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## Measure for measure

### A ROBUST APPROACH TO THE ASSESSMENT OF ECONOMIC IMPACT

*Economic impact studies have become an important tool for policy-makers and business. Carrying out these studies can, however, be difficult. Frontier has carried out a range of impact studies for government and business, and in this bulletin we outline the key factors to take account of to ensure studies are both effective and credible.*

There has been an increasing focus on economic impact studies over the last decade. Within the public sector, impact studies have become an important tool for delivering evidence-based policy. Within the private sector, there is a need to demonstrate the wider benefits companies bring to local communities, in response to a growing consumer interest in the behaviour of business.

To meet these objectives, impact studies must be done well. All of the activity's benefits and costs must be taken into account and measured. Developing accurate measures of costs and benefits is difficult. There are many approaches to developing the evidence base, and choosing the right one is critical.



Frontier has carried out impact studies for both government and businesses. This bulletin sets out Frontier's approach designed to ensure that such studies yield robust results.

To carry out a successful study, it is vital to: i) understand what you are trying to measure; ii) understand which groups are likely to be affected; and iii) think about the best approach to developing evidence on the costs and benefits facing each group.

### NOW YOU SEE IT, NOW YOU DON'T

The first step is to be clear about what you are trying to achieve. Put simply, in measuring the impact of an activity we are trying to understand what would happen were it not to exist, or were it to be terminated. This somewhat counter-intuitive approach enables us to identify the unique benefits of an activity.

For example, consider a study to measure the employment effects of a development providing 1,000 jobs. To understand the true employment effect, we ask what would happen if the development were closed down. In the short run, 1,000 people would be unemployed. However, over time another firm might move into the area, or existing firms might expand and employ some of the unemployed. The unique benefit of the development is therefore the employment it brings, less the employment that would have taken place in its absence. The same is true for any impact we try to measure. We need to arrive at an estimate not of the gross impact of any activity, but of its net impact.

When seeking to arrive at the net impact, it is important to look for:

- leakages – costs or benefits outside the area directly affected by the intervention;
- deadweight – costs or benefits that may at first sight be ascribed to the intervention, but would in fact have existed without it;
- substitution – costs or benefits that are replaced by those associated with the intervention; and
- displacement – costs or benefits occurring elsewhere that ceased.

The relevance of each will depend on the individual case. If we are measuring an intervention's impact on a local area, it will be necessary to allow for leakage of its effects to other parts of the country - for example, participants in a regional skills project may leave to find employment elsewhere.

Deadweight loss, substitution and displacement are more likely to be important in assessing the impact of interventions on the national economy. For example, a national R&D programme may absorb existing R&D activities. A regional R&D subsidy may encourage companies to move their R&D activities from one area to another.

This highlights an important point about impact studies. From a policy perspective, knowing "where" as well as "how much" is important. To analyse geographical impact, we use supply chain analysis to map the effects of the intervention. This helps to show where an intervention is having an effect as well as how big this effect is (as the farming example in the first box illustrates).

### FARMING OUT REFORM

In a recent project for the Department for Environment, Food and Rural Affairs (Defra), Frontier analysed the impact of reform of the Common Agricultural Policy on the wider economy. Defra particularly wished to be better informed about the likely impact on the 42 Public Service Agreement districts that had been identified by the department as making up economically weakest quartile of rural areas.

Frontier's approach was to:

- develop a detailed mapping of the supply chains in the agricultural sector;

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- seek to understand the relationship between farm production and other businesses in the sector (i.e. farmers' suppliers, and business customers); and
- map the likely effects of changes in farm production on the employment and output of other businesses in the agricultural sector.

This allowed us not only to estimate the likely overall effect of changes in farm production on different ancillary businesses, but also to understand how big these effects would be in particular geographic areas. This showed that even small changes in farm production could have large impacts on some ancillary businesses.

### TAKE THREE WAYS

The need to “take everything into account” may make the task seem endless or impossible. So it is important to apply some structure to the problem. Frontier has developed a robust approach to measuring net economic impact. This focuses on three ways in which an activity, or intervention, can have an impact:

- on firms that are directly affected by the activity;
- on people who use the product or service (consumers); and
- on people or firms that are affected indirectly.

To take each of these in turn: an intervention will usually have a direct impact on some businesses – i.e. the first round effects that arise solely from the impact of the intervention on the recipients. For example, consider a grant to help a manufacturer increase its capacity. The manufacturer may now spend more with suppliers and increase employment. As spending and employment can be readily observed, it is not difficult to arrive at measures of the total level of impact for this manufacturer.

To arrive at the estimate of net impact, we have to take account of what would have happened without the grant. For example, if the manufacturer receiving the grant would have undertaken some expansion (but not as much) without the grant, then the expenditure and employment effects must be scaled back. Additionally, it is important to identify whether the new employees were previously in employment, or were unemployed. Only new employment (i.e. a reduction in unemployment) should be counted as part of the impact.

It is also important to capture consumer effects. Take an example of a new store. Consumers in-store expenditure provides a minimum measure of (gross) consumer value for the additional activity. However, measuring the direct impact on consumers is less straightforward in the case of a government intervention. This is because consumers typically do not pay directly for publicly provided services (although they pay indirectly through taxation). Consequently, there is rarely an available measure of direct consumer benefit. The challenge is to find alternative ways to assess consumer value.

These include consumer surveys to identify consumers' willingness to pay, and methods designed to provide indirect measures of consumer value. Consumer surveys can provide detailed information, but robust results requires considerable time and resources to be spent on the survey design and implementation.

When this is not feasible, an imaginative approach is needed to identify other sources of information on consumer benefit. For example, when looking at publicly provided services, one could use data on take-up rates or complaints as indicators of consumer satisfaction. This can be supplemented with case studies and qualitative analysis. The second box describes Frontier's approach to measuring the impact of the BBC's services in the nations and the regions.

### VIEWING VALUES

Frontier was asked by the BBC to examine the economic impact of its services in the “nations and regions” of the United Kingdom. To do this, we had to measure the value its services provide to its audiences. Because the BBC does not charge directly for its services, it is difficult to measure this directly.

We focused on information the BBC held on consumer behaviour to identify whether audiences valued regionally-tailored services. We grouped evidence according to whether it was qualitative or quantitative (based on audience reach and share data). To measure overall consumer value, we gathered similar evidence for network (UK-wide) broadcasting services. We then compared the two to see whether viewers valued regionally tailored programming over more generic (UK-wide) programming. This provided a strong evidence-based description of the value consumers attach to regional and national services. We found strong evidence that consumers value regionally-tailored programming, such as news, social affairs and, current affairs programming that is reflective of the viewers’ region.

### WHAT ABOUT THE REST?

The framework has had a third category of effects: the impact an intervention has on firms and consumers that neither produce nor consume the service directly. These can too easily be overlooked, leading to an underestimate of economic impact.

There are two types of indirect effect to be considered here: *second-round effects*, and *externalities*.

Second-round, or “multiplier”, effects are those that flow from the further actions of those immediately affected by an intervention. For example, if a business hires 1,000 extra workers, their earnings will lead to increased expenditure, which in turn provides sales opportunities for other businesses, and may create more jobs.

Plainly, if estimating even the first round of effects is difficult, measuring all the economic ripples from the original event is extremely challenging.

Such analysis requires a detailed understanding of the economy and data on a wide range of sectors. Otherwise, it requires some heavy use of assumptions. It is important, therefore, to take care when using multipliers to estimate economic impact.

Externalities are benefits (or costs) that spill over from an action or activity but are not directly accounted for in the transaction. Externalities may affect both firms and consumers. For example, an increase in local retail sales may have the positive indirect effect of making streets safer, or the negative indirect effect of making them noisier.

Indirect effects are often overlooked in impact studies. This is because they are hard to identify and still harder to measure. However, careful analysis of the available information may provide sensible measures of the externality. Even where this cannot be achieved, a good understanding and description of the likely externalities, and whom they affect, may be an essential part of an impact study.

### CONCLUSION

Plenty of bad impact studies are made, because good ones are not easy to carry out. The choice of the right approach is complex and critical. In this bulletin we have set out some of the key factors that need to be taken into account to ensure that studies are effective: the key is to use a case-by-case approach, and think innovatively about how best to use the available information.

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