

The changing nature and role of vocational education and training in Europe

WORK ASSIGNMENT 2

External factors influencing VET - Understanding the National Policy
Dimension: Country Case Studies

AO/DSI/JP/Changing_Role_of_Vet/009/15

Case study focusing on Norway

prepared for CEDEFOP – European Centre for the Development of Vocational Training

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The changing nature and role of vocational education and training – overall aims

The purpose of the Changing nature and role of VET-project is to improve our understanding of how VET is changing in the countries belonging to the European Union (as well as Iceland and Norway). Over a three-year period (2016-18) the project will analyse how vocationally oriented education and training has changed in the past two decades (1995-2015) and based on these results investigate the main challenges and opportunities facing the sector today and in the future. Work is divided into six separate but interlinked themes:

- (a) the changing definition and conceptualisation of VET;
- (b) the external drivers influencing VET developments;
- (c) the role of traditional VET at upper secondary level;
- (d) VET from a lifelong learning perspective;
- (e) the role of VET at higher education levels;
- (f) scenarios outlining alternative development paths for European VET in the 21st century.

The study takes as its starting point that vocationally oriented education and training is something more than the traditional VET delivered at upper secondary level (in the form of school-based education or training, apprenticeships, or combinations of these). Due to the requirements of lifelong learning, we are able to observe diversification of VET with new institutions and stakeholders involved. We also see an expansion of VET to higher education areas, partly through reform of existing institutions, partly through the emergence of new institutions. This has been caused by factors internal to the education and training system as well as by external pressures linked to demographic, technological and economic changes.

This particular case study, together with 9 other case studies, provides input to theme (b) of the project ('The external drivers influencing VET developments').

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Norway

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I. Introduction

Norway has a strong policy interest in the vocational education and training (VET) system related to achieving several policy objectives related to economic development, productivity, and labour market integration (Skule et al. 2002). First, the VET system is intended to provide the labour market with the skills it needs and thus contribute to economic development. The projections of supply and demand for labour, conducted by Statistics Norway, show a trend of increasing demand for workers with tertiary education and upper secondary vocational education will continue in the period up to 2030. Particularly relevant to VET, the projections show a high growth in demand for skills in construction (Statistics Norway 2014a). Second, the VET system is to provide qualifications for competent skilled workers, and thus provide young people with transparent occupational paths, and access to certain segments of the labour market. Third, another aim is to promote social inclusion. In Norway, unemployment and income inequality remain at comparatively low levels (OECD 2012), while educational policy emphasises universal access and manifestly aims to counteract inequalities associated with social background (Hegna et al. 2012). Nonetheless, Norwegian researchers have demonstrated a significant impact of social class background on life chances, for instance, with regard to educational attainment (e.g., Hansen 2010).

Apprenticeship as a training model receives widespread political support in Norway, but is challenged by external pressures, such as the supply relatively low cost labour resulting from immigration in the wake of globalization, and 'academisation' tendencies in society following the substantial expansion of tertiary education. These external pressures affect the VET system in different ways. First, since the EU-enlargement in 2004 and 2007, Norway has experienced a large increase in labour immigration, particularly from Poland and the Baltic states, leading to changes in the conditions for VET within the building and construction sector. Increasingly international labour markets are believed to affect employers' willingness to invest in apprenticeship training, due to easy access to cheap foreign labour, which presumably affect the degree to which young people perceive the vocational education system as attractive and a suitable platform for career progression (e.g., Røed and Schøne 2015). Second, the development whereby higher education credentials are ascribed higher value in society, implies a potential weakening of the attractiveness of the VET system (Bråthen and Fløtten 2017; Nyen and Tønder 2014). These challenges to which the VET system is expected to respond are addressed below.

Regarding current international concerns relating to labour market segmentation and dualisation - i.e., a 'hollowing out' of the skills structure between work requiring higher levels of education and unskilled labour - this is also reflected in the Norwegian debates (c.f. Doeringer and Piore 1991). Norway perhaps may be better equipped to handle the challenges related to immigration, technological change, and an ageing population due to the systems' embedment of what is recognised as 'the Nordic model'. In a variety of international comparisons, the Nordic countries are found to perform relatively well on indicators relating to global competitiveness, innovation, gender equality, and corruption (Bråthen and Fløtten 2017). Dølvik (2013) presents three interrelated pillars to illustrate the Nordic model; first, macroeconomic governance. The Nordic countries are small open economies with fiscal and monetary policy aimed at combining free trade with growth, full employment and social cohesion. This has required active and stability-oriented fiscal and monetary

policies, and coordinated wage formation which is considered to be vitally important. The second pillar of the triangle model is the public welfare state. Nordic social policy is comprehensive and aimed at broad risk coverage for the whole population. The third pillar is organised working life, partly regulated by law and partly by collective agreements. Moreover, the social partners are important counterparts with government in developing productivity and restructuring measures, and in developing labour market policies. The strength of the social partners and the balance of power between them is vital to assure the legitimacy of political decisions, trust amongst actors, confidence in institutions, and trust between political actors and the population.

2. What is meant by VET and the national VET system

Since the comprehensive school-reform in 1994, when the VET system was integrated in to the general upper secondary education system, VET is typically understood as a youth education, and as an alternative path to the general academic track. In recent years, the proportion of 16 year olds applying for a vocational programme has been around 40 percent (Bråthen and Fløtten 2017). Currently, the vocational tracks follow the 2 + 2 – model with two years at vocational school followed by two years of apprenticeships. Apprentices are generally trained full time in companies, and do not return to school-based learning post-apprenticeship initiation. This means that it is a *combination* of school-based and work-based learning which characterises the Norwegian VET system.

After completing the four-year vocational education, the students achieve a certificate in a particular trade. There are 200 trades, but 30-35 account for the majority. The trade certificate is a qualification whose labour market value differs between labour market sectors, but generally provides access to relevant work. Vocational programmes do not provide general entry qualifications to higher education. All upper secondary vocational qualifications are at EQF 4/ISCED 3-levels. Also, since 1994, the system includes the opportunity to take a supplementary year of academic subject study in order to access higher education, typically undertaken after the two school-based years, or by taking an extra year after graduating with a trade certificate. This arrangement was introduced to signal that VET is an open educational track, rather than a 'blind alley'. Today, this option is particularly popular within the programmes in the private and public service sectors for health and child care. About 45 per cent of the students in the programmes for these sectors switched to general education after their second year (in 2010). The numbers are much lower in technical and industrial production (9 per cent), but are significant in electricity and electronics, building and construction and restaurant and food processing (16-19 per cent) (Olsen et al. 2015).

There are constantly on-going public debates over the status, worth and recognition of vocational education. Generally, one can say that the VET systems suffers from disparity of esteem compared with the academic track, where vocational skills are assigned lower status in a hierarchy of knowledge and value. Despite the pressing need for vocational skills at a societal level according to statistical projections, vocational students frequently appear in the newspapers in negative terms related to: their lack of motivation, dropout, being school-wary, and not 'suited' to academic study. The large majority of 16 year olds in Norway enter upper secondary each year, but only about half of those entering the vocational tracks succeed in completing within five years. There is, however, significant variation in the dropout rate between different vocational tracks. The transition from school-based education to apprenticeship training is a critical point in the Norwegian vocational system, and dropout is intimately connected to the transition from school-based learning to apprenticeship (Nyen and Hagen 2014). Young people do not have a statutory right to an apprenticeship place; about 70 per cent are usually able to secure an apprenticeship. Thus, a lack of

apprenticeship places is one of the reasons why less than two out of 10 students in vocational programmes complete the 'standard' 2 + 2 model (Aspøy and Tønder forthcoming; Bråthen and Fløtten 2017). Research clearly establishes that dropping out of upper secondary education is a phenomenon more closely related to vocational education programmes than to programmes for general studies. Markussen and colleagues (2008) find that in the general academic upper secondary tracks, the dropout rate was about half of this average or lower, but all of the vocational education programmes had a dropout rate above the average of 14.8 per cent.

In order to accommodate some of the aforementioned challenges, different measures, initiatives and pilot projects have been implemented. One example is the project for more frequent transitions between school and work-place during the four-year vocational education, compared with the current 2 + 2 model. This pilot project spans from 2014-2018 (Andresen et al. 2016; Høst et al. 2015). Another example is that of obtaining 'double' or 'hybrid' qualifications, where young people achieve the trade certificate and general study certificate (granting access to higher education) after completing vocational education. The initiative for this kind of programme was a response to employers' preference, especially within the manufacturing and building sectors, to recruit engineers with experience of practical work on the shop floor. It started out, in 1992, as a programme for what today is labelled technical and industrial production manufacturing (TAF). In 1996 a TAF programme within electricity and electronics was introduced, and in 2000 a programme one for building and construction. Since 2007, a TAF course has also been offered within the programmes for healthcare, childhood and youth development, and even within agriculture, fishery and forestry (Olsen et al. 2015).

In order to give a more nuanced picture than portrayed hitherto, it is relevant to point to three topics which differentiate the way VET is understood and applied in Norway. First, generally, the Norwegian VET system, constituted by specific trade logics, is grounded in clearly defined occupational knowledge and skills. There are, however, trades, such as service sector ones, which do not have a fixed occupational point. Rather, these types of trades which are weakly established in the labour market as a social and occupational category compared with trades within industry and crafts, make it difficult to identify the jobs which apprentices are being prepared for. The trades struggle to engage students and employers, while the transition to relevant employment post apprenticeship is weak, and the trade certificate has low labour market currency. Here employers have come to prefer training and recruitment strategies disconnected from the VET system (Reegård 2017). Active employer engagement in the development of vocational education and apprenticeships is considered essential in ensuring that apprenticeships remain an important part of training and recruitment policy in the various companies and industries. Concerns, however, about a lack of employer (and employee) influence have been raised, particularly within the weakly established trades, such as trades directed towards the service sector (Høst et al. 2013). The share of apprentices compared to young employees with other types of qualifications differs significantly between the labour market sectors. In contrast to the building and construction sector, where nearly all young people employed are apprentices (99 per cent), the retail sector has the biggest discrepancy - meaning the lowest share of apprentices (10 per cent) - compared with the overall youth workforce (Nyen et al. 2015).

Second, there are significant geographic variations in the status and support for vocational education depending on where in Norway one is located. Although vocational upper secondary education institutions are geographically distributed to offer equal opportunities in Norway, local patterns of inequality in participation and achievement are evident. These variations are linked to the composition of local labour markets, and vocational education traditions with implications for young

people's orientations towards vocational education (Olsen et al. 2015). For instance, in Oslo which is characterised by labour migration, de-industrialisation and knowledge-intensive labour markets, one in four (of those aged 16-18) chooses VET, whereas it is almost 50 per cent elsewhere in the country. Typical VET regions are the west coast and mid-Norway, which still have a significant amount of employment in industrial production.

Third, it is crucial to emphasise the large share of adults completing a vocational education. Approximately half of all trade exams are completed by adults. As already mentioned, the standard model in vocational programmes is two years of school-based education followed by two years of apprenticeship training. In practice, however, only a minority follows the standard route and acquire a trade certificate within four years. The average age for persons completing a vocational programme in Norway is 28, which is among the highest in the OECD. Adult apprentices can have all training at the workplace, apart from that in general subjects. Besides, adults who can document long and varied practice as unskilled workers within a relevant trade, can also register for the trade examination and acquire the trade certificate, usually after having a shorter theoretical course. This latter practice based route is a commonly used qualification route in the Norwegian labour market, and accounts for about a third of all new trade certificates each year. It enables segments of the population with an otherwise low likelihood for completing upper secondary education to acquire formal qualifications at this level. Apprenticeships and experience-based trade certification provide adults with a second chance to acquire upper secondary vocational qualifications (Bratsberg et al. 2017).

In general, the Norwegian VET system denotes both school-based and work-based learning, which at least in part, leads to relevant jobs and an educational certificate of labour market value. The majority of apprenticeship places are within the private sector. There are, however, recent measures taken in order to strengthen and increase the public sector's willingness to provide apprenticeships, particularly within the trades of office administration, and ICT services, which are among the largest trades relevant to the public sector. Research, however, shows that vocational education for these parts of the public sectors, are characterised by obtaining education in the labour market, rather than an education *for* the labour market. The public agencies do, to a small extent, offer skilled workers a job post-apprenticeship completion but, particularly for the office administration trade, employers prefer employees holding higher education credentials (Høst and Reegård 2015).

3. Historical context – the direction of travel

The VET system in Norway has been a central institution for the training of tradesmen/journeymen for entry into the labour market for a long time. It has been long regarded as a mechanism for the recruitment and qualification of the labour force. Over the years since the 1970s there has been long-term growth in the number of apprentices from about 3 000 in the early 1970s to almost 20,000 in 2016. This means that the percentage of Norwegian youth who receive vocational education through an apprenticeship has increased from around 5 per cent to 30 per cent (Bråthen and Fløtten 2017; Høst 2008a).

The great increase over the years has been rooted in the interest of policy-makers in the vocational training system. This ensured that much greater financial resources were invested in the vocational system. Over a period of 50-60 years, the vocational system went from being practically doomed in the 1960s (Michelsen 1995) to holding a central position in upper secondary education today.

Until the 1990s, the vocational system was largely a recruitment system, particularly to the trades within industry and crafts. During the 1980s Norway witnessed a revitalisation of the system of collective skill formation within the manufacturing sector, a process driven step by step by local and

central actors (Olsen et al. 2015). The vocational system however, was considered complex, fragmented, and largely filled by older youths and adults. Furthermore, it was numerically a modest apprenticeship system. Building up to the comprehensive school reform of 1994 was an overburdened education system and increasing youth unemployment. This was the backdrop to the efforts made to transform the Norwegian apprenticeship system through Reform 94; subsuming vocational education and general academic education in a common law. In parallel, so-called Local Training Agencies (LTA) emerged in the beginning of the 90s, privately owned, and intended to relieve companies from the increased administrative coordination following the integration of vocational training into the general upper secondary education system. The interest among employers in recruiting apprentices from upper secondary school has significantly grown. With this reform came expectations that workplaces would not only offer more apprenticeship places, but also to expand and renew their capacity as places for training. This development was welcomed both by employers, and by the social partners, contributing to raising the general status and educational standards of the vocational system (Olsen et al. 2015).

With the reform in 1994 all young people were given the right to upper secondary education. The core of the restructuring of the vocational education during the 1990s was the forging of tighter links between the apprenticeship system and upper secondary education. The aforementioned 2+2 structure was adapted to the new school system in which 16-19 year olds were given a statutory right to three years of upper secondary education. The vocational tracks were integrated in to the general upper secondary education system. Thus, it follows that the apprenticeship system also became evaluated in line with the education system's requirements for effectiveness and transparency. With this integration, one can say that the vocational system increasingly developed into an educational arrangement for young people - from being a recruitment channel and qualification system for trades - accompanied by stronger public governance and regulation (Nyen and Tønder 2014).

Prior to 1994, sectors and industries had come to develop and formalise a very different set of training and recruitment practices, e.g., vocational education in school combined with enterprise-based practice, higher professional education, and on-the-job training. The reform in the 1990s sought to adapt these different educational traditions and turn them into a comprehensive, nationwide, restructured system of vocational education. The aim was an integrated and uniform further/higher education system capable of including all 16-19 year olds, either preparing them for higher education, or providing them with a skilled worker certificate after completing the apprenticeship (Høst et al. 2008a). This expansion resulted in the birth of a series of new trades directed towards meeting the needs of the service sector, thereby creating a pathway for young people into this segment of the labour market (Michelsen et al. 2014; Olsen et al. 2015).

Traditionally, the essence of VET is training in a specific trade, i.e. a distinct and demarcated set of vocational skills that lay the foundation for working in an occupation. A trade is constituted by established occupational categories, a more or less standardised set of work tasks and responsibilities, cutting across company-specific skills (Nyen and Tønder 2014). One of the central aims of Reform 94 was to extend the apprenticeship system to all labour market sectors, both public and private. In this process, the VET system was expanded to include labour market sectors, which did not have the tradition for apprenticeship training, among them retail and office jobs. These 'new' service sector trades, however, do not seem to lend themselves easily to the apprenticeship model of training (Reegård 2017). In broad historical terms, one can say that the Norwegian VET system made a successful transition from crafts to industrial production with the industrial revolution, but the second transition to the service economy has proven less successful (Reegård 2016).

Post Reform 94, the share of 18 year olds who apply for an apprenticeship place has been relatively stable; between 17 and 19 per cent. This suggests that the apprenticeship system enjoys a stable status among young people, accompanied by increased supply of public expenditure and resources (Høst 2008a).

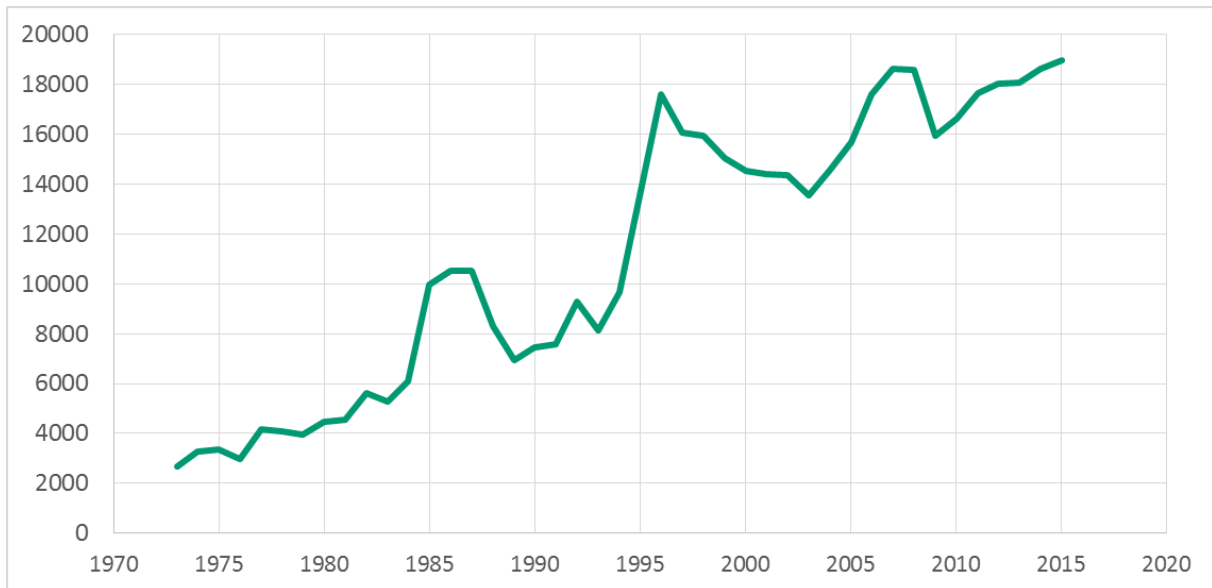
The other relevant school reform affecting the Norwegian vocational education system is the Knowledge Promotion reform of 2006. In the wake of this reform came further restructuring, meaning that the system would offer vocational training in fewer trades. Importantly, the number of second year courses was reduced significantly, with the consequence that many vocational students had broader and less trade-specific vocational education and training during the first two years. Another significant change was the introduction of the school subject called the 'in-depth study project', which was implemented in the two school-based years of vocational education. Critics had warned against the negative consequences of abstract and theoretical courses at the expense of practical training. The distance between the subjects taught in school and the trades and occupations might have negative effects on student motivation as well as on skills development. An important aim of the in-depth study project was to introduce VET students to authentic work methods and tasks within relevant trades and occupations at an early stage of their training, partly in order to counteract the presumed negative effects of broad vocational programmes (Olsen et al. 2015). Currently, several trades are clustered together in eight vocational programmes, branching out to 52 second year courses. The first of the school-based year in a vocational programme has a broad vocational content with students prepared, potentially, for many different trades study within the same programme. The second year involves further specification yet usually still encompasses several trades (Bråthen and Fløtten 2017). Recent research shows that the content and learning provided in the placement periods is rather arbitrary and non-standardised, owing to decentralised school responsibility (Nyen and Tønder 2012).

Historically, the social partners have enjoyed great influence and control over VET. Cooperation between social partners in the tripartite bodies within the VET system in Norway is important. After several decades when the social partners had relatively extensive influence over the vocational education system, the state gave the public administration complete control of this system from the 1990s on. The social partners took on, or were granted, a position of providing advice on policy. Moreover, the number of tripartite Vocational Training Councils was reduced (Grove and Michelsen 2005). The changes have been explained as a turn towards more unified governance of the education sector, giving the government greater flexibility over changes in vocational education (Høst 2008a).

4. Changes in enrolment

As portrayed in the previous section, since the beginning of the 1990s a number of political measures were implemented in order to establish a new basis for the integration of the apprenticeship system within general upper secondary education system. And the range of the apprenticeship system has expanded. In line with Høst et al. (2008b), there are several ways to operationalise changes in the extensiveness of VET, for instance the establishment of new trades, developments within individual trades, and expansion of VET in geographic areas. Moreover, there are different ways to measure enrolment. The following figure is based on new yearly apprenticeship contracts (i.e. a measure of apprenticeship starts) extracted from Høst et.al. (2008b, 20).

Figure I: Development of the number of apprenticeship contracts entered for all trades, 1973-2016



Source: Extracted from Høst et.al. (2008b)

The figure illustrates how the Norwegian apprenticeship system has expanded over 40 years. This is primarily due to the fact that established areas of vocational education have generated more contracts, but the number of apprenticeship contracts has also expanded significantly through the establishment of new trades, particularly in the wake of Reform 94. Thus, the 90s were characterised by new areas and sectors being integrated into the VET system. The most significant expansion took place within health and social services with the formation of the care worker trade, youth and child worker trades, and emergency medical technician trades. Altogether, 61 new trades were established between 1990 and 1996. Since then, few new trades have been formed (Høst et al. 2008b).

The subsequent figure (Høst et al. 2008b, 23) shows the significance of the different trades for the growth depicted in Figure I. Three categories of trades are shown: (i) craft and craft-oriented trades, (ii) industrial and industry-related trades, and (iii) other trades i.e. new trades within sectors previously not included under the law on vocational education.

Figure 2: New apprenticeship contracts per year from 1973-2008, distributed according to craft, industry, and other trades

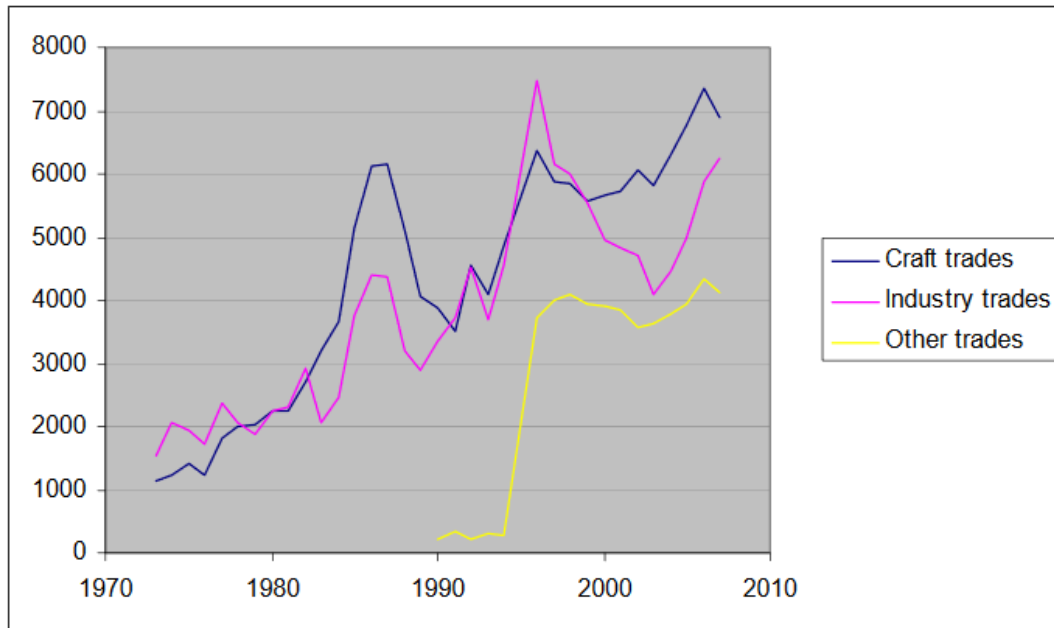


Figure 2.2: New apprenticeship contracts per year from 1973-2008, distributed according to craft, industry, and other trades.

Sources: RFA's annual report, Linda vocational education, The Ministry of Education, Statistics Norway

Figure 2 illustrates that the trades of crafts and industry account for the most significant share. Carpentry, hairstyling and construction have contributed strongly, whereas the smaller, traditional crafts have declined. Within the industry trades, the electrician trade is the largest, while the metal industry and automobile trades are also important (Høst et al. 2008b). The new trades that emerged in the service sector in the wake of Reform 94 increased after their introduction, but have not been able to sufficiently gain foothold, neither in the labour market nor among students.

5. The interplay between external and the internal factors shaping VET

The demographic challenge

As is the case with other OECD countries, Norway's population is ageing. In line with the OECD average, the proportion of the population aged 65 and over is projected to increase from around 30% of the population aged 20-64 in 2011 to around 60% by 2050 (OECD 2014).

It is, however, difficult to accurately project the future. There is thus a high degree of uncertainty in the projected figures on how the population will develop in the future, both with regard to its total size and its composition. The Norwegian population will continue to grow throughout the century, according to the population projections conducted by Statistics Norway. It is estimated that Norway will reach 6 million inhabitants in 2031, and 7 million in 2065. The growth will be particularly high in and around the larger cities. Norway is commonly broadly divided into six geographic regions: East, South, South-West, West, Mid and North. Each region has a regional 'centre'. The population in all six regional centres, i.e. Oslo, Kristiansand, Stavanger, Bergen, Trondheim and Tromsø, will increase markedly.

The aging of the population will continue, and every fifth resident in Norway will be at least 70 years of age in 2060. The increase in the number of adults and elderly will increase sharply over the coming ten year-period. The age group 70 and older constitutes 11 per cent of the population today, but projections estimate that this share will increase to around 19 per cent in 2060. As a consequence, every fifth person in Norway will be 70 years or older in 2060. Moreover, individuals aged 80 and older will make up almost one tenth of the population in 2060, compared with 4 per cent today (Statistics Norway 2014b).

This development indicates that the comprehensive, tax-funded welfare state in Norway might be placed under pressure given the dependency ratio the demographic statistics suggest will emerge. More specifically in relation to the VET system, the changing demographic structure implies the need to strengthen the transitions for youth from school to employment, strengthen (formal and informal) lifelong learning provision, and increase recruitment to health care vocational programmes.

Norway today is considered to hold a strong position, being able to cope better with population ageing than most other countries. The labour force is expected to continue to grow until 2060, since the population projections from Statistics Norway estimate net immigration rates above the OECD averages (OECD 2014).

Immigration and labour migration are external factors relevant to the VET system, and to which the VET system needs to respond. First, annual net migration to Norway has been stable at around 40,000-50,000 individuals for a number of years, which is a substantial rise compared with the situation over previous decades. According to the projections, immigration to Norway is assumed to decline somewhat over the long run, while emigration will increase somewhat – especially over the first few years. As a consequence, net migration will decline in the long run. In this main projection, net migration will stabilise at around 15,000-20,000 individuals a year from 2040 onwards (Statistics Norway 2014b).

An increased flow of immigrants might pose a strain on the Norwegian welfare system, thus policy-makers are keen to integrate immigrants rapidly into the labour market. Recently, measures have been by piloting modularisation within the VET system, in order to speed up the qualification route, which immigrants are to undertake in order to access the labour market. Modularisation entails vocational competence to be divided into smaller components, where immigrants may obtain a qualification after completing each module. Through this, the government aims to create a more flexible adult learning system. It remains to be seen how the current VET system, and employers, response to such modularisation efforts, pans out.

Second, labour migration is believed to have had a impact on the VET system, particularly within labour market sectors such as building and construction. In a high labour-cost country such as Norway, the consequences of opening up international labour markets in the wake of EU-expansion, was to see an influx of labour migrants who were willing to work for lower wages compared with Norwegian workers (Nyen and Tønder 2014).

Friberg and Haakestad (2015) analysed how the recent influx of large numbers of labour migrants represents a supply shock that has shifted the fundamental balance of power and class relations in the Norwegian construction industry, moving from «craft-oriented» to «neo-Taylorist» management principles. Other studies have documented that labour migration had had a negative impact negatively on young people's willingness to enter immigration-exposed trades and occupations (Røed and Schøne 2015). It has also reduced employer demand for skilled labour (Friberg and Haakestad (2015).

Technological change

Technological development is rapid, implying great progress within robotics and artificial intelligence. Evidence indicates that the pace of the technological development will increase further in the years to come. These changes will contribute to change the labour market in a number of different ways. A survey on new technology and its labour market consequences, conducted among a representative sample of companies in Norway, showed that nearly 50 per cent had introduced new technology over the past two years. This led to changes in work tasks and altered the need for competences in these companies. Moreover, with direct implications for VET, it is likely that the supply and demand for continuous skills development will increase further in accordance with rapid technological development. Furthermore, technological change might involve the recruitment of new employees (Holte 2017).

At the same time, one of the strengths with the Norwegian VET system is the relatively close link and cooperation between the educational venues - i.e. (vocational) schools - and the labour market, which is intended to ensure efficient feedback mechanisms and dialogue between the two venues. Thus labour market-driven technological change affects the content of vocational education. At the same time, vocational curricula have a broad vocational competence base, which aims to make skilled workers flexible with the ability to learn new skills during their career. To date few studies have explicitly addressed the way technological change has an impact on the VET system.

The macroeconomic environment

Norway enjoys favourable circumstances as an oil-producer economy which has proven resilient even in times of global recession. As mentioned in the introduction, close cooperation between the government and the social partners - constituting an important element of the Nordic model - implies active and stability-oriented fiscal and monetary policies, and coordinated wage formation. Yet, naturally, Norway experiences macroeconomic fluctuations.

In Norway vocational training is dependent on the work processes and production in companies, and is thereby, at least in the private sector, sensitive to market conditions. Employers' recruitment of apprentices is closely linked to their demand for labour. At the same time, it has been argued that the VET system has developed certain autonomy in relation to the labour market. This should provide space for education policy objectives and strategies rooted in the logic of the education system's effectiveness and demand for education to withstand fluctuations in the economic cycle (Høst et al. 2008b).

It is evident that employers' intake of apprentices is intimately connected to the general economic climate. This means that during downturns, employers reduce their intake of apprentices. One aim of Reform 94 was to encourage employers to invest in the VET system as an education and training strategy and not only as a recruitment strategy, and thus make the intake of apprentices less sensitive to market fluctuations. It was important to establish mechanisms in order to shield the VET system from market fluctuations and stabilise it as a training system. Measures initiated included more favourable financing and grant systems for companies that took on apprentices, the formation of new follow-up and quality control schemes, as well as greater investment in training collaboration through LTAs and training circles (Høst et al. 2008b).

Figure 3: The development of new apprenticeship contracts and unemployment from 1973-2007

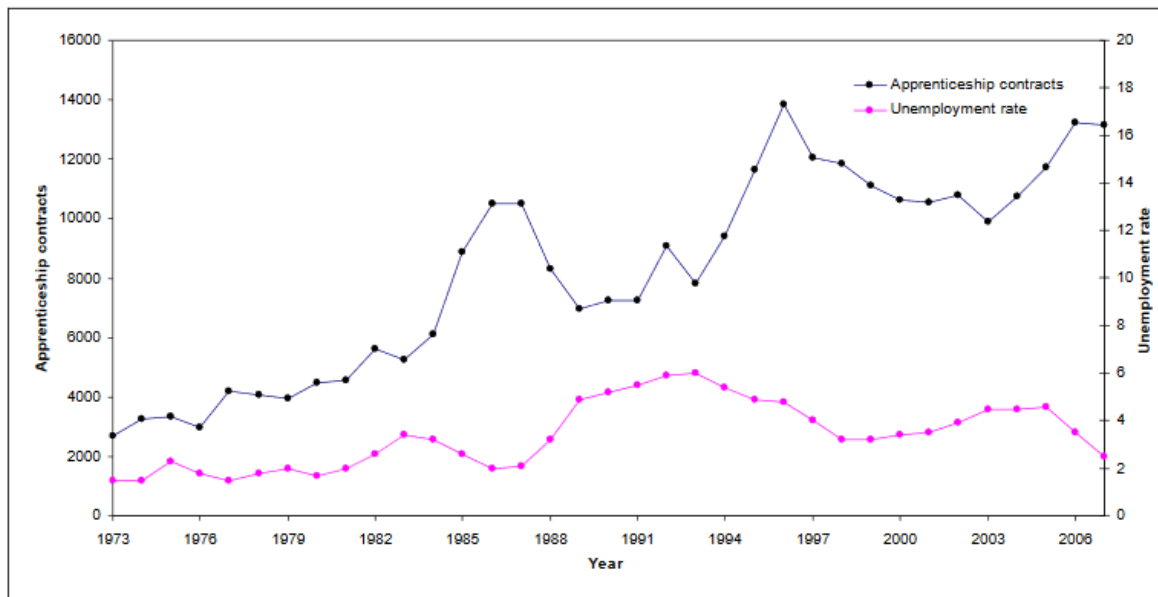


Figure 2.4: The development in numbers of new apprenticeship contracts and unemployment from 1973-2007

Sources: RFA's (VET Council) annual report, Linda Fag, Directorate of Education and Training, Statistics Norway¹²

The picture emerging is that it seems as if the unemployment rate, and number of apprenticeship contracts are moving in a counter phase as shown in the figure above. In periods of decreasing unemployment there is a significant increase in the number of new apprenticeship contracts, while during periods of increasing unemployment there is a decrease in the number of apprenticeship contracts. This is noticeable especially during the recession at the end of the 1980s there were fewer apprenticeship contracts than the trend would otherwise suggest (Høst et al. 2008b).

6. Conclusion

The case of the Norwegian VET system - commonly referred to as a combination of the bureaucratic, state-regulated model and the dual corporatist model - is characterised by a well-developed system of tripartite cooperation between social partners and the government (Nyen and Tønder 2014). The embedment of the Norwegian system in the Nordic model might imply that Norway is better equipped to tackle some of the challenges pointed to in this discussion, e.g., increased labour migration, immigration, and an ageing population, compared with other countries.

If the Norwegian VET system continues along the current trajectory, it will most probably function quite well within the traditional VET sectors, i.e., industry and crafts (i.e. sectors with a degree of path dependency and institutional inertia, these sectors have used the VET system for training and recruitment for decades. Employers have come to prefer this kind of kind of system). External factors such as the oil price, economic market fluctuations and continued technological innovation within national export-sensitive industries, may impact not only on employers' willingness to take in apprentices, but also the VET-system's perceived attractiveness amongst students.

Whereas, for other less established VET-sectors, e.g., service sector and health care, employers' receptiveness to this kind of recruitment system still remains quite open. Given the weak position of VET within 'new' VET sectors, the consequences of potential failure to institutionalise VET need not necessarily imply severe consequences for the national economy.

One of the pressing external challenges depicted here relates to labour migration. On the one hand, large-scale migration has enabled booming growth at a time when native craft personnel have been in short supply. On the other hand, there is evidence that large scale movements of labour has disturbed the power balance between capital and labour in industry, and negatively affected young people's desire to enter a vocational education in the building and construction industry (Friberg and Haakestad forthcoming; Røed and Schøne 2015).

Another challenge relates to the trend towards academisation and further expansion of the higher education system. Presuming that academic drift tendencies evident today increase, it might be difficult for the VET system to avoid becoming a 'dead end' in the education system. In order to sustain it, it is crucial that young people perceive vocational education as attractive, and suitable for career progression. Measures to increase permeability so that upper secondary VET can lead to higher education entry - including to higher VET - will be important in sustaining the attractiveness of VET. Perhaps will policy-makers consider it necessary to promote vocational tracks leading to double qualifications to a greater extent, i.e., providing both access to higher education and a vocational certificate. These two challenges, labour migration and academisation, might mutually reinforce each other by contributing to a polarised labour market regarding skills; between unskilled and those with higher education. If skilled labour is replaced by cheap unskilled labour as a result of increased labour migration, then VET may appear less attractive to young people, such that, the academic alternative becomes more attractive. Also, if the supply of skilled workers decreases, employers will look to other training and recruitment strategies (Nyen and Tønder 2014). This may have severe consequences for the Gross National Income.

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