

**Summary:**

# **Regional effects of Olympic Winter Games in Tromsø 2018**

## **Background**

Tromsø with 64 400 inhabitants, situated at 70° N in Troms County, is the principal town in Northern Norway. Tromsø has been chosen among three national candidates by the Norwegian Olympic Committee and Confederation of Sports (NIF) to send an application for hosting the Olympic Winter Games (OWG) in 2018. However, before Tromsø's candidacy can be promoted to the International Olympic Committee (IOC) the Norwegian government has to approve the application for financial guarantees from the state. In 2004, the government turned down an application for a state guarantee for the possible OWG in Tromsø in 2014. Hence, the application for the 2014 OWG was never forwarded to the IOC.

## **Main questions to be addressed**

The applicant "Tromsø 2018" has prepared an application to the government for the state guarantee. The Ministry of Local Government and Regional Development has commissioned an evaluation of the application in relation to the targets of the regional policy. The overall objective of the government's rural and regional policy is to ensure equal living conditions throughout the country, and maintain the settlement patterns and central features of the potential in all regions.

The following set of questions has been formulated by the Ministry (our translation):

- Which conditions have changed since the 2014 application? Is the 2018 application in a better position than the 2014 application?
- Are the assumptions behind the socio-economic effects, as presented by the applicant, realistic?
- Are the conclusions drawn from these assumptions realistic? The assessments should address effects on development in population, employment, wealth, business and competence, and include the private as well as public sectors.
- What will be the regional effects of improved infrastructure? The Olympic Winter Games will have impacts on infrastructure investments and maintenance in the region.

- Beyond the efforts planned by the applicant, are there efforts that could further increase the potential effects of the Olympics?
- Given the objectives of the government's regional policy, is there a better alternative for the allocation of the estimated state guarantee of approximately NOK 10 billion?

## **Changes since the 2014 application**

What has changed after the Norwegian Parliament (Stortinget) turned down the previous application in 2004?

One significant change is that in 2006 the government launched its High North<sup>1</sup> strategy, which implies a higher priority of areas such as education and research, environmental and resource management, security, energy, fishing industry, tourism and industries, health, culture and equality in the northern regions. This strategy, in addition to the developments in the oil industry in the North, should strengthen the potential for effects regarding regional competence and deliveries to the expanding industries. This will not necessarily lead to long-term regional effects from OWG, but there is a greater potential.

## **Characteristics of the Tromsø region**

Comparisons between Tromsø and Lillehammer (which hosted the 1994 OWG) show that Tromsø is a larger and faster growing town with a younger population than the national average. Tromsø has a university and an airport located in the town itself. Lillehammer is part of a more densely populated region (in the South-Eastern part of Norway) where the communications by road is excellent. Tromsø on the other hand has a very low volume of commuters. In the investment phase prior to the OWG, the possibility to benefit from extra labour offered by commuters was more obvious in Lillehammer than it would be in Tromsø.

There is a tendency that people move out of Northern Norway mainly to the bigger cities in the south. Simultaneously, there is centralisation towards Tromsø from other parts of Northern Norway. Hosting the 2018 OWG in Tromsø is likely to slow down the net relocation from Northern to Southern Norway and intensify the centralisation to Tromsø.

## **Effects of hosting the 2018 Winter Olympics**

We can split the activity generated by the 2018 OWG into three phases: the investment phase, the implementation phase and the phase after the event.

Subcontractors to Tromsø 2018 have developed a plan for the construction of OWG arenas and facilities in the investment phase. The estimated costs are NOK 6 billion. In addition, the investment phase covers other investments (mainly transport infrastructure) of approximately NOK 2.3 billion. The total OWG related investments will in turn increase income and demand not only in the directly affected sectors, but also in other sectors of the economy. By use of a

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<sup>1</sup> The Barents Sea and adjacent areas

simple regional input-output model called PANDA we have estimated that the total workload of the construction industry in Troms County will increase by 40 pct. This estimate can be modified somewhat if it is taken into account that the investments partly will replace other, non-OWG-related, investments. An example of this is the athletes' village that may substitute some of the ordinary construction of dwellings in the area. The apartments in the village will be sold on the open market with a clause that the dwelling should be free to use for the athletes during the Games. Further, the 40 pct. estimate should be regarded as an upper limit, because the PANDA model has a demand side only and ignores possible capacity constraints from the demand side (e.g., possible shortage of labour to meet the demand). Hence, volume effects could be overestimated by the model. In reality, capacity constraints would increase prices.

The implementation phase will be a short and intensive period of time. The budget for this phase is NOK 10.3 billion, but that covers also some activity before the OWG start. Applying the PANDA model, we have calculated that the activities from the implementation phase will amount to an increase of an aggregate of relevant industries involved of around 40 pct. in 2016-17 and 60 pct. in 2018 in Troms County. The indirect effects stemming from the few weeks that the event is running might not be as high as PANDA suggests, considering the extraordinary high activity level during a short period of time. Still, it is obvious that the increase in 2018 can not be handled solely by firms in Troms County.

The direct, temporary employment effects of the OWG is estimated to grow from around one thousand man-years in 2012 to six thousand man-years in 2018. Ignoring 2018 because it represents an extraordinary situation, the number of temporary man-years probably reaches a maximum of around five thousand in the year 2017. As an illustration, we have assumed what the percentage of the deliveries from Tromsø, Troms County and Northern Norway, respectively, could be. The assumptions are based on today's production within the relevant industries in the respective regions. The resulting figures for deliveries to OWG during the years 2011 to 2020, are 37 pct. from Tromsø, 15 pct. from the rest of Troms County, 20 pct. from the remaining parts of Northern Norway, and the remaining 28 pct. from Southern Norway or imported from other countries. Note that this distribution depends on the chosen assumptions.

The estimated effects in the phases of investment and implementation are uncertain, but are at least based on plans that are specified by the applicant. The effects in the third phase – the phase after the Games are over – are harder to predict. In this phase effects will be smaller and depend on decisions made in earlier phases. For the local industries the crucial point is to which extent they will manage to compete with other companies for contracts. Hernes et al. (2007) illustrate the differences between two types of firms (Hernes et al. apply this concept to describe one possible scenario for large-scale petroleum-related activities in local communities). On the one hand, there are large companies where major projects like the construction works for OWG represent just business as usual. On the other hand, there are small, uncoordinated, local companies that are newcomers to projects of this size. In such a setting, it is possible that the small, local companies get a share of the benefits, but the larger companies from outside of the region will be in control. After the big event is over, the larger companies leave, and the region is left with no significant increase in employment

and competence. To avoid this scenario, the local companies could form alliances in advance in order to be more competitive and increase skills. This could contribute to regional growth in the long run, whereas a disadvantage in some cases may be that this is a less cost-efficient solution.

Secondly, the economic cycle will determine to what extent the local industries will be able to deliver services or whether their capacity will be overbooked. Thirdly, it is uncertain how many new establishments that will occur in Tromsø as a result of OWG related activity and how many of these will remain after the OWG is over. ECON (2007) has estimated the number of new permanent jobs as a result of OWG to be 4 300, mainly in tourism. Because of the uncertainty mentioned above, we have not aimed at quantification of the number of permanent jobs. However, because we have found ECON's estimate of growth in the tourism industry to be on the optimistic side, we expect the number of OWG-induced permanent jobs to be less than 4 300.

The OWG will undoubtedly generate high levels of temporary economic activity in Tromsø. For the rest of Northern Norway there will be potential temporary effects especially for industries delivering materials to building and construction. As mentioned, the long-term effects are uncertain. If long-term increases in employment mainly occur in service industries that require high-skilled labour, it is probable that growth will mainly occur in Tromsø. If the present migration pattern between counties continues, roughly half of Tromsø's population growth would come from Northern Norway. Given that Tromsø will experience the same increase in population growth rate that Lillehammer did in the years around the 1994 OWG, the extra population growth in Tromsø would be around four thousand persons. However, it is not given that hosting the OWG should have similar population effects in Tromsø 2018 and Lillehammer 1994. Since there is hardly any potential for increased commuting to Tromsø from other parts of the region, labour must come from farther away to live in Tromsø either temporarily or more permanently.

Population growth might also have an effect on employment because of the locally increased demand for goods and services. The employment related to some public services depends on the number of inhabitants, and some services are obligatory for the municipality to provide, such as schools. With the present ratio of municipal employment per person in Tromsø, an extra four thousand persons would imply approximately three hundred new municipal jobs.

An extra population growth in Tromsø will create an extra demand for housing. The OWG will contribute to the supply of housing in terms of the athletes' village, amounting to approximately 1 – 2 years' ordinary demand for housing in Tromsø. At the same time, the supply side will have parts of its capacity employed in OWG-related activity. Consequently, there is a risk of excess demand and increased prices for housing.

The 2018 OWG would most likely induce growth in the hotel and restaurant sector and other tourism-related business in Tromsø, Troms County and also Norway in general. However, a growth of 70 pct. as presented in the application from Tromsø 2018 seems to be on the higher side. The economic activity generated by OWG will cause a growth in business travel to Tromsø. Leisure travel to Tromsø due to the effect of the OWG is more uncertain. An increase can

be expected right before, during, and right after the Games. The effect will probably be moderate in the longer run, after 2020.

## **Conclusions**

A state guarantee of NOK 10 billion for the 2018 OWG in Tromsø would not be the optimal use of public funding given the objectives of the government's rural and regional policy. The funding would be too concentrated around Tromsø and limited to that area over a specific period – particularly intense in the last years prior to the event. The allocation of the funds would have been different if regional development of Northern Norway was the target. The regional effects will be small compared to the costs, and rather uncertain. NOK 10 billion for less than 4 300 jobs means more than NOK 2,3 million per new job, which is rather costly.

There are of course other reasons for hosting the OWG than the rural and regional policy. However, those aspects, such as the joy in having a spectacular sports event, are outside the scope of this report. Neither do we consider arguments against hosting the OWG due to e.g. the way it will dominate the town. Taking a socio-economic perspective, if financial guarantees are provided for the OWG despite an expected economic loss, then the benefits from the other aspects of the OWG are implicitly valued at least as high as that loss. A natural question would then be whether this can be justified by the Norwegian populations' willingness to pay. It should also be mentioned that the public funding alternatively could be allocated to other welfare goods and services.

The 2018 OWG in Tromsø would however be a positive injection for Troms County and the Northern Norway over a decade or so. The potential for this has improved since the previous application due to the government's High North strategy. But there are many uncertain factors determining the extent to which the long-term potential comes into a firm realisation. Further, the OWG would most likely contribute to enforcing the centralisation towards Tromsø. Whether this path of development is desirable is a political question.