# Summary

The goal of this project was to identify the mechanisms affecting the proportion of employees without professional qualifications in the municipal kindergarten and care and nursing sectors. Quantitatively, this involved mapping the characteristics of municipalities with relatively high or low proportions of employees in posts not requiring a specific education. Qualitatively, a selection of individual municipalities was researched.

Overall, the most important and demonstrable correlation is that a high proportion of unskilled employees is closely associated with high levels of part-time employment, a high proportion of immigrant labour and a low educational level in the municipality as a whole. These can be understood as background conditions that may contribute to systematic variations between municipalities as regards the proportion of unskilled employees. On the other hand, the case studies show how the different policies followed by individual municipalities contribute to some of them reducing the proportion of unskilled employees despite these conditions, while others do not.

Municipalities naturally enough base their strategies and practice on their individual situations rather than on an overall perspective. The municipalities we have visited prioritise the recruitment of registered nurses, but are relatively unconcerned that the training capacity of existing education programmes is too low in relation to projected needs. At the same time, they experience the availability of health care workers as being very good, despite the fact that there are already few newly-trained workers today. They do not experience the current proportion of health care workers without relevant training as problematic.

The municipal need for a qualified labour force will in all likelihood be both substantial and increasing for the foreseeable future, particularly in the care and nursing sector, but also in the kindergarten sector. Factors such as the higher proportion of older people in the population and the ongoing undersupply of kindergarten places mean that the need for qualified labour power in these areas will probably continue to grow in the decades to come. To reduce the proportion of unqualified workers presupposes that a sufficient proportion will be trained. So long as it is not possible to increase the capacity of the ordinary nurse and health care worker training programmes, the training and certification of unskilled adult employees appears as a clear alternative. In this light, a policy of preventing the intake of unskilled individuals appears self-defeating, in that it undermines the basis for recruitment of new skilled workers. If the capacity of training programmes remains too low, the most likely scenario is one of importing the required labour force.

**What do the quantitative analyses show?**

Previous research has shown large variations between Norwegian municipalities, cutting across dimensions like size and location (see e.g. Bakkeli *et al.* 2013, Aamodt *et al.* 2012 and Agenda 2006). This indicates that the proportion of unskilled workers in the municipal sector is affected by factors other than size and location, such as the use of part-time labour, the organisation of the services provided, demographic conditions, the characteristics of the local labour market and the economic and political situation of different municipalities. In order to get a better understanding of the mechanisms affecting the proportion of unskilled employees in the municipal sector, this report explores how the proportion of unskilled person-years worked in the kindergarten sector and in the care and nursing sector respectively varies according to different municipal characteristics. We carry out both analyses of individual partial correlations and more advanced analyses of the correlations between multiple variables.

The partial correlations in our quantitative analysis are well suited to show individual relationships between different municipal characteristics and the proportion of unskilled person-years worked in the municipal sector. However, they do not take into account the fact that these characteristics may affect each another. Thus the partial correlations between individual municipal variables and the proportion of unskilled workers presented below may also capture the impact of other municipal variables on the proportion of unskilled workers. This makes it hard to interpret such relations. Hence we have also carried out analyses which include multiple variables simultaneously (regression analyses). Because regression analyses can simultaneously control for the impact of multiple municipal variables on the proportion of unskilled workers in the municipal sector, these analyses take account of the fact that different municipal variables may be mutually correlated. The regression analyses are thus a good method of isolating the significance of individual municipal characteristics, and the results become easier to interpret. The fact that we have data for the municipalities over several years enables various methodological approaches. In order to check the robustness of our results, we therefore carry out analyses both for individual years and across several years.

Even if we control for a range of both observable and unobservable municipal-level variables, there are nonetheless methodological problems which cannot be handled even by the more advanced analyses. This means that the effects in the regression models below cannot be interpreted unambiguously as causal relationships. This requires us to proceed somewhat cautiously, and to interpret the correlations shown below as systematic relationships within the data rather than as causal relationships.

**It is easier to recruit skilled employees when a high number of hours is offered**

One of the key findings of our analyses is that there is a clear relationship between the average number of working hours offered and the proportion of unskilled employees, both in the kindergarten sector and the care and nursing sector. This relationship is clear both in the individual partial correlations and in the more advanced regression analyses where we controlled for a range of municipal variables at the same time. It appears that a higher average number of hours worked is associated with a lower proportion of unskilled workers in the municipal sector. This can be interpreted as meaning that it is easier to recruit and retain labour power with formal qualifications if the positions being offered involve a high number of hours.

**More unskilled workers where young cohorts are large**

Furthermore, we find that municipalities with a relatively high proportion of children between the ages of 1 and 5 have a higher proportion of unskilled workers in the kindergarten sector by comparison with municipalities that have a relatively low proportion of children between 1 and 5. This indicates that the need for kindergarten services also affects the proportion of unskilled workers in the service. The report’s findings indicate that municipalities employ a higher proportion of unskilled workers in relation to those with formal training when the need for labour power grows. By contrast, it does not seem that the proportion of older people affects the proportion of unskilled workers in either the kindergarten sector or in the care and nursing sector. This can either be interpreted as meaning that the proportion of those over 66 is such a varied group that it is not the relevant age group to include in these analyses, or that the presence of a higher proportion of those over 66 does not affect the relationship between unskilled and formally-qualified labour power.

**More unskilled** **workers where there is a high proportion of immigrants**

We also find a clear relationship between the proportion of unskilled workers in the kindergarten and care and nursing sectors and the proportion of immigrants in a municipality. This can reflect the fact that the job descriptions in the kindergarten sector and the care and nursing sector largely revolve around taking care of others (which is a universal phenomenon) and that this attracts immigrants who often lack or only have limited (Norwegian) training.

**Fewer unskilled workers where the availability of skilled workers is high**

Finally, the analyses show that a higher proportion of inhabitants with at least secondary education is associated with a lower proportion of unskilled workers, both in the kindergarten and the care and nursing sectors. This can be interpreted as meaning that better access to formally-trained labour power in the municipality leads to a decline in the proportion of unskilled workers in the kindergarten sector and in the care and nursing sector.

The quantitative studies which follow give some interesting pointers to systematic correlations in the data, but much of the variation between municipalities cannot be explained by an economic model. The proportions of unskilled workers in the kindergarten sector and the care and nursing sector respectively are affected to a high degree by conditions which we cannot control for in these models. There was therefore a need for case studies that could give a more in-depth analysis of what sorts of mechanisms underlie these relationships.

**Fewer positions with low working hours in a municipality may result in more skilled workers**

Through the case studies carried out of four municipalities, a clear pattern emerges where small part-time positions are largely filled by employees without professional training. It is very hard to get formally-trained persons to take up such positions. Instead, they are occupied by students, people with other professions looking for a side job, as well as other people with a looser relationship to the labour market who take such positions either because it is convenient, or because they cannot find other work. They are also occupied to some extent by newly-qualified health care workers who are having difficulties finding more full-time work. This overlaps to a considerable extent, but by no means completely, with the category of employees lacking relevant professional training. Thus we also get a statistical relationship.

In general, those municipalities which have managed to reduce the proportion of small, part-time positions have a better coverage by skilled workers. One question which can be raised is if it would be possible to fill all positions with professionally trained employees if they were sufficiently full-time. In principle, it can be imagined that this would be possible in some municipalities. This assumes that a municipality has the resources to extend its core staff to the point where it can fill a normal shift rota with full-time employees alone, and that there is a sufficient supply of skilled labour seeking such positions. Those municipalities which manage to reduce the proportion of small, part-time positions will probably gain an advantage in the competition with other municipalities for professionally trained staff, above all those with higher education. However, it would hardly be possible to resolve the problem for all municipalities in this way, because the total availability both of college-educated staff and those with secondary-level VET is too small to fill all positions. It would therefore be more accurate to say that full-time positions give a municipality an advantage in the competition for professionally trained staff - vis-à-vis other municipalities, vis-à-vis other sectors, and to some extent in relation to getting its own employees to prioritise taking on more full-time positions.

However, because overall there is not a sufficient labour force with relevant training to meet the need for staff in kindergartens and care and nursing work at a national level, there will still be a need to employ a certain proportion of unskilled staff. These in turn are channelled towards the small, part-time positions. The market for recruitment to these positions is also shaped by the many people who for various reasons are seeking part-time work. If part-time positions disappear, these people would also lose their employment opportunities, but without there being sufficient availability of employees seeking full-time work at present.

**Immigration as a resource and a challenge for municipalities**

Employment rates, broken down into immigrants and others, show firstly a quickly growing proportion of immigrants in the care and nursing sector. We do not have comparable figures for the kindergarten sector. The proportion of immigrants is highest among those lacking a recognised qualification, followed by health care workers. However, it is also significant among registered nurses. In Oslo and some of the surrounding municipalities in Akershus county, the proportion of immigrants in care and nursing work, all positions combined, is between 40 and 50 per cent. There are several reasons for this. Although the region does attract qualified employees from abroad, it is probably even more significant that these municipalities have a high proportion of immigrant residents without professional training. Kindergartens and care and nursing form an important labour market for these residents, because these are sectors which are not able to attract sufficient trained employees. While municipalities with such labour markets initially recruit many people without training, there are major differences in how they handle this. In one of our case study municipalities, substantial investments had been made in the training and qualification of initially untrained immigrants. This appeared in the statistics in the fact that in later years they had considerably reduced the proportion of those without training and increased the proportion skilled health care workers.

The quantitative analyses also showed that municipalities which had a low educational level among women also had a higher proportion of staff without training in the kindergarten and care and nursing sectors. This is also as would be expected. However, there are variations. In one of the municipalities we visited, the educational level in the general population was low, but the municipality had nonetheless succeeded in staffing kindergartens and the care and nursing sector with trained staff to a higher proportion than other municipalities. This appeared to be connected to an active policy for the adult education of employees, both those without professional training and those with a generally low level of education and training.

## Implications of the findings

The municipalities’ strategies and practices are naturally enough based on the situation of individual municipalities. They have increased the proportion of registered nurses and remain most concerned with recruiting this group, even though some have just begun to discuss the division of labour between nurses and health care workers. The basis for this last development is that the municipalities themselves experience their access to health care workers as being very good. While they are not concerned that the proportion without recognised training is currently too high, the municipalities wish to reduce or prevent new appointments of those without professional training, at least for permanent positions.

The individual municipality does not consider access to labour power on a national level, but is concerned with its own competitiveness in order to secure a sufficient supply of registered nurses for their services. If we look at the overall picture, it shows competition for a scarce resource which is in all likelihood set to become even scarcer. Statistics Norway’s projections for this sector, based on present-day training capacity, predict a shortage of 28,000 registered nurses in 2035, given the current division of labour and the proportion of nurses in the sector. If this projection is to be relied on, it will be difficult to continue increasing the proportion of registered nurses in the municipalities in general. On the contrary, everything suggests that it will decline. If we look at the total national requirement, leaving aside reallocations between the municipalities and the different parts of the health care sector, an increased proportion of registered nurses would have to mean either an increased capacity in the training programmes, a continued growth in the average time worked, or the increased importation of foreign nurses. Today, it seems that importing labour power is the most likely result.

In this situation, some municipalities have started discussing the division of labour between registered nurses and health care workers, with a view to the latter group taking over some of the tasks currently carried out by nurses. However, the projections also indicate a large shortfall of health care workers in coming years. Even with a higher training rate than today’s, Statistics Norway’s figures would give us a shortfall of 57,000 health care workers in 2035. Statistics Norway itself has concluded that the possibility of replacing health care workers with registered nurses will not be possible to any significant degree, as there will also be too few registered nurses. In order to avoid an increasing shortfall of health care workers, either the training capacity must be significantly increased, or carers who are qualified to become health care workers must be imported.

The most important cause for the halving of the capacity to train health care workers is the reduced access for adults to the health care worker / auxiliary nurse category, which has traditionally been recruited from groups without professional training. The main decline here came with the Knowledge Promotion reform in secondary education in 2006, which removed auxiliary nurse training both for young people and adults. For adults, what now remains is the possibility of taking the trade certificate on the basis of long experience. This means that it has become much harder for municipalities to bring adults through a progression that enables their certification, because they must now have five years’ experience as an unskilled worker in the field in order to proceed to the vocational examination. If the municipalities further reduce the recruitment of unskilled workers, and limit these to short and medium-term contracts, the certification of adult health care workers will gradually cease, because ever fewer will have sufficiently long experience. As long as the capacity for apprenticeship-based health care worker training is not increased, the training and certification of unskilled adults as health care workers should be an obvious alternative. In this perspective, a policy of preventing the appointment of persons without professional training has little logic, unless recruitment is to be based on the large-scale import of qualified carers.

For the kindergarten sector, the prospects today appear better. The municipalities we visited expressed a reasonable degree of satisfaction here. It has been more possible to stabilise the kindergarten teacher group. The proportion of child- and youth workers is gradually growing, at the same time as a number of kindergartens still have good assistants with long experience. These latter are rarely experienced as a problem, more as a resource. Today, almost as many child- and youth workers are being trained as health care workers, even if the kindergarten sector has far fewer employees. Given present-day trends, the proportion without the relevant training will in all probability continue to fall in kindergartens over the coming years. The question is then rather whether the speed of this process is satisfactory. A faster decline in the proportion of unskilled workers presupposes success in increasing the proportion of adults who take the trade certificate on the basis of long experience, or success in making employment as child and youth workers more attractive to young people. Here too, however, stopping the recruitment of staff without professional training will over time reduce the required recruitment of adults to the skilled child and youth worker category.