

Summary

Due to budget restrictions, political decisions often involve conflicts between short and long-term goals, and between different groups in society. Optimally, a decision as to whether or not to adopt a public policy should be preceded by an assessment of all potential revenues from the policy against all potential costs. Decision-makers often refer to scientific evidence as a reason for adopting policies, but these statements often serve as justifications of proposals rather than careful assessments of the actual state of knowledge.

The aim of the report is to evaluate the possibilities of increasing the use of evidence-based policy in Sweden. To this end, we first define evidence as the summary of results of high-quality studies with a causal design. We then define what characterises a high-quality study and what requirements must be met for it to qualify as a study with a causal design.

A causal design states how the counterfactual outcome of being treated (the potential outcome if the individual had not been treated) by a policy is identified in data. A well-conducted experiment in which treatment and control (non-treatment) are randomly allocated allows us to identify the counterfactual outcome of being treated, by using the outcomes of the individuals not treated, or controls.

The randomised experiment has long been perceived as the best design ("gold standard") in causal analysis. However, the special standing of the randomised experiment has been challenged in recent decades. In pace with technological development, the increased availability of data and, not least, methodological development, especially in economics, the natural experiment, or quasi-experiment, has emerged as an alternative to the classical randomised experiment. Quasi-experiments have many advantages; they are not as expensive to perform and the ethical aspects are less of a problem.

In addition, undesirable behavioural effects are not a problem in non-blinded randomised experiments.

The report provides a summary of the results of Swedish randomised field experiments carried out in social insurance in recent decades. The review shows that while all the experiments were of high quality, they did also have shortcomings. They have been successful in measuring the overall effects of the interventions, i.e. those that also take into account the offer to participate in the interventions, but, in general, they do not provide an understanding of the mechanisms behind the results. We conclude that if randomised experiments are to be considered when evaluating policy, they should be able to create an understanding of the underlying mechanisms as this helps in drawing conclusions on similar policies and in other contexts.

Conditions for an evidence-based policy

There is a perception among economists that the use of randomised field experiments has increased over time and that this is especially so in development economics. This perception was probably reinforced after the decision of the Royal Swedish Academy of Sciences to award the 2019 Economics Prize to Abhijit Banerjee, Ester Duflo and Michael Kremer for “their experimental approach to alleviating global poverty”. This report sets out the extent to which randomised experiments and quasi-experiments occur in scientific publications in medicine and economics between 1999 and 2019. The picture is twofold. The number of publications has increased clearly over time, which should have a favourable impact on the conditions for a more evidence-based policy, not least because it signals increased methodological competence in the research community. However, not only are the studies with an experimental approach remarkably poorly cited, they still make up a very small proportion of all published studies. This is partly due to a sharp increase in the total number of published studies. With a general increase in scientific production, it becomes more difficult to sift “the chaff from the wheat”.

To better integrate the consideration of evidence from high-quality studies in political decisions, analysts in the central government administration need a minimum level of methodological competence. Knowledge of statistics in general and of causal strategies in particular develop the ability to think critically. To be critical to empirical studies, you need to have an understanding of how the researcher's design is solving the problem of validly estimating the counterfactual outcomes to the ones treated. This study surveyed study directors at Swedish universities about the requirements for various study programmes, primarily in the social science subjects which are the field of the majority of people working for the central government administration in Sweden. As a comparison, the survey was also sent to a study director in medicine. The review shows that undergraduate programmes in subjects such as economics, political science, sociology, business administration and journalism usually contain about half a term of courses in basic statistics. It is hard to believe that students who only take these courses can develop critical thinking about empirical analysis. We find large variation in requirements in master's and doctoral programmes. In some cases, they are based on the students' own choices regarding elective courses and the dissertation subject chosen. This also applies to the medical sciences. Economics stands out as a subject where students are given not only theoretical but also practical knowledge of quasi-experimental approaches, and this is already done at the master's level. A conclusion is that there is a significant potential for improvements in methodology in most disciplines.

Obstacles to an evidence-based policy

Finally, the report discusses factors that prevent evidence from having an impact on policy. We particularly highlight the growing interest in theories based on Critical Theory as a way of understanding society and shaping politics. Advocates of these theories share scepticism about the scientific method and the consideration of alternative explanatory models behind an event. The report uses Swedish gender equality policy to exemplify the element of Critical Theory. Writings in official governmental

documents on gender equality give clear indications that the Government has been adopting this non-scientific theory in its formation of gender equality policy. Paradoxically, this risks having negative consequences for gender equality, defined as equal conditions and opportunities for men and women.

Three proposals for evidence-based policy

Our three proposals focus on creating better conditions for evidence-based policy. They are about strengthening methodological teaching at universities and other higher education institutions, especially in the social sciences, as well as about investments in analysis and evaluation agencies with responsibility for causal analysis of high quality. Last but not least, we call for the questioning of academic authority.

Strengthen methodological teaching in social science subjects

An evidence-based policy requires critical thinking and knowledge of statistics and scientific methods. Our review shows that the undergraduate programmes (bachelor's degrees) in the social science subjects that often figure in political decision-making usually contain only half a term in the subject of statistics. There is no support that students gain an understanding of the difference between correlation and causality. Only in exceptional cases are concepts such as cause, correlation and experiments mentioned in the syllabus. Furthermore, the material taught on causal approaches at masters and doctoral level is, at best, to be regarded as superficial.

Without claiming to give a complete picture, our review shows that the requirements for the students in understanding the principles of causal thinking and design for credible analysis are low. We believe that this is central to an evidence-based policy, and that a review of the objectives of the basic courses in statistics is necessary. Students should already be introduced at this stage to experiments and thinking about counterfactual outcomes and be given the opportunity to understand the limitations that exist in the use of non-experimental data and traditional regression approaches in causal statements.

Question researchers and research

Surveys of political preferences among researchers have shown that there can be clear clusters of opinion within disciplines, not infrequently on the left of the political right-left scale. The ideological preferences of researchers may underlie the issues addressed, the conclusions drawn and the results highlighted as important, especially if there are political implications of what is being studied. We believe that questioning academic authority is necessary for an evidence-based policy.

In order to avoid the risk that interdisciplinary dogmas will have an impact on policy and to ensure, on the contrary, that decision-makers are given a relevant and fair picture of the state of evidence in a particular area, it may be worth using expertise outside the particular research area to examine the state of research. This expertise must consist of independent researchers with good methodological competence.

More analysis authorities with clear assignments needed

An evidence-based policy is achieved not by funding individual randomised experiments but by having a long-term strategy for knowledge building in different subject areas and sectors, for example by building research environments with a focus on empirical analysis. One good example of this is the establishment of the Institute for Labour Market and Education Policy Evaluation (IFAU) in Uppsala, which was formed in 1997. Almost everyone at IFAU has a PhD and the Institute's activities are of high quality.

Our assessment is that more agencies with clear assignments to evaluate the effects, and cost-effectiveness, of various initiatives would increase the conditions for evidence-based policy. The challenge is to staff the agencies with sufficient competence in causal design and analysis. Competent researchers can work on a variety of issues, provided that they are allowed to collaborate with staff with the necessary subject-based expertise. For this reason, there may be coordination gains in creating a number of major evaluation agencies as also previously suggested in a review of the Government's analysis and evaluation resources (SOU 2018: 79). In addition, the evaluation agencies should be placed in a broader research environment, since

the ability to recruit staff with the right skills is crucial for the ability to deliver a high-quality knowledge base for policy.