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## The Employment Effect Of Firm Oriented Regional Support - Evaluation Of The Norwegian Snd Incentives

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## **The Employment Effects of Firm Oriented Regional Support. Evaluation of the Norwegian SND incentives.**

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### **Abstract**

Firm oriented support has for decades constituted an important element of the Norwegian regional policy, where the state offer loans, guaranties and grants for firms located in the designated areas. These incentives are operated by state agencies, where the firms have to apply for the support on an individual base.

The regional effect of these schemes has been under debate, and from time to time evaluations are effectuated in order to identify the effects generated for the net employment in the designated areas, which are defined according to national regional policy aims.

From 1994 on, systematic surveys has been undertaken where the firms are asked how the support has influenced the operations, both for the projects focused in the applications as well as for the firm. Also, questions are posed on how the firm would adjust if the application had not been accepted. These surveys have been conducted more and more regularly. Because of these surveys, it is possible to evaluate on a more scientific basis both the effect of the support by categories (support categories as well as firm categories), and also changes over time in the support efficiency. Such changes will to a large extent reflect the business cycles in the availability of credit support from the private credit market.

The paper presents the methods applied in the ongoing evaluation and experiences from earlier evaluations conducted the last decade. Special focus is laid on the additionality concept. As a rule, the employment effect of the individual projects will tend to be higher when alternative financing are expected to be available. Then, the higher the project effect will be, the lower will be the additionality of the support programme. When corrected for additionality, the best way to get the highest employment effect will be enlightened as far as the empirical material allow conclusions to be drawn.

### **Firm oriented support in Norwegian regional policy**

The concept of regional policy may have different interpretations, depending on geographical level and differing between countries. A common interpretation will be the physical and economical policy measures taken at a sub-national level or in an intra-national sub-region. Alternatively, regional policy may denote policies at a higher geographical level (nation, EU, etc.) aiming at influencing relations between regions. Such policies may include the stimulation of creative processes in weaker regions, income transfers to designated regions, building of infrastructure to strengthen communication between regions, or solving bottleneck problems (Mønnesland 1997). When we use the concept we refer to the latter interpretation.

Nationally defined regional policy has long traditions in Norway, as well as in most Nordic countries, and is founded on historical and topographical conditions as well as on rebuilding policies in the post-war years. The regional policy objectives have been integrated in many sector policy areas such as agriculture, fisheries, local government, transport and communications. In addition, a specially targeted periphery policy has been implemented to stimulate economic activity and to secure the settlement patterns in non-central areas.

In greater parts of Norway, the population density is below 20 inhabitants per km<sup>2</sup>. As a comparison, the population density in the European Union ex. Sweden and Finland is on average around 150 inhabit/km<sup>2</sup>. The special geographical conditions with small populations spread out over vast areas called out for a specially adjusted policy to meet the needs of the more peripheral regions.

After the Second World War, the national government put strong emphasis on economic growth, mainly based on heavy manufacturing industries, to meet the post-war surplus demand and to secure the establishment of the welfare state. The manufacturing industry was over-represented in central areas. These areas already experienced strong growth due to increased employment within public administration and other centre activities. The economic growth policy thus contributed to expand the regional imbalances. At the same time, some urban centres experienced congestion problems with shortage of housing, infrastructure, raw materials, etc. Regional development was explicitly defined as a special field of politics in the 1950s. The optimism of future economic growth simplified the introduction of distribution policies between regions as well as between social classes. One believed that active political planning could prevent counterproductive overheating in central regions and ensure exploitation of the resource potential in more peripheral areas. The establishment of regional policy was thus motivated both from distributional considerations and as an integrated part of a policy for planned economic growth.

The periphery oriented regional policy incentives developed gradually through the 1950s and 1960s and were mainly directed towards production. The objective was to even out growth between regions and thus promote national economic policy. Differences in productivity, disadvantages of scale, distance from factor and product markets etc. implied that investment yields were somewhat lower in the periphery. As a consequence, manufacturing industries received grants and subsidised loans to compensate for localisation disadvantages. In addition, several state-owned manufacturing units were set up in the periphery, usually in the vicinity of water power plants or metal/mineral resources.

After 1974 growth in manufactural industries started its stagnation in central areas. At the same time, national objectives for equal access to public services irrespective of where people lived, caused considerable growth in public employment in peripheral areas. Net out-

migration from peripheral areas was in decline due to both reductions in job offers in central areas and growth in public sector jobs in peripheral centres. The settlement pattern appeared to stabilise during this decade.

As new growth sprang out from know-how intensive industries and business and personal services, the strong centralising migration pattern of the 1960s re-emerged in the 1980s. The impact on the settlement pattern was greater than it had been in the 1960s due to a general fall in fertility. Thus the 1980s showed a centralising trend, not only of population growth, but also of population in itself. This centralising pattern has continued throughout the 1990s.

### **Existing regional policy schemes in Norway**

The overall objective of regional policy in Norway is to secure the main features of the settlement pattern and to develop robust regions in all parts of the country. It is common to distinguish between what is called *major regional policy* and *minor regional policy*. The major regional policy is intertwined with other policy areas such as agriculture, fisheries, transport and communications, and local government financing. The interplay between different policy areas is of great importance both for regional development and for adjusting regional imbalances. The major policies contribute to infrastructure building and supply of a reasonable amount of public services in all part of the country.

The minor regional policy, or the peripheral oriented policy schemes, consists of different kinds of industry support schemes. These schemes are limited to special designated areas differentiating in permitted support levels. There are several conditions that have to be fulfilled even within the designated region to be entitled to industry support. The support schemes are designed to function as a compensation for localisation disadvantages due to i.e. distance to consumer markets, lack of sufficient venture capital and difficulties of attaining the required human capital resources. Still, the support schemes are not supposed to over-compensate for such disadvantages and support is not to be given to projects that are not expected to turn profitable in foreseeable future.

The regional policy support schemes can be divided into separate target areas, some of which are firm oriented and some of which are of a more general character. Amongst the firm oriented support schemes we distinguish between establishment grants, investment grants, development grants, and low risk loans. The firm oriented support schemes used to include guarantee funding as well, but the use of guarantees were infrequent throughout the 1990s and were finally dismantled in 1997. For the firm oriented support priority is given to develop, restructure, and rationalise existing firms, to capital funding, to the establishment of new enterprises, to investments in technology and innovation, and to procure work places specially targeted towards women or the highly educated. These support schemes are only available through application.

Other regional policy instruments are distributed through local or regional governments. These instruments are often targeted towards developing the region and to secure maintenance of the existing settlement pattern. The differentiated payroll tax has been an important instrument for the up keeping of settlement and employment in peripheral regions. Reduced levels of payroll tax can be considered as an industry subsidy as it makes labour a cheaper input. There has been some dispute between the Norwegian government and the European Union whether the payroll tax system is in conflict with the EEA treaty. This dispute were finally solved by a decision in the EFTA Court in June 1999. Revisions were made in the designated

area in January 2000 as a consequence of this court decision, and some industry branches were omitted from the scheme..

In addition, there are national programs specially designed to meet the challenges of northern Norway, to stimulate technology and innovation in peripheral areas, to secure water supply according to regulations, to build and let out business premises in regions where fixed capital investments are risky due to non-existing secondary markets, and to promote the qualities of the periphery based on healthy and spacious living conditions deprived of the congestion and pollution problems of the greater cities.

It is the firm oriented support scheme, based on grants and risk loans, which is the subject of the evaluations commented on here. These schemes are administered by the Norwegian Industrial and Regional Development Fund, SND. Most of the resources are granted at the regional level by district offices while applications for considerable amounts are treated centrally. Depending on differences in interest rates and commercial banks willingness to offer risk loans, the fund's annually resources are usually exhausted. As long as the demand for regional support exceeds the amount granted, strong emphasis is put on selecting the projects that ex ante seems to be the more efficient. One of the more important aspects of the evaluation is to examine whether this objective is being fulfilled.

### **Recent challenges in regional policy**

The regional policy was designed at a time of optimism for future economic growth. The distinct change in the situation that came about in the late 1980s, when employment dropped in more or less all regions, led to a new debate on the legitimacy of regional policy. Future growth was expected to find place in innovative, human capital intensive business and personal services. Such businesses are most often located in central areas, either close to higher educational units/human capital intensive business clusters or close to consumer markets. Centralisation and increasing regional imbalances were gradually getting political acceptance. Although this new orientation took place parallel to a continuation of traditional regional policy, it affected the political support for regional policy as well as the strength of it. Intensified focus on urban development in combination with an increase in nation-wide industry support contributes to undermine the periphery dimension of regional policy.

Since the introduction of the EEA treaty in 1994, the regional policy support schemes in Norway has been subjugated to the same restrictions as in the EU countries. Basically, the treaty concerns enterprise support that can be claimed to contradict the principles of free trade within the European market. Such support should be abandoned unless mandated by specific paragraphs in the treaty. One such paragraph exists for regional policy support schemes. In accordance with specified criteria for levels of unemployment and income in the designated support areas, enterprise support can be applied within accepted aims and levels. The determination of support areas and confirmation of national support schemes are the responsibility of the Commission for the EU countries and of the EFTA Surveillance Agency (ESA) for the EFTA countries. Small firm support is subdued to less stringent regulations because it seldom affects the competition between member states in any significant manner and the agricultural sector is totally omitted from the treaty. The adaptation to the EU/EEA rules has led to several revisions in Norwegian regional support schemes. One effect has been a reduction in support levels in all designated areas.

The centralising trend beginning in the 1980s has continued throughout the 1990s. This has led to re-emerged congestion problems in mainly the metropolitan region, but also other

major cities. The situation in recent years has been continuous growth in urban areas with surplus demand for highly skilled, as well as trained and non-skilled workers. Consequently, there has been massive net in-migration to these regions.

The situation differs from the centralisation in the 1960s in some serious ways. One thing is that the post-war housing policy that helped secure reasonably priced housing in urban areas was dismantled at the beginning of the 1980s. Followed by stagnation in the building of new houses this has resulted in huge surplus demand for housing. In a deregulated market with more or less free price setting, the consequence has been a violent rise in prices in central areas. Another troubling consequence of the recent centralisation is connected to the fall in fertility rates in all parts of the country. Higher birth rates in peripheral areas in the 1960s helped secure population stability in out-migrating regions. Today, out-migration has become a threat to the existence of a growing number of local communities.

The smaller regional centres are further threatened by rationalisation in regionally outspread personal service companies, many of which have traditionally been under state ownership. Services like post, telecommunications, banking and insurance has traditionally been well represented in all communities (of a certain size) and has played an important role in local labour markets. These services have experienced great cutbacks in staff since the middle of the 1980s and an increasing number of regional offices are being shut down. The cutbacks of these services from periphery centres have great impact on the stability of local labour markets, in addition to diminishing the attraction of living in periphery regions. Cutbacks in national defence expenses also affect the local communities where military employment has been dominating the labour market and boosted local consumption demand.

### **Calculating the contra-factual level**

Rather often, evaluation reports are presented which includes mainly a pure description of the activity in question. Also so-called effect indicators are often described in a pure statistical manner. It is of importance to have a statistical picture of the ongoing development but by merely being descriptive one will often be rather far away from estimating the true programme effects.

In impact analyses and other types of ex ante analyses of the potential future with and without different policy actions, the available statistics will only be valid before the activities to be analysed have come into action. Then, it will be obvious that indicators of a pure statistical type cannot tell the full story about the effects of the future actions. Confusing the effects with the experienced development is something only seen in unskilled ex post evaluations, or in unskilled comments to evaluations.

The basic challenge, to distinguish between the development with and without the actions, and then to let the difference alone and not the development itself be the effect indicator, is rather similar in ex post and ex ante analysis. A schematic illustration is provided in figure 1.

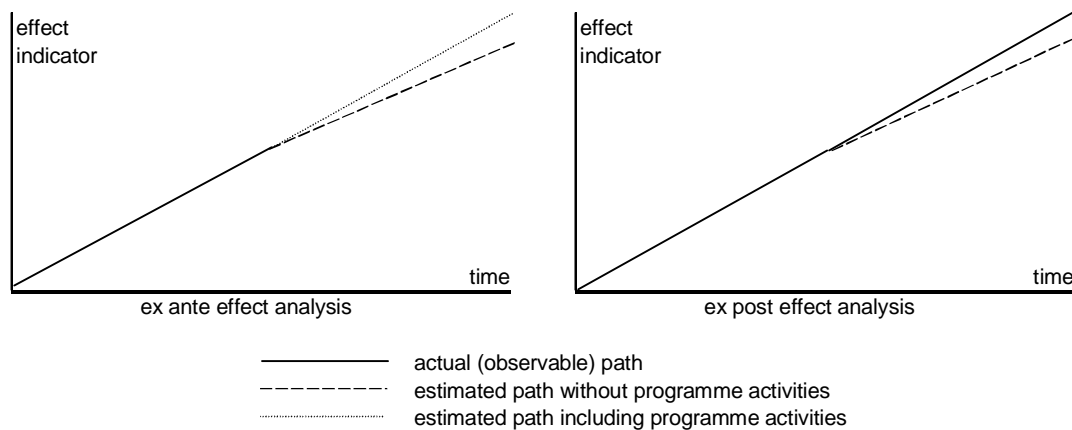


Figure 1. The reference path, the path with programme implementation, and the programme effect. Ex ante and ex post analyses.

As seen from figure 1, it is only in ex ante analyses the path including programme activities needs to be analytically estimated, this is a realised and then observable path in the ex post analyses, i.e. the evaluations.

In the ex post analyses, the actual level of today will normally be a situation where the programme activity is ongoing. Here, the analytical challenge is to estimate the contra-factual path, i.e. the development path as it would/could have been if the programme were not in operation.

In figure 2, two situations are illustrated, showing the development of an effect indicator (as employment, production, value added etc, and could be regarded for the whole economy or only for the units involved, depending on the type of the programme). In both situations, it is expected that time A, the starting date of the evaluation period, also is the starting date for the programme activity.

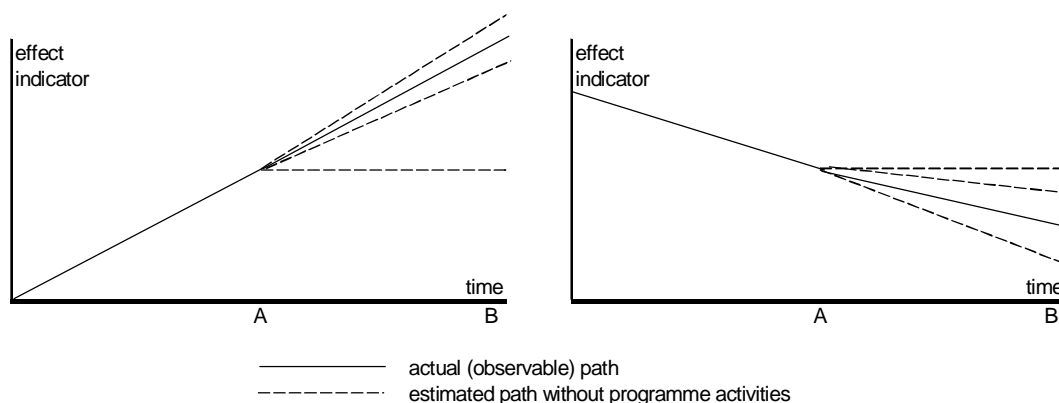


Figure 2. Growing and declining indicator development. Actual path and hypothetical alternatives without programme activities

If the evaluator do not have the concept of the reference path clear in mind, important mistakes may be made about the programme effects. In a situation with growing indicator values, the evaluator may conclude that the programme is a success. In a situation with declining indicator values, the evaluator may similarly conclude that the programme is a failure. None of these conclusions are obvious. Depending of the level of the reference path, the programme effect could in both cases be either positive or negative. Without estimating the contra-factual path describing what the non-programme indicators could have been, it is impossible know the dimension as well as the direction of the programme effect.

It is more the rule than the exception to see evaluations that do not distinguish between the total indicator development and the programme effect. Then, in a situation of general growth, most programmes will tend to get positive evaluation, and in a situation of general decline they will tend to get negative evaluation, when unskilled evaluators are engaged to do the job. Interpreted in the framework of figure 1 and 2, the unskilled evaluator will implicitly analyse as if the contra-factual reference path (the path without the programme activity) would have been a zero growth path from time A to time B. In some cases, such a situation could be close to reality. In other cases, and more often than not for regional development programmes, the path from A to B without programme activities cannot be expected as a stable one. Rather often, the underlying instability is the direct cause for the programmes to be set up. Then, this should be reflected in the evaluation techniques in order to obtain reliable conclusions.

### **Alternative ways to find the contra-factual level**

In the ex ante analysis referred to in figure 1, the method will often be to start with a reference path developed as a straightforward prolongation of the trends existing independent of the programme activities. Then, the relevant exogen input generated from the study of the programme activity is put into the model, and the model will generate the alternative path for the effect indicators when the programme is operating. In the ex post evaluations, similar methods may be used. The model may be calibrated to reflect the actual observed development. Then, the relevant exogen input generated from the study of the programme should be put into the model with negative signs, and the model will then generate the alternative path for the effect indicators if the programme had not been operating.

If a neighbour sample exists, where the programme is not in operation but otherwise the situation in the samples may be regarded as relatively similar, the contra-factual levels may be estimated from such non-programme samples by a type of shift-share analysis.

The former evaluations of the firm oriented regional support may illustrate this point (Mønnesland et.al. 1993). Here, two different approaches have been used in the evaluation of the regional investment support scheme in Norway.

One approach has been a shift-share type of analysis (Dale et.al. 1993). The scheme is operating within the designated support zone. The hypothesis was that the scheme should *cet.par.* have generated a better development within the zone than outside the zone. Differences in the industrial structure are taken care of by using the shift-share method on a disaggregated sector level. The effect of the support scheme is then measured as the higher investment intensity at the disaggregated sector level within the zone compared to outside the zone. The total effect is measured by aggregating the sector differentials. Similar measurements are also made on other indicators as production and employment.



The other approach has been a respondent-based method (Berge et.al. 1993). A representative sample of respondents is asked about the investment level, production effect and employment effects generated by the support. They are also asked about the additionality, i.e. to what degree the investment would have taken place without the support. The sample respondent figures are then expanded to the level of the total support receivers, giving the estimated effect of the support scheme on the direct receiver level. Ordinary multiplier models of the cross section type is then used to include also the secondary effects.

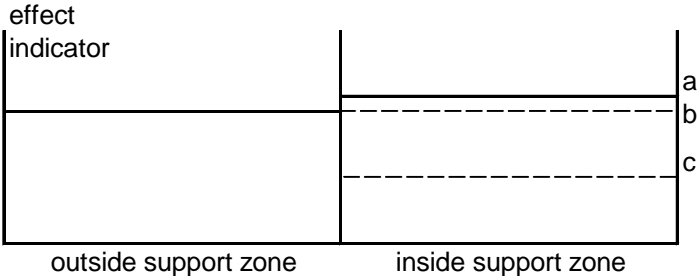


Figure 3. Estimated support scheme effects. See text for explanation

Figure 3 shows the results for the evaluation estimates. The shift-share approach found the effect to be close to zero (a-b in figure 3), while the respondent based method estimated the effect to be substantial (a-c in figure 3). In the shift-share method, the contra-factual level, i.e. the estimated level if the scheme did not exist, was supposed to be similar as outside the support zone when corrected for different industrial structure. In the respondent based method, the contra-factual level was estimated based on the respondent replies, adjusted for the additionality factor and included secondary effects.

Similar types of evaluations took place on two occasions, one in the early 1980s and one in the early 1990s, giving the same striking differences in estimated effects as shown in figure 3. At both occasions, a methodological debate occurred. Those being in favour of the shift-share method claimed that you couldn't trust respondent answers. Those in favour of the respondent method claimed that the shift-share method underestimated the disadvantageous conditions operating in the support zone.

What is then the relevant contra-factual path within the support zone? If the only disadvantage were an unfavourable industrial structure, then the b line in figure 3 could be a relevant estimate of the non-support level, and the shift-share method would have been appropriate. But as other disadvantage factors no doubt exist in the zone, and are in fact important reasons behind the generating and upholding of the support scheme, the b line will lie above the real contra-factual level. Such factors are long distance to the greater market network, weaker level of labour market at the different segments making the recruitment of the optimal working staff more difficult, weaker second hand values of production assets giving more strict credit terms on private loans, and so on. A claimed argument for the schemes is that they aim at counteracting such periphery disadvantages. Then, an optimal scale of the support scheme would be to make an exact counteraction so that line b in figure 3 could be the output of the programme, starting from a much lower contra-factual level.

It may be disputed if the estimation of level c in figure 3 is made by sufficiently good methods when level c gets over- or under-estimated etc. Nevertheless, the very concept of a contra-factual level lying below the b line seems to be justified by the nature of the scheme. Whatever could be said about the respondent based method, the shift-share method is based

on a non-justified conception of the contra-factual level making this method to generate a serious under-estimation of the support scheme effect.

### **Evaluating the effect of the firm oriented regional support scheme:**

#### **Methods adopted in the ongoing evaluation**

The firm oriented regional support scheme has been in operation for decades. The volume of the scheme has been of such a significant size that it is reasonable to assume that the firms have adapted to the existence of the scheme. The main methodological challenges will then be the estimation of the reference path, i.e. the contra-factual development showing what would have been the situation if the support scheme had not been in operation. This challenge will be illuminated by the different methods used in former evaluations of the firm oriented regional support scheme.

In most cases, the evaluations are based on questionnaires to the participating actors. They are asked about their opinion of the programme, in what way the programme has been useful for them, and often to what extent they have reached different targets in their activities. They may be asked to set up some indicator values showing the employment effect, value added effect etc. which they regard as programme dependent. The answers are then handled analytically in order to estimate the effect on a.o. employment generated by the supported projects.

Not all the supported projects are dependent of the support schemes. Therefore, to estimate the effect of the scheme, it is of importance to correct the project indicator results from the additionality, i.e. to subtract the indicator results that were not programme dependent. To do this, knowledge of the alternative options will be needed, i.e. how the project owners would have acted if the project had not been supported. This is called to check for additionality in the description below.

There may be problems connected to the validity of the answers from the project owners. Especially if a programme is ongoing and the transfers to the projects are expected to continue, a positive bias in the reported effect indicators may be expected. The experience from the evaluations is that the answers are relatively reliable if collected after the application is finally handled. Also, it is important that the questioning is handled by evaluation milieus being regarded as independent of the programme-operating unit (SND). Several questionnaire techniques are developed to deal with the validity problem. This problem may to a high degree be overcome when the evaluations are carried out in a skilled way.

One reliability problem still remains, connected to the limited knowledge of the project owners themselves. Often, the firm has only concluded that the expected result is positive without more detailed expectations on how the whole indicator set is expected to be realised. To answer a questionnaire based on expectations will often yield tentative answers. The answers will be more exact when collected ex post. However, as will be commented on below, expectation data are of importance when the additionality level of the programme is to be set up.

In the ongoing evaluation, data on the actual results from the projects are collected three years after the support was decided. Data on the expectations and data on alternative actions to be adopted if the support had been denied, are collected partly from the application forms and partly from questionnaires collected the first year after the support was decided.

The programme is on such an economic level that the production and employment effect should not be restricted to the receiving firms alone. Secondary effects are important, i.e. the general activity level generated (or upheld) in the total regional economy due to the support. It is mainly through these secondary effects the scheme is expected to contribute to a better employment and population development in the designated areas.

The method applied in the ongoing evaluation may be illustrated as a three-step procedure:

- estimate the gross effect from the supported projects
- correct for additionality to get the net effect generated by the supported projects
- calculate secondary effects based on the direct effects generated in the second step.

In the two first steps, the needed data are taken from project surveys and where register data are used to generate total population estimates. In the last step, a regional input-output model is developed to generate the secondary effects region by region.

One problem in the estimation on secondary effects is that we only calculate the effects in the project region alone. Several projects may give secondary effects in other regions, which also will be inside the designated support area, and then these effects will contribute to the success of the programme.

On the other hand, some of the projects may compete with other actors within the region. If this is the case, we will have an additionality problem that will not be covered by the applied method. It is reasons to believe that this problem is of a moderate level, as most of the supported projects have their product market outside their local region. But to a certain extent, also in external markets there may be competitors located in other parts of the support zone.

### **Accounting for additionality**

The challenge of estimating the contra-factual path is not overcome by getting valid project data and reliable project effect estimates. To find the contra-factual level, it is necessary to estimate the additionality. By this, it is understood to correct the effect estimation for what would have happened if the support scheme had not been existing.

Normally, several of the projects supported by the programmes under evaluation also could have taken place without the programme. As mentioned, investments supported by the regional support scheme could to some extent have been financed by alternative sources without the programme.

Measuring the additionality will often have to be done by questionnaires. The normal method is to include additionality questions in the questionnaire used to estimate the project indicators. If other sources, as project registers, accounting figures etc obtain the project indicators, questionnaires will still be needed to generate the additionality information.

The straightforward way to measure additionality is to ask the support receivers and/or project actors what they would have done if support was not given or they were not involved in the programme. The answer alternatives used in several evaluations (see Berge et.al. 1993, Brein 1996, Bjørnsen 1997), have used these answer categories:

- would have effectuated the project in the same way
- would have postponed the project
- would have scaled down the project
- would have cancelled the project.

The first option is given the additionality factor of 0, the two next options a factor of 0,5 and the last option a factor of 1. The method is then to multiply the estimated project effect indicator values by this additionality factor in order to find the programme effect.

The reliability of the answers on additionality questions will have some of the same characteristic as the other questionnaire collected information. The questions should preferably be asked after the project financing is settled, and/or by a milieu regarded as independent of the programme administration. It is also of great importance how the questions are formulated and what methods are used to collect the answers. As the questions are of a contra-factual character, the respondents will not always know the correct answers themselves. In most cases, however, the actors have made strategies about what to do if the programme application should be turned down.

In addition to the variance caused by the validity problem, the category division used causes another problem. In reality, the additionality factor will lie on a continuous scale from 0 to 1. It is difficult to construct answer alternatives reflecting this continuum, and if done, the respondents will probably understand such a graduation differently. For this reason, one will have to stick to the rather crude categories mentioned above. Even as the variance of the estimates might be significant, this is a better situation than using estimates being systematically biased upwards, as will be the case when additionality is not taken into consideration.

### **What information can we attain from former evaluations?**

The support schemes have regularly been put under evaluation in order to increase efficiency and to secure that the objectives of regional policy are being fulfilled. Three major evaluations took place in 1984, in 1992, and in 1996, including empirical analysis showing how the regional policy support schemes were employed, and calculating effects and economic consequences. The evaluations have put emphasis on estimating direct and indirect effects on employment, both within and outside the designated area. The results are coloured by what time-span the evaluations cover. In the 1984 evaluation effects were calculated on data from the 1970s. This time period was characterised by recession in manufactural industries in central areas, increasing public employment in the periphery, and of a decentralising migration pattern. The economic trend of the time was reflected in the results coming from the evaluation. Employment was found to rise more rapidly in peripheral regions and growth appeared mainly within the smaller and medium-sized firms. Particularly strong growth was found within the fish farming industry that experienced explosive growth towards the end of the 1970s, but employment rose in all industries inside the designated area. By use of shift-share modelling one tried to calculate how the observed activity path differed from a non-policy reference path. The reference path was calculated to illustrate the activity level without implementation of regional policy support schemes, accounting for regional differences in the industrial structure. The 1984 evaluation calculated the employment effect to be above 3 percent annually. As employment in manufactural industries were believed to fall if these industries had developed in the same manner as outside the designated area, one could reasonably assume that the support schemes had had a positive impact on employment. Approximately 1 percent of the annual growth in employment was found to stem from regional policy instruments (Bivand 1984). In addition to the shift-share analysis, the evaluation used questionnaire methods to estimate the programme effects and this method yielded far better effects, see Teigen 1984. The evaluation also stressed the importance of a

continuation of firm oriented support as the activity level in several regionally located industries were expected to fall in foreseeable future.

The evaluation in 1992 put stronger focus on questionnaire methods in addition to a shift-share analysis. It can be argued that merely considering differences in industrial structure, not accounting for localisation disadvantages, would underestimate the true effects of the support schemes. The empirical analysis of the 1992 evaluation covered the time span between 1985 and 1990 when the general economic situation was almost diametrically opposite from that of the 1984 evaluation. The second half of the 1980s was a period characterised by strong centralisation based on growth in know-how intensive industries and business and personal services. Industries that traditionally were strongly positioned in the periphery were in decline and the growth in decentralised public employment that came on in the 1970s had come to a standstill. The regional policy schemes would thus have to counteract the strong centralising trend, whereas in the 1970s the driving forces of the whole economy were of a decentralising character. As a result, the employment effects of the regional policy incentives were not easily detectable. While one in the 1984 evaluation focused on isolating the regional policy effect from the total increase in employment, the problem in 1992 was to detect how regional policy contributed to put brakes on the general decline in regional employment.

The survey material gave information on how the receiving firms were affected by the given support. This information was used as input when modelling employment effects. As the employment effects were derived from qualitative data the validity of the results depended on the respondents incentives to give truthful answers. Grants and subsidised loans are of positive value to the receiving firms, so a natural response will be to overestimate the value of such schemes, thus bringing an upward bias into the analysis. The true employment effects will then probably lay somewhere between the results derived from the shift-share analysis and those from the survey-based analysis (as illustrated in figure 3). When calculating employment effects based on the survey material it was possible for the evaluators to account for additionality. If additionality was reported to be zero, the generated effects would consequently also be zero and no positive effect would stem from the regional policy schemes. In that case the given support would have been a waste of public money. If, on the other hand, full additionality was reported, the project would not have been implemented without public support and the total effect could fully be credited the given support. The cumulated employment effect from 1985 till 1990 was found to be close to 70 000 work places. On average this equal more than 1100 per year. In comparison, the annual effect in the 1984 shift-share analysis was approximately 900. In addition, the 1992 evaluation calculated secondary effects to be approximately half that of the direct effects, i.e. the employment multiplier was found to be 1.52. The results from the 1992 evaluation is presented in Mønnesland et.al. (1993).

The results from the two evaluations are not immediately comparable as different methodological tools were utilised. The results of the 1984 evaluation was reported to be considered a minimum net effect of regional policy in the 1970s, while the 1992 results probably lay closer to a maximum effect.

The 1996 evaluation ( Bjørnsen et.al., 1997) was mainly concerned with evaluating the effects of introducing local economic responsibility in the administration of regional support schemes. The responsibility for assignments had gradually been decentralised to the county level from the 1970s onward, while losses were handled centrally until 1994. A consequence of the former policy was that support was given to projects without sufficient prospects of

survival. In the 1980s this led to substantial losses because of crises in several typically peripheral industries. An important effect to be evaluated was how local economic responsibility affected the assignment behaviour of county granting officials. The driving hypothesis was that local economic responsibility would reduce the additionality of the support as the granting officials would turn more risk averse. The funds for regional support were limited and the county administrations showed low willingness to redistribute funds from other policy areas to cover losses from regional support risk loans. The evaluation revealed significant differences in the counties adjustment. In counties where only minor regions were included in the designated area, no significant change of behaviour could be detected. It was particularly the counties that were fully included in the designated area, but that were not getting substantial benefit from other national programmes, that changed their behavioural pattern. The general trend was that the limits for giving grants were fully exhausted while the assigning of risk loan were considerably reduced. The hypothesis of lower additionality were clearly supported by the results and losses were more than halved in numbers and reduced to approximately one third in figures. Another effect was centralisation within the designated area with less support reaching the more peripheral areas.

In 1995 the Norwegian Industrial and Development Fund initiated a yearly survey for the firm oriented support schemes. A selection of somewhere between 500 and 1000 firms within different industries receive a questionnaire one year after support is granted and then another questionnaire after three years. The surveys are designed and administered by an independent research institution. The incoming data are kept unavailable to the granting authorities in order to improve the respondents' incentives to give truthful answers. By having the opportunity of questioning the same firms of their ex ante expectations as well as their ex post experiences one gets valuable information of how the firm oriented support schemes function as well as on how the administration of the incentives can be improved. These surveys are also invaluable when the support schemes are put under evaluation. The 1996 evaluation utilised data from these surveys to examine how additionality changed over the evaluation period. Also in the ongoing evaluation, we intend to base the effect study on this material.

It is the questionnaire method combined with empirical statistics that is used in the ongoing evaluation of the regional support scheme. The gross project effects are estimated by observed figures on employment development during the first three year of the project period (which for most project will be close to the total project period), analytically adjusted by using respondent answers on the project effect on the total employment growth of the firm. This firm based employment estimate is then corrected by additionality adjustment in the way mentioned above. Finally, this net employment effect in the supported firms is taken as input in the regional input-output model to calculate the secondary effect for the non-supported firms in the designated areas.

### **Picking the winners**

The concept of additionality set the focus on a problem related to the public support schemes which often seems to be neglected.

Following a straightforward way of thinking, the programme will be more successful the better results are recorded from the supported projects. The challenge for the bodies handling applications should be to pick the winners, to select among the applications in order to spend the limited resources on the projects where the results on employment, value added etc. are expected to yield the highest levels.

The firm oriented regional support scheme consists of both loans and grants, and rather often these elements are combined in the support package given to the individual project. Due to the grant element, most firms would appreciate such money gifts, even in cases where the support is not a precondition for the project to be realised.

Normally, the better the economic potential will be for a project, the easier the project may find the needed financial resources from the private capital market.

If the programme adopt a strategy where they try to pick the winners, to allocate the money to the projects where the expected returns are the best possible, then the programme may record a high gross effect at the firm level, but the additionality will often be close to zero.

On the other hand, the additionality will be high for projects that are highly risky, or with a weak economic return. Here, the expected gross effect on the firm level will be moderate, but the additionality will be high.

Rather often, evaluations only look at the gross effects and are neglecting the additionality aspect. Programmes which is competing with the private capital market, in the way that they are serving the same type of projects, will often obtain good evaluation records for such a reason. In reality, however, such a programme may be skipped without great effects on the industrial development, as the private capital market may take over the role without greater difficulties.

The legitimacy of public programmes should be to take up activities that otherwise would not have been implemented, i.e. where the additionality is high. For the regional firm oriented support, this should imply to support projects with a positive expected return but where the risk is too high to be accepted by the private capital market on normal interest conditions. Then, to be a useful scheme, the cost will have to be a somewhat higher loss rate than is accepted in the private capital market. Alternatively, the scheme will also have legitimacy as far as it is directed into segments where market dysfunction exists in the private capital market. Such dysfunction exists a.o. if the private financial institutions lack proper knowledge of peripheral regions and for that reason they act too restrictive towards firms in such regions.

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