicraft sector were assessed to be large. To complicate matters further, some employers in manufacturing industry were in favour of apprenticeship legislation, whereas other were staunch opponents. Also this attempt to introduce apprenticeship legislation failed. But another development had taken place: collective agreement on apprenticeships.

Collective agreements

The years around 1900 were characterised by high degree of organisation in the labour market. The Swedish Confederation of Labour (*Landsorganisationen, LO*) was founded in 1898 and the main Employers' Confederation (*Svenska arbetsgivarföreningen, SAF*) in 1902 (Lundh 2010). The handicrafts were organised in the separate Central Employers' Federation (*Centrala arbetsgivarförbundet, CA*) since 1905, but had been active about a decade before that (Hellstrand 2020). Conflicts were frequent in the labour market around the year 1900, but Swedish politicians left conditions in the labour market relatively untouched. The non-intervention policy produced fertile soil for regulation through collective agreements between the labour market parties. Some of the early collective agreements that were concluded about 1900 included stipulations on apprenticeships. In the early years, however, apprenticeship agreements were common only in a few industries, and furthermore many agreements covered only some aspects. For example, several agreements included only stipulations on apprentices' pay whereas others could be quite detailed also in matters concerning the training necessary to guarantee proper training in the workplace. A survey in 1907/08 revealed that explicit apprenticeship stipulations were concentrated to certain handicrafts such as bakeries and harness-makers and to three industries: tobacco, printing and (parts

of) paper manufacturing, whereas what was called “the customs in the industry” was prevalent in mechanical engineering and glass foundries, among others (Karlsson et.al. 2018).

The scarce information in surveys and inquiries implies that knowledge of the contents of apprenticeship stipulations in collective agreements is limited. In general, it seems that employers tried to keep full prerogative over apprenticeship training, including the employment terms of workers in training. The trade unions, on the other hand, sought to restrict the number of apprentices in relation to trained workers and tried to get some guarantee for the quality of training (Bengtsson 2006). It should also be emphasised that apprenticeships agreements were only included in a minority of all collective agreements. The numbers of workers in industries with collective agreements only corresponded to about 25 per cent of all workers in manufacturing industry and the handicrafts (Karlsson et.al. 2018).

The reform of 1918

Partly to overcome the enormous difficulties in getting apprenticeship legislation in place, the Swedish Parliament reconstructed the vocational school system in 1918. The Reform Act of 1918 implied that different kinds of institutions providing vocational training became integrated in a system, albeit quite a cumbersome one. School-based vocational education became supervised and partly funded by the State but operated by municipalities and to some extent by private actors. The schools had a broader scope than in most other countries at the time, where the term ‘vocational’ was more or less synonymous to ‘technical’ education. In Sweden, not only technical but also commercial and domestic work schools were established. However, in one important respect these schools resembled the previous ones; instruction took place in afternoons and evenings on a part-time basis. The reason for this was that the schools were intended to be a complement to the vocational training that took place in workshops. That was obvious already from the name of the new school: Apprenticeship school (*lärlingsskola*). Its purpose was to provide young people with additional skills and competencies that were demanded in the labour market. It targeted people in the ‘apprentice age’, i.e. 14-17 years of age. Teaching was restricted to 10–12 hours per week and it usually took place late afternoons.

Two more features of the reform should also be mentioned, even if they constituted smaller parts of it. The new system also included a small continuation part called Vocational school (*yrkesskola*), intended for adults. Its purpose was to provide experienced workers with theoretical competence in their field of work. The other feature was a novelty in Sweden. The activities in the Apprentice school

presupposed that the participants held a job. But during the difficult years following World War I, unemployment was high, in particular among young people. In 1921, a new school, the Workshop school (*verkstadsskola*), was introduced. Teaching in these school was full-time and consisted of practical as well as theoretical subjects. The Workshop school remained, however, for a long time a very small part of the system of vocational education and training.

The re-organisation of the vocational school system was one part of the reforms that started in 1918. The other part was to regulate the situation for apprentices. However, the attempts to legislate failed once more. It is likely that this time, the proposals were too ambitious since they covered all parts of the Apprentice schools, i.e. not only technical schools but also commercial schools and schools for domestic work. In these sectors, there were no traditions of apprenticeship. The handicraft organisation found the proposals too extensive and pointed out that the costs to hire an apprentice would increase. Some handicrafts and parts of manufacturing industry pointed at the existing collective agreements as sufficient. The trade unions were negative to apprenticeship legislation, and all the objections implied that it would be very difficult to pass legislation. The proposals withered away (SOU 1954:11).

To sum up: in the early 1920s Sweden had an embryonic system for vocational education and training. It consisted of two main components. The first was a school system, operated by municipalities or private interests but partly funded (and to some extent supervised) by the State. Teaching took place late afternoons and lasted for about 10–12 hours per week. General subjects were important, but the syllabus also included courses on labour law, for example. The schools were originally supposed to constitute a complement to the other main component in vocational education and training; apprenticeship training in work-shops, regulated by specific laws. However, such regulation never came in place. In some branches, notably knowledge-intensive ones such as mechanical engineering, and in most handicraft branches, apprenticeship was regulated through collective agreements. In other branches, the majority of the labour market, young people underwent vocational training under market conditions. That is to say, they could be hired as apprentices with correspondingly low wages but without guarantees that vocational training actually took place. On the other hand, they could leave their employment with short notice. Not a very satisfactory model, but it seems to have worked at least up the depression in the 1930s.

Concluding discussion

In the pre-industrial Europe, a large part of skill formation took place through guilds, where apprentices were trained in return for work with very low wages. That system was protected with legislative measures and guild privileges. During the nineteenth century, those privileges were questioned and in country after country they were abolished. It took place early in the nineteenth century in England and France but in most other countries the abolition was a consequence of the liberalisation and de-regulation that took place in the approximate time period 1840s–1860s. In Sweden, these reforms took place in two steps; the abolition of guild privileges in 1846 and freedom of trade in 1864. The latter reform implied that anyone could pursue a trade regardless of formal training. That implied that a young person could work as an apprentice for a while and then start his own business even though he did not possess all the skills in the trade.

During the early phases of industrialisation, the lack of regulated vocational education and training does not seem to have posed much of a problem. As late as in the 1870s, the ‘systems’ in France and Germany resembled the English one. Young persons worked for a number of years in a workshop and learned the trade. After a time that varied between branches they were considered skilled workers. Some form of evening schools also existed in these countries (Greinert 1999). The similarities with Sweden at the time are obvious.

However, although the ‘systems’ in France and Germany (and Sweden) resembled each other, they were not identical. Guilds were abolished early France, during the French revolution, but they remained strong in Germany where the abolition did not occur until 1869. As manufacturing industry became the leading sector in these countries during the second half of the nineteenth century, the demand for skilled labour increased. The response was very different in those countries. The second section in the paper demonstrated how France early opted for a schooling model, with the State as the driving actor. The strong guild tradition in Germany, on the other hand, was one important component when the ‘German model’ was constituted.

The Swedish development does not fit with any of these two models. The Sunday- and evening schools did get some government funding from 1878, but that was a far cry from the development in France with their *Cours Professionnelles* and *Écoles Nationales Professionnelles*. Not even the reform of 1918 was even close to the development in France. In Sweden, the Apprentice school offered few teaching hours during afternoons, whereas much of the vocational education in France was full-time (Greinert 1999). Today, Sweden is together with France a prominent example of the *statist model*, but that is a relatively new development in Sweden. School-based vocational education, operated by

the State (and municipalities) became the norm in Sweden as late as during the 1960s (Olofsson 2005).

It is obvious that that handicrafts in Sweden wanted a solution similar to the German one. Representatives from that sector tried at several occasions to convince the lawmakers that apprenticeship legislation was necessary, but in vain (Hellstrand 2020). The handicrafts did not have a very strong position in Sweden, and as Thelen points out, it was the combination and relative strength of different interest groups that was crucial when the different skill formation systems were established (Thelen 2004). The collective agreement that were made in Sweden in the early twentieth century were far from being a satisfactory substitute for apprenticeship legislation.

In conclusion, it must be said that Sweden's skill formation system during the late nineteenth and early twentieth century came to resemble the liberal system. Much of the skill formation was left for the labour market to handle, through skill premiums and other processes. Vocational schools played a minor role during all this time, and that continued to be the case at least until the 1950s. A proper skill formation system came did not come about in Sweden until, first the labour market parties and later the State, considered the issue to be important (Nilsson 2013, see also Olofsson 2005). That development started in the 1940s and was completed in the 1970s. But that is a different story!

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