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Designation of regional policy zones –
Evaluation of the zone map for differentiated labour poll tax

Abstract

The Norwegian regional policy is a national policy designed in order to support industrial activity in the non-central areas. The underlying logic of the policy is that the non-central areas have a disadvantage compared to the central areas due to the low market density in the home region and longer distances to the central markets (Champion 1996, Cappelen 2002).

This evaluation of the geographical scope of the regional policy target area analyse geographical indicators measuring periphery disadvantages, as well as direct problem indicators connected to employment, income and population development. A set of indicators for designating a target area is developed and weighted and new maps of the support area is constructed.

In addition to the ordinary regional support area, Norway also operates regional support through the differentiated labour poll tax. In the EEA context, the differentiated labour poll tax is designated according to the scheme allowing for transport cost support in low density areas.

The constructed maps are then related to the designated areas of today, to draw some conclusions about the quality of the designated target areas in the operating schemes. Main conclusions are that the designation of the existing map seems to be based on sound reasoning, thus addressing problems in remote areas, but even an evaluation cannot solely rely on stringent methods.

1 Introduction

This paper is intended to summarize an evaluation made for the Ministry of Local Government and Regional Development by the Norwegian Institute for Urban and Regional Research (NIBR) and the Institute of Transport Economics (TØI) concerning the zone map for differentiated labour poll tax.

Differentiated labour poll tax is an important instrument in the periphery oriented regional policy of Norway. The task of the evaluation was to judge if the geographical zone map for this differentiation is suitable, given the regional policy aim.

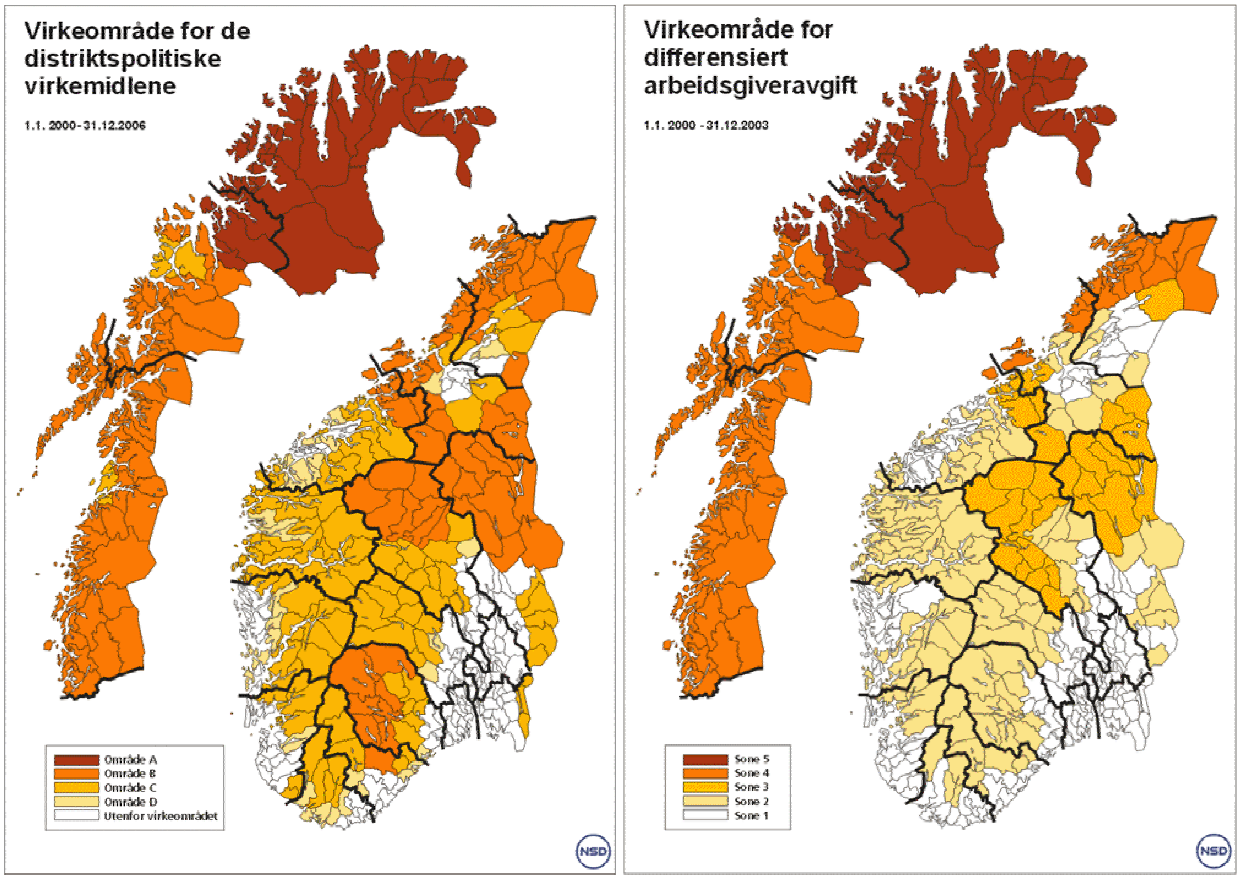
The evaluation, however, starts with an analysis of the regional policy support map. The regional policy support map (which defines the designated area for firm oriented regional support) is designed according to the same regional policy aim as the differentiated labour poll tax. Therefore the zone maps for the two regional policy zones should ideally be identical. One implication of this is that an evaluation of the geography of the differentiated labour poll tax will also have to be an evaluation of the ordinary regional policy support map.

The evaluation was made among other things because the operating zone map for the differentiated labour poll tax is accepted up to end on 31.12.2003, and a judgement of the geographical structure is needed prior to the next revision per 1.1.2004. The maps generated in the evaluation are analytical tools in order to give judgements of the suitability of the existing zone maps. It is the task of the Ministry of Local Government and Regional Development to propose actual proposals for change when the existing maps are to be revised.

2 Aims and restrictions of the periphery oriented regional policy

The basic element of Norway's periphery oriented regional policy is the focus on the non-central parts of the country. This is clearly exemplified in the designation of a zone map for regional support (map 1). The municipalities within the designated zones may utilise instruments which are not eligible outside the zones. Since 1994 the designated support area consists of four zones. In three of them (zone A, B and C), firm oriented regional support may be given, while in zone D only infrastructure funding may be provided in the municipalities. At the last zone revision per 1.1.2000, 2% of the national population lived in zone A, 10.8% in zone B, 13.1% in zone C and 5.1% in zone D.

The differentiation of the labour poll tax in zones with different tax rates are generated according to the periphery oriented regional policy aims (map 1). Since 1981 there are five zones of this tax scheme. Full tax (pt. 14.1%) is paid for employees living in the most central parts of the country. The four zones with reduced tax rate pays 0%, 5.1%, 6.4% and 10.6% respectively. On the last revision per 1.1.2000, 2.1%, 9.5%, 2.2% and 10.3% respectively lived in the 4 zones with reduced tax rates.



Map 1. Maps of regional policy support areas (left) and zones of the differentiated labour poll tax

The non-central orientation is based on the fact that a peripheral location gives competition drawbacks which the policy aims to counteract. This is regarded necessary in order to avoid centre oriented net migration to an extent giving un-wanted changes in the settlement pattern. Thus, the policy is not purely problem oriented. If central regions get problems of income generation or employment, such problems are to be handled by other instruments (within the industrial policy, welfare policy etc). It is, however, anticipated that a peripheral location

generates problems in the fields of employment and living conditions. The level of such problems is therefore to be regarded when the designated areas are to be defined.

Norway has claimed that the EEA rules on state aid should not affect the differentiated labour poll tax, as tax policy is not included in the EEA agreement. ESA, the surveillance agency for the EFTA part of the agreement, did not agree. Their opinion was that the scheme had to be adopted according to the state aid rules. The dispute was ruled in favour of ESA by the EFTA court in 1999. From 1.1.2000 Norway had to withdraw several sectors from the scheme. These sectors had to pay full tax rate (14.1%) regardless of where their employees are living. The withdrawn sectors are resource-based industries without alternative location possibilities, some industries with special EEA regulations (steel, ship-building and ferrosilicon) and some service industries exposed to international competition. Also some revisions of the zone map were needed to get ESA acceptance.

While the firm oriented regional support is contributed according to the location of the firm, the labour poll tax is differentiated according to place of residence of the employee. A zoning that separates place of residence from working place will not be adequate. Thus, we used a grouping of the municipalities into 161 Labour Market Regions (LMR). The borderlines of the zones for the differentiated labour poll tax should normally not divide these regions. For the regional policy support zones, this consideration is not so important.

According to the EEA agreement, it is not allowed to give state aid which influences the competition between member states, unless accepted in the EEA rules. Such rules allow for regional policy motivated aid under certain conditions. The schemes must then be accepted by the surveillance agency (ESA for the EFTA countries). Operating support is only accepted in areas with low income, Norway has no such areas per today. Investment grants (as the firm oriented regional support) may be given in areas with low income, high unemployment, and/or low population density (less than 12.5 inhabitants per km^2). The last moment is the relevant one for Norway. Areas should be designated on county level. When applying sub county levels (as is the case in Southern Norway), this has to be justified by assessments including relevant socio-economic indicators. It is also expected that the zones should be compact unless topographical conditions call for deviation. It is an expressed target that regional policy motivated support should be limited, which will block attempts to expand the percentage of the national population living within the zones.

Differentiated labour poll tax is a form of operating support (use of labour input), and as such it is not allowed according to the EEA rules. It is, however, accepted to provide transport support to firms in areas with low population density (below 12.5 inh/km^2), as the firms here will face higher transport costs to the markets. This support may not exceed documented transport costs, and may not be given to specified activity types. Former to the last revision, ESA accepted the differentiated labour poll tax as an indirect form of transport support. The reason for acceptance was that for the commodity production, the support which could be given by a literal implementation of the transport support regulation was higher than the support channelled through the differentiated labour poll tax (when the withdrawn sectors were excluded). For the services, the support was not regarded to influence the competition between member states, also here with exception of withdrawn sectors.

ESA has communicated that the differentiated labour poll scheme will be re-judged prior to the revision by the end of 2003. The reason is that international competition are influencing more and more service sectors, that it is not clearly documented that no firms are over-compensated according to the transport costs, and that it is a claim that the rules should be practised similarly in the EU and EFTA part of the EEA. The status at the moment seems to be that only the northernmost parts of Norway may be included in the scheme (population of

100 000 inhabitants). For zone 3 and 4 a direct transport subsidy arrangement and a 3-year transition period is under negotiation. Anyhow, our evaluation has been based on the rules and the ESA rule interpretations that were used in the last notification process prior to the revision of 1.1.2000.

3 Indicators for the regional policy support area

At each revision of the regional support area, the Ministry of Local Government and Regional Development makes a judgement on which municipalities that should be included, according to the regional policy aims of the zone division. As a tool for the judgement, indicators are set up which should reflect geographic conditions, demographic conditions, the labour market, and income situation. The indicators are weighted together to give each municipality an index value. A zone map based on this index value alone will however often give a scattered pattern. Then, it is supplied with qualitative judgements, in order to get more compact zones and to take care of relevant local conditions not reflected in the indicators.

The indicators used in the last revision per 1.1.2000, and the used weights, are the following:

Geography	Centrality	0,30	
	Population density	0,10	
	Share of population living in dense settlements	0,10	0,50
Demography	Population growth	0,15	
	Share of population in age 18-30	0,05	
	Share of population being women in age 20-39	0,05	0,25
Labour market	Unemployment share	0,10	
	Share being disabled	0,05	0,15
Income	Income per tax payer	0,10	0,10

Geographic indicators

The centrality indicator used is the four level classification of municipalities made by Statistics Norway, based on the size of the greatest centre to be reached within commuting travel time spans. 203 of the 435 municipalities were laid in the lowest category (weakest centrality) while 104 municipalities were in the highest category, giving a rather rough division. We have substituted this indicator with an 11-category division made by NIBR, giving a sub-division of the Statistics Norway indicator.

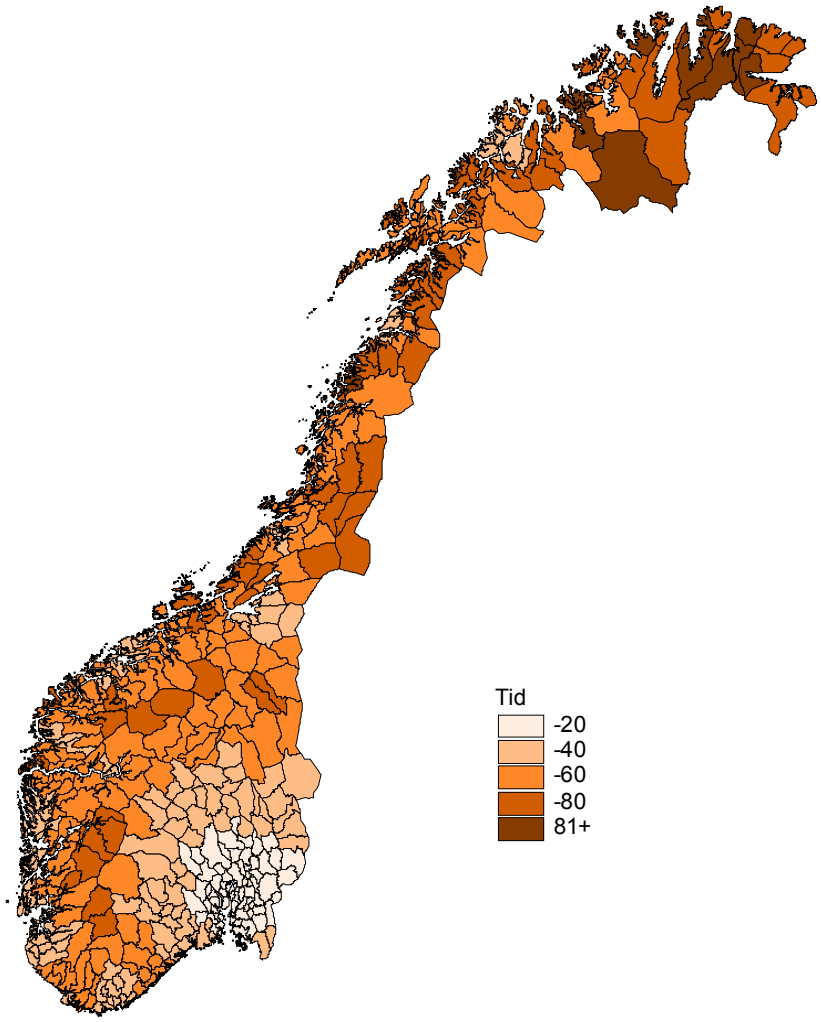
At the last revision, the Ministry transferred the centrality indicator levels to the index in a way giving all the 203 municipalities in the weakest category the lowest extreme value on the scale (and the 104 in the highest category the opposite extreme value). The effect was that this indicator got a much higher de facto weight compared to the other indicators with a continuum on the index scale. In our calculation, we gave the 11 categories an index representation in the middle of the interval of the analogue continuously distribution.

Both centrality indicators reflect the communication distances to centre of different size, thus primarily capturing the regional centre-periphery dimension. The centre-periphery dimension also has a national aspect. A supplementary indicator reflecting the communication distances

to the capital area and main economic centre in Norway is therefore needed. The need for such an indicator is underlined by the fact that ESA used a.o. transport costs to the capital as an element in generating accepted support levels for transport grants.

Such an indicator may be defined in different ways. We were looking at freight costs, road distances, travelling costs and travelling time. The three first mentioned indicators were strongly correlated. We found travelling time to be the best indicator. Ticket costs may of course be of importance, but often the time will constitute the most important cost element.

The travel time indicator used the principle of shortest travel time, which means travelling by car in the area within 3-4 hours from Oslo and air travel for the rest of the country. Access and egress times to airports are included. The travel time indicator map reflects the location of airports in Norway.



Map 2. Travel time indicator (most distant municipality = 100).

The indicator has a certain resemblance with a sheer distance indicator. However, regression analysis shows that the travel time indicator to a higher extent than the distance indicator is correlated with the type of problems that are supposed to be linked to peripheriality.

The centrality indicators are even higher correlated to the problem indicators. Thus we can conclude the problem indicators really reflect *regional* problems. However, the level of correlation provides an argument for keeping accessibility and centrality as elements in the weighted indicator.

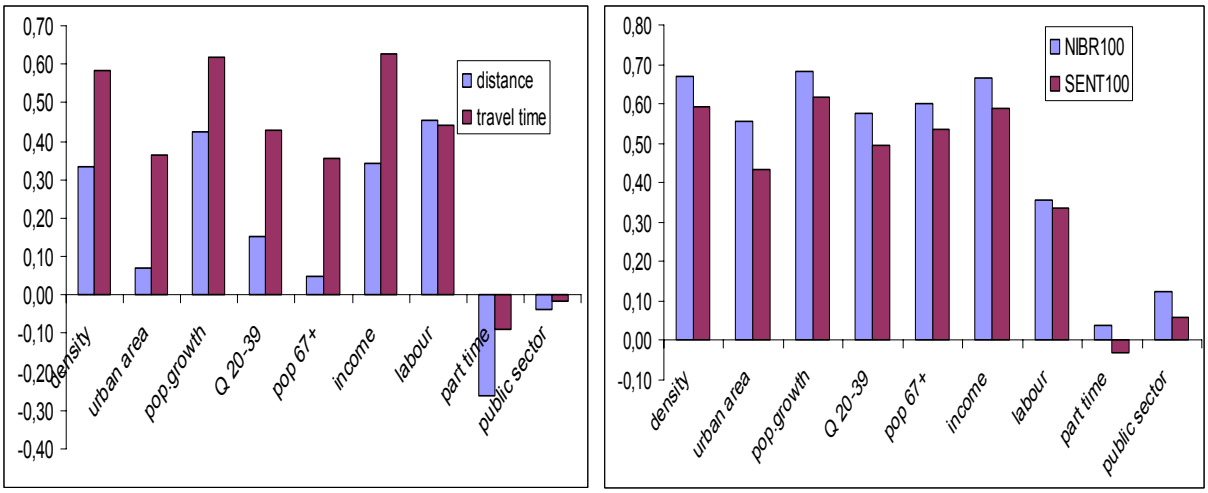


Figure 1. Correlation; "regional" problems by accessibility and centrality.

The share living in dense settlements were found to be of weak relevance regarding the periphery oriented regional policy aims. In some central suburban areas many people live in scattered small houses, giving low share in dense settlements. On the other hand, peripheral municipalities with low total population densities may have most of the population in several small but dense settlements. The industrial structure will here be of importance; fishery areas have more dense settlements than agricultural areas, these differences being of nearly no importance regarding availability of centre services. Therefore, this indicator was dropped.

Demographic indicators

Population growth (or decline) is an important indicator for a periphery oriented regional policy which should contribute to stabilising of the settlement pattern. The historical growth is, however, not always a precise indicator for future growth. Unfavourable population structure may generate future problems more severe that those observed so far. We tried to use cohort based predictions as an additional indicator. This indicator was, however strongly correlated with the observed growth indicator. The significant deviations were found for municipalities with the highest share of elderly population. It is therefore better to reflect this aspect by an indicator showing the elderly share directly.

The two demographic structure indicators of today (share in age 18-30 and share females aged 20-39) are strongly correlated, as the nominators partly consist of common segments. The structural aspects being most important for the development of the settlement pattern is partly the elderly share and partly the share of females in the age of household establishment. Then, we kept the indicator showing the share made by female aged 20-39, but skipped the share 18-30 and used the share aged 67 and above.

Labour market and income indicators

The labour market indicators used by the last revision, were the share of unemployed and the share of disabled. They do both measure aspects of non-employment. For unemployment, registration procedures may influence the indicator. The share disabled is only partly related to labour market conditions. We found it more relevant to use actual employment as indicator, measured as share of the population in working potential ages (20-64).

Should industrial structure be reflected? Unsuccessful industrial structure constitutes an important problem for the regional development. It is, however, not easy to find a good indicator measuring unsuccessful industrial structure. Often, there are both successful as well

as unsuccessful firms in all branches, making it problematic to use branch structure as indicator. An industrial structure with only one dominant sector may also be a problem, but could on the other hand be the outcome of a successful adaptation to the local preconditions.

We decided not to use indicators reflecting industrial structure. Structural problems will visualise in the actual industrial growth pattern and the employment growth. Thus we added an indicator showing employment growth in addition to the employment share.

Average income is the only indicator of living conditions. Labour income as well as income from pensions and grants, are included. Other aspects of living conditions are often affected by public services. However, regional disparities within public services should be dealt with separately and should not influence the need for public money in other sectors. Therefore, we accept that income should still be the only indicator for living conditions. It is, however, problematic to use income per taxpayer as indicator, as this measure is strongly influenced by part time workers (as weekend jobs for pupils and students etc). Instead, we use taxable income per person aged 17 and above as indicator.

4 Indicator weighting

The indicators to be used, and the weighting given to them in the main alternative, are the following:

Geography	Centrality, NIBR-11	20	
	Population density	10	
	Travel time to capital	10	40
Demography	Population growth	20	
	Share of population aged 67 and above	5	
	Share of population being women in age 20-39	5	30
Labour market	Employment share (per inh. aged 20-64)	10	
	Employment growth	10	20
Income	Income per inhabitant aged 17 and above	10	10

Compared with the weighting used in the last revision per 1.1.2000, we have reduced the weight of geography from 50% to 40%. By changing the way to represent centrality in the index, we also avoided giving this indicator a non-intended extra weight. Our method implies a clear weight reduction for the geographical indicators. The travel time indicator represents a new aspect, while the indicator for the share living in dense settlements was skipped.

Less weight for geography implies higher weights on the aspects. Both demography and labour market are given weight expansions of 5 percent points compared to the last revision. The reason for this (i.e. no expansion for the income weight) is that the settlement pattern and regional industrial growth are today the most articulated operative aims of the peripheral oriented regional policy. For the labour market, the two indicators (employment growth and employment share) are given equal weighting.

As a basis for evaluating the effect of the different indicators, we made maps for each of them. The geography indicators, especially centrality, generate a pattern close to the map of today, which reflect the high weighting given to this indicator at the last revision.

The population indicators provide a more scattered pattern, but still a certain resemblance to the actual map. The employment share generates a deviating map. Several coastal municipalities in Northern Norway as well as inland municipalities in Southern Norway will not qualify. The reason may be that in the primary industries the employment is high but the outcome may be limited. Further, more central and densely populated manufacturing areas with employment reduction will tend to be included.

We also generated zone maps based on alternative weightings of the indicators. As long as we keep the aggregated geography weights on 40%, there are minor effects on the map from alternative weightings, both when varying among the geography indicators and among the other indicators. If the geography weight is lowered and more weight is given to employment and income, more significant effects occur. Several central municipalities are then included and some periphery municipalities with good employment conditions are excluded.

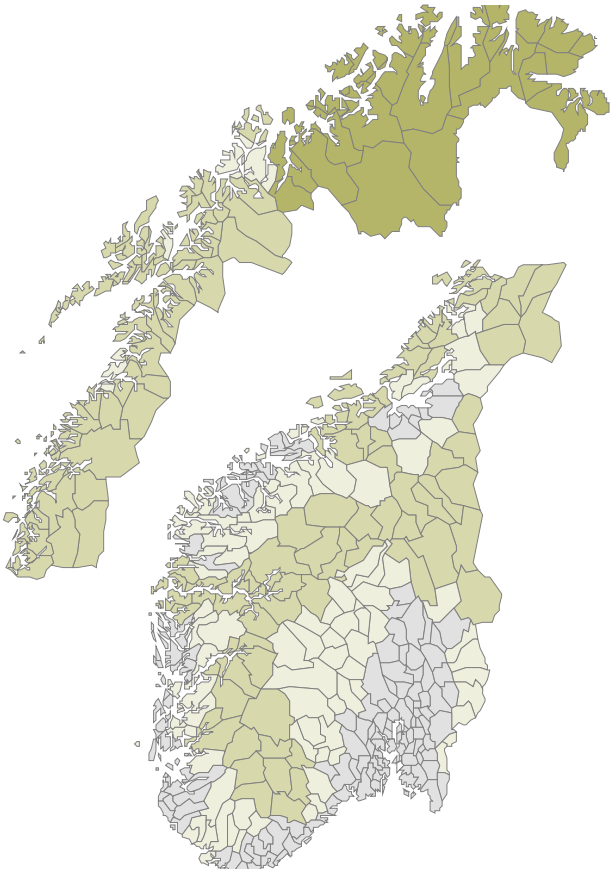
5 Generating regional policy support areas

For given population shares in the zones of the support area, the weighted index may be used to allocate the municipalities by zone. We have used the population shares of today as operating ceilings, since they will be the legal limitation given the way ESA interprets the EEA rules.

If no side consideration is allowed, larger centres in Northern Norway (Alta, Tromsø, Harstad and Bodø) are excluded from the support area, giving room for more municipalities in Southern Norway. This is in line with the results from the last revision. Due to priority given to Northern Norway in our regional policy and the recognition of the important role played by the regional centre for the development of this part of the country, these areas were nevertheless included. Given the restriction that Northern Norway should be included, a new map was generated that had close similarities to the actual zone map of today.

The existing map was generated partly by indicator analysis and partly by qualitative judgements. In the evaluation there is also a need to use qualitative judgement as a supplement to the indicator analysis in order to generate a map representing the best possible aim targeting. This judgement led us to give priority to municipalities with especially heavy transport (isolated islands), and to scale down the priority given to municipalities with easy centre access. 11 municipalities were included and 12 municipalities were excluded from the A+B+C zone due to the qualitative judgements. The result was a zone map where only 15 municipalities where given different status according to the firm oriented support zone than in the existing map.

The same method of combining indicators, Northern Norway restrictions and qualitative judgements was applied when constructing sub-divisions into zones. For the A zone, Finnmark and northern Troms were given priority for regional policy reasons. Two fringe municipalities were taken into the zone, partly because it was possible within the population ceiling, and partly because they had high scores on the indicator index calling for priority. The rest of Northern Norway were given B status, except for the three municipalities which fell out in the indicator based map, they were given status C. This taken for granted, as well as the partly judgement based definition of the A+B+C area, a new map was generated using indicators to divide Southern Norway into the B and C zones. From this map, quite some assessments were needed to make the B zone more compact. The final outcome was a map where the two existing B zones are connected, and the B-zone is also pulled towards outer Sogn (Map 3). For the D zone (i.e. outside the firm oriented support area), the EEA rules are not relevant so no evaluation or maps are made.



Map 3. Regional policy support zones.

In the ESA notification, population density is the criterion used when the support zone are to be accepted on county level. Northern Norway may be accepted on this basis. In Southern Norway, the zone is set up on the municipal level. Here, a criterion used is that among five socio economic indicators, all the municipalities must have a certain deviation from the national average. The A+B+C zone satisfies these conditions.

6 Zones of the differentiated labour poll tax

The reduced labour poll tax area should according to the Ministry be included in the regional policy support zones, thus guaranteeing that only municipalities with "regional problems" are included. An extra requirement, put forward by ESA, is that tax reductions must not exceed extra transport cost. There is therefore a need to calculate transport costs by municipality in order to define eligible areas.

Estimation of transport costs at the municipality level

Not all transport costs are eligible. Only land transport via Oslo or sea transport north of 60° N count as extra transport costs according to the ESA rule implementation. Direct export by sea south of 60° N is not regarded as a transport disadvantage, nor is feeder transport to export by sea. On the other hand, tax benefits apply to all kinds of production regardless of if it is export or not.

Unfortunately, there is no data on export and transport pattern on the municipality level. Trade statistics on county level, assumptions from a survey of firms from 1996 and distances from Oslo to the municipalities are applied in order to calculate the transport ratios (transport cost / tax reduction) at the municipality level. The procedure implicitly assumes that the export transport pattern does not vary within counties.

The transport pattern in inland municipalities will however probably differ from coastal municipalities in the same county. The latter will to a greater extent apply direct export by sea, while inland municipalities more often rely on road transport. Probably the composition of goods will also differ.

In the case of Telemark and Agder, massive direct export by sea from large firms located at the sea front, lead to low transport ratios in those counties. Inland municipalities in these counties, would probably be in a similar situation as municipalities in Hedmark and Oppland counties who are not regarded as over-compensated according to the procedure. In the absence of a new survey of firms there are at present no reliable data to confirm whether or not these interior parts of Telemark and Agder are over-compensated. Since these areas are really problem areas (high indexes), they are not excluded from the reduced labour poll tax area. The transport requirements are fulfilled with good margin from the county of Sogn og Fjordane and further north.

Limitation of the total support area

Limitation of the total support area (zone 2 to 5) is based on functional Labour Market Regions (LMR). Reasons for using larger units than municipalities are partly increased mobility and partly increased emphasis on larger robust regions in regional developments policies. Besides, as the firms are supported not according to their own location but according to the home address of the employees, a zoning dividing commuting areas might create unintended effects. The 435 municipalities are aggregated into 161 functional labour market regions.

As a starting point areas with reduced labour poll should lie within the ABC-zones. However, the use of larger units may allow for minor exceptions. If, for instance, all municipalities within a labour market region (LMR) are inside the ABC-area, except the central municipality, then the centre may also be proposed inside the designated zone of reduced labour poll tax. More often, peripheral municipalities are excluded because the entire LMR to which they belong is to be excluded. In very few cases distinctions are made between municipalities within the same LMR (only when doubt on which LMR to assign municipalities to or when the distance to LMR-centre is high).

The same weighted problem index is applied as in the case of determining the ABC-zones. The LMR index is, however, generated on the basis of the whole region instead of the individual municipalities.

Regions are ranked according to the problem index described above. Higher values indicate larger degree of problems. Regions with index-value of 45.6 or higher comprise 23% of the national population. Adding the LMRs of Tromsø (index 23) and Bodø (index 32), given priority as North Norway regional centre, will add 2.4% to the population share.

Some regions with high index-values must be excluded because the transport requirement is not fulfilled (Kongsvinger, Notodden, Risør, Farsund and Flekkefjord), and one region is included in order to achieve a continuous zone. Four regions comprise centres which are outside the ABC-zone but with all other municipalities in the same LMR are inside the ABC-zone. Three of these are proposed inside the zone of the differentiated labour poll tax, while the forth region are divided.

The exclusion of regions that did not fulfil the transport requirement, made room for inclusion of a limited number (11) of single municipalities with high index values and a high distance to nearest LMR centre. The resulting designated reduced tax zone (zone 2-5) comprise 23 % of the national population.

Differentiation into zones

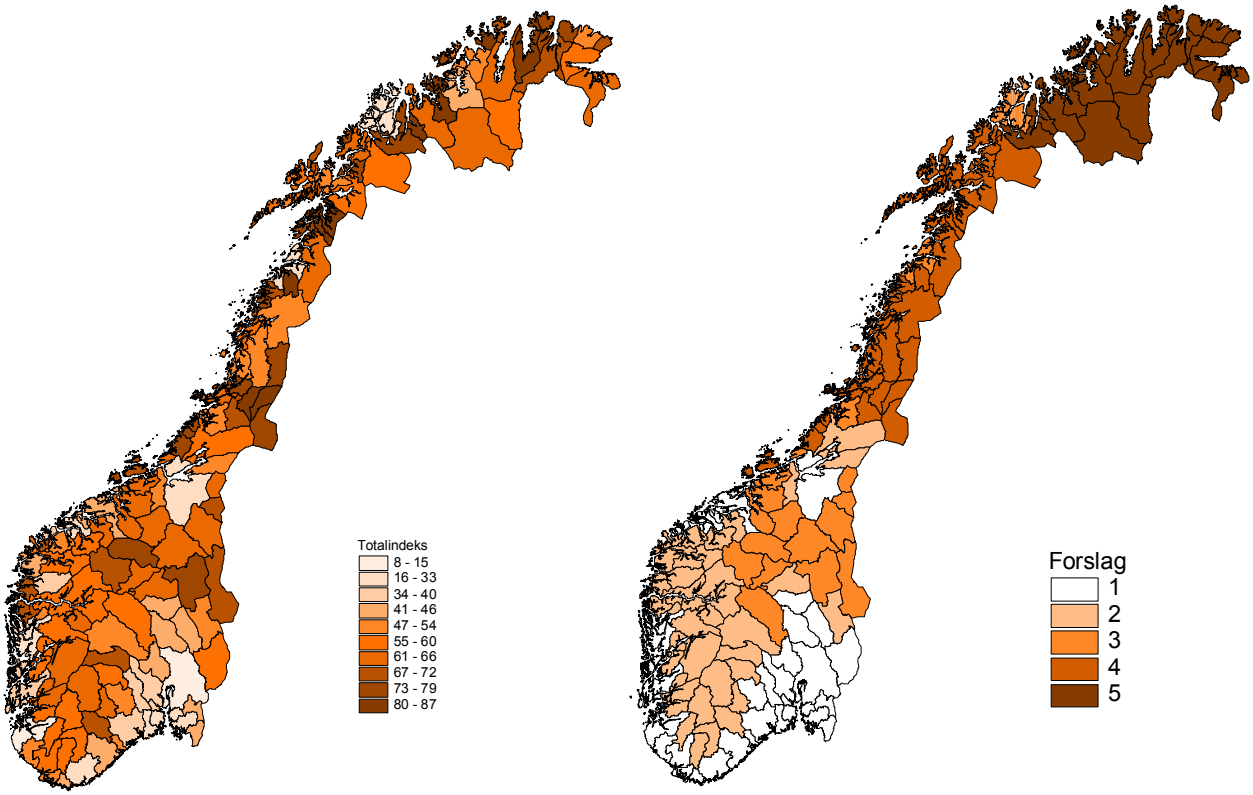
Within the area that satisfies the transport requirement, differentiation into zones should ideally be done according to the level of regional problems in the region. A mechanical procedure, without consideration of transport requirement, is shown in map 5 (left). The map does clearly show that problems are linked to northern Norway and to a certain extent to some coastal and mountain regions.

We used a stepwise procedure giving as a starting point priority to northern Norway due to consideration of regional policies and transport conditions. The counties of Finnmark and parts of Troms are proposed as zone 5 as before (with some alterations along the borderline due to the LMR criterion). Typical indexes here are also high (65-80) except in two municipalities with better population growth. The remaining northern Norway's is proposed as zone 4. Exceptions are made for Tromsø and the LMR of Bodø who are placed in zone 3 due to low index-values. Parts of Trøndelag (northern part and some island in the south) are also included in zone 4 due to high index values.

A few municipalities in Southern Norway could also qualify for zone 4 on the basis of high index values, but is placed in zone 3 in order to achieve continuous areas. The inland mountain region in Southern Norway and some coastal areas in the north-western parts are proposed to zone 3 according to their index values. The remaining area in Southern Norway within the total designated zone for reduced labour poll tax is generates zone 2.

Fiscal effects

Compared with the zone division of today, zone 3 increases at the expense of zone 4, while the other zones keep their employment share. With unchanged poll tax rates, the total subsidy amount will be reduced by 4%. By reducing the poll tax rate in zone 4 from 5.1% to 4.1%, there will be no fiscal effects.



Map 4. Labour poll tax zones, mechanical (left) and stepwise, smoothed (right)

7 Deviations between the evaluation maps and the existing zone maps

The aim of the evaluation is to comment on the suitability of the existing zone map, in relation to the aims of the periphery oriented regional policy, and taking into account the frames laid down by the EEA rules.

The map generated for the regional policy support areas and for the differentiated labour poll tax zones illustrate in our opinion the best possible targeting, given the periphery oriented regional policy aims. The deviations between these maps and the existing zone maps will then give potentials for a better geographical designation.

The regional policy zones
For the regional policy zone map, there are minor deviations between the existing map and the evaluation map. We have included 8 new municipalities in the area for firm oriented support (A+B+C), and 7 municipalities are taken out.

To some extent, this may be the effect of common judgements, designed so that the deviations are to be small. However, the qualitative judgement constitute a small part of the evaluation map. Only 7 municipalities are accepted due to judgement (among these 4 in Northern Norway), the rest are included due to indicator values.

By the last revision per 1.1.2000, 13 municipalities were included due to qualitative judgement and not indicator value, while at the same time a number of municipalities were excluded in spite of high indicator values. The reduced need for after-judgement in our evaluation indicates a better adaptation to the periphery oriented regional policy aims than the former set of indicators. However, the evaluation also is a support to the judgement used in the last revision.

The deviation between the evaluation and the existing zone map is greater when we look at the sub-division in A, B and C zones. The need for compact, unbroken zones implies that the qualitative judgement will have a broader scope compared to the indicator analysis. In the evaluation, the B zone has been given a somewhat different geographic profile (especially for Agder/Telemark and Sogn), but all such judgements will be discussible.

The zones for the differentiated labour poll tax
Three factors may create deviations between the map generated by the evaluation and the existing map:

- Application of larger regions (LMRs)
- The transport requirement being not fulfilled
- The index value being too low (due to changes over time)

The priority of Northern Norway imply that regional centres are included even when the problem indexes may be moderate. However, they sometimes will be allocated to a zone with higher tax rate (lower tax reduction) for such reasons. Totally for the whole country, 6 regions have come worse off, while 7 regions have increased their status (either from zone 1 to 2, or from zone 2 to 3).

At the municipality level the list of changes is long. 14 are better off , while 38 are worse off. 19 is excluded as transport requirements were not fulfilled. 17 of these would, however, have qualified on the basis of high index values. 19 municipalities are worse off due to low index value for their LMR. 8 of these would, however, have defended their status of today on basis of individual index values. These 8 municipalities may be regarded as “victims” of

methodology (i.e. using the bigger LMRs). 10 of the 19 municipalities that are worse off due to low index value for their LMR, are totally excluded from the designated area (goes from zone 2 to 1). Of these 8 would be excluded anyway because they were outside the ABC-area.

The 17 municipalities that are excluded because their LMR did not fulfil the transport requirement would in most cases not meet this requirement when judged individually.

To conclude, the major deviations between the evaluation map and the map of today are related to unfulfilled transport requirements and the application of larger regions when creating a new map of zones. Otherwise, the new and old maps are rather similar. This is to say that the designation of the existing map seems to be based on sound reasoning.

8 Conclusions

Main conclusions are that the designation of the existing map seems to be based on sound reasoning, thus addressing problems in remote areas. The new set of indicators seems to perform better than the old ones in the sense that they reflect regional problems and reduced the need for after-judgement. However, any evaluation of this kind cannot solely rely on stringent methods, but has to apply some sort of professional judgement as a supplement.

The resulting map depends on the interpretation of aim in the regional policy, but is still rather robust to changes in the composition and weighting of indicators. However, taking other policy priorities into account (the priority of Northern Norway) will change the result.

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