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CHAPTER 1

When and How Can Evidence Inform Policy?

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'The most savage controversies are about matters as to which there is no good evidence either way.'

Bertrand Russell

INTRODUCTION

When and how can evidence inform policy? There is a sense in which the answer to this question is obvious. Whatever the policy domain, few would dispute that decision-makers are inclined to make better decisions when they have the relevant factual information, understand the main underlying processes involved, and possess reliable estimates of the likely outcomes associated with the options under consideration.

For example, health policy benefits from evidence that measures how many patients are treated in each healthcare centre (hospital, primary-care centre, GP practice, etc.), that explains how the patients come to be treated in these different centres, or that estimates the likely impact on the use of healthcare services of changing the way patients pay for their healthcare. Similarly, transport policy benefits from evidence that measures the demand for journeys, or that explains how people choose their mode of transport, or that estimates the impact on those decisions of a proposed change in service.

Furthermore, it is similarly uncontentious that ongoing policy development is likely to be improved by objective evaluation of the outcomes that policies generate. This is particularly the case if policies are readily open to alteration and if there is a willingness to absorb lessons for and from other policy areas.

This potential for evidence to inform policy and to help evaluate existing policies in order to drive improvements in policy design has long been recognised. Indeed, arguments about how evidence should relate to policy are at least 250 years old. Back in 1747, the Scottish physician James Lind conducted what is widely regarded as the first clinical trial, on the effects of citrus fruit as a cure for

scurvy. Since naval power was vital to the creation and preservation of the British Empire and, at that time, more naval seamen were killed by scurvy than by enemy ships, the new form of evidence generated a vigorous policy debate, one which was not resolved for forty years (Bartholomew, 2002). The early application of evidence to health policy – and disease control in particular – has contributed significantly to the cessation of long-standing medical treatments that were damaging rather than beneficial to health.

This tradition continued to develop in the nineteenth century. In Ireland, for example, the Statistical and Social Inquiry Society of Ireland was founded in 1847 in the belief that statistics and economic analysis would provide scientific answers to the major problems of the time and in particular to the problems created by the 1840s' potato famine (Daly, 1997). The Society's journal provides a picture of the different kinds of empirical evidence that have been presented over the following sixteen decades, informing civil society and those with the power to react to the findings. For example, the papers that laid the background to T. K. Whitaker's *Economic Development* were presented to the society in the mid-1950s. Furthermore, Whitaker himself, together with other members of the society, was instrumental in establishing the Economic Research Institute in 1960, whose defined purpose was to provide evidence to inform policymaking in Ireland.[1] Ireland was not alone in this regard. Over the course of the twentieth century many governments in the developed world established organisations with the explicit aim of improving the quantity and quality of data (through their national statistical offices) and of analysis (through funding research institutes and research groups) across major policy areas. Thus, the concept of evidence-based policy is hardly new.

Yet the situation has changed since the 1990s. The digital revolution has transformed modern data systems, methods of analysis and access to domestic and international research output – greatly increasing the potential for more systematic use of evidence to inform the policy process. An identifiable movement towards evidence-based policymaking has emerged, the progress and potential benefits of which are analysed by scholars of political science and public administration. In addition, various conceptual frameworks have been developed that seek to analyse how knowledge is managed at the interface between researchers and policymakers, including the role of so-called 'knowledge brokers' (Mayer *et al.*, 2004; Magnuszewski *et al.*, 2010). Politicians, public servants, researchers, journalists, campaigning organisations and others with an interest in public affairs now place increasing emphasis on research evidence; the context is one where greater transparency and accountability are called for. Indeed, within a modern society, it is difficult to argue that the process of policymaking, together with the political and public debate that surrounds it, is not enhanced by the timely availability of relevant objective evidence.

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1   The Economic Research Institute evolved over the following decade to incorporate social as well as economic domains, becoming the Economic and Social Research Institute in 1969.

What is new in the recent period is the greater availability of high quality scientific evidence to inform policymaking and decision-making. The production of scientific evidence has expanded greatly. Where previously selective pieces of data or analysis (sometimes of dubious quality) were used to make the case for or against a particular policy action, when we speak today of evidence, and especially research evidence, we mean careful and robust analysis based on established statistical methods applied to more comprehensive data. When we refer to evidence in this chapter, we have in our minds primarily peer reviewed, high quality research evidence. This is not to say that other evidence may not also be relevant to policymaking: rather, the intention is to focus on the particular form of evidence that lies at the heart of discussions of evidence-based or evidence-informed policy.[2] This includes both quantitative and qualitative evidence; the defining characteristic must be the rigour of the approach. The expectation is that researchers supplying policymakers with objective and high quality evidence, coupled with well-informed and experienced policymakers seeking and commissioning relevant objective research, should lead to better policy decisions and, hence, better outcomes for society.

Even so, this idealised picture of the contribution of evidence to policy in a modern society is, quite simply, at odds with reality. While many researchers and policymakers[3] might agree on the benefits of using evidence as a basis for policy in principle, in practice they find it much more difficult to engineer an effective meeting of minds. Moreover, there is great variation across policy domains. When the interface between researchers and policymakers works well, it amounts to a systematic, sophisticated and efficient exchange of information and perspectives – although rarely one that is entirely without tension. When the relationship works poorly, communication is one way, effective dialogue does not develop, or the relationship breaks down, with sharply differing perspectives on either side. Researchers sometimes perceive or find policymakers to be unreceptive to relevant research, ignorant of key findings and concepts, anti-intellectual, and more concerned with managing immediate political agendas than with developing policy that will best serve society. For their part, policymakers can perceive or find

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2   We consider this distinction in greater detail later in this chapter. The key issue is whether policy can ever be truly based on evidence, or whether the evidence base must be just one factor among several that ultimately determine policy.

3   The term 'policymakers' is employed here in its broadest sense to cover all those with a responsibility for or direct influence on public policy. Those responsible include government ministers and politicians (on all sides of the House), political advisors, as well as civil servants and employees of government agencies that have a policy focus. Those who directly influence policymaking include members of government-appointed expert groups and private-sector consultants working directly for the public sector. Although the formulation 'politicians and policymakers' is often used, implying that politicians are somehow not policymakers, in our use of the term the politicians are included.

researchers to be excessively theoretical, ignorant of political realities and institutional details, aloof, driven by their own agendas and really more concerned with publishing papers than with helping to develop policy. Furthermore, professional researchers and experienced policymakers, despite being highly intelligent and very committed, frequently struggle to comprehend the view from the opposite side of this divide, let alone to benefit from adopting the alternative perspective offered.[4]

As we discuss further below, policymaking requires much more than research evidence and must take into account values, contexts (especially institutional factors), implementation challenges, risk and uncertainty. We recognise that decision-making involves balancing the findings of the research evidence with the many considerations that are ultimately outside the realm where research evidence can be of assistance.

THE AIMS OF THIS BOOK

Helping to bridge the divide between researchers and policymakers is the primary aim of this volume. Its chapters are written by researchers at the Economic and Social Research Institute (ESRI). They are based on a series of research papers that set out with the explicit intention of using research evidence to provide insight for policymakers in Ireland, as the country attempts to extricate itself from the wreckage left by a severe banking crisis and very deep recession. The eleven topics cover a range of research questions of clear relevance to Irish policymakers at this time. The studies are largely empirical, making only sparing use of theory. Policy implications are drawn with mindfulness of the constrained context in which policy decisions must be made.

Yet the purpose is not merely to inform policymakers and other stakeholders interested in the specific policy areas in question. The broader aim is to shed light on the relationship between research and policymaking, allowing themes and lessons to be drawn about the linkages between research evidence and policy. As noted above, we are concerned here with research evidence in particular; unless otherwise stated below, reference to evidence relates to research evidence. The intention, therefore, is that this collection of analyses should be instructive for policymakers, researchers and students irrespective of where their interests lie in the policy spectrum; the principles and practices discussed apply wherever bridges between research and policy need to be formed or strengthened. For policymakers, the chapters illustrate the variety of ways in which evidence can inform policy, in terms of the relevance of evidence at different stages of policy development and

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4   The extent to which research has an impact on policymaking also depends on the importance of formal policy commitments in driving or corralling the policy agenda; as discussed in Ruane (2012), in the Irish case, the commitments in Programmes for Government, budgetary policies and social partnership agreements have strongly impacted on the capacity of the Irish policy system to respond to research findings.

the range of empirical and analytical techniques that can be exploited. For researchers and students, the chapters raise issues about how best to employ data, analytic methods and scientific literature to assist the policymaking process. For both researchers and policymakers, the various analyses reveal that, even where research questions are well defined and findings are of clear relevance, the precise policy implications of the evidence remain matters of debate. They are not obvious but require careful inference and judgement. In general, the evidence allows the decision-maker to be better informed and thus raises the possibility of better policy decisions, but it does not provide the final determination between the options facing the decision-maker.

By providing a set of example studies and associated discussion, the present volume also aims to make a contribution to the growing academic literature on the relationship between evidence and policy across a range of social and economic domains. In order to do this, we explore elements of the interface between researchers and policymakers, but our focus is primarily on demonstrating how different types of evidence can inform policy.[5] As described below, while the movement towards evidence-based policy is understandably popular among many researchers with an interest in policy, it has recently been subject to constructive criticism, most notably with respect to its regular failure to recognise the limits of evidence as a basis for policy and the inadequacy of government resources to respond in policy terms to the evidence. Since the studies presented here raise issues about how much can be inferred about policy from different types of evidence, they constitute examples that can help to inform this debate.

The remainder of this chapter sets the scene for the range of analyses that follow. It describes briefly the international movement towards evidence-based policy in recent decades and argues for a broader conception than is commonly adopted regarding when research evidence is of relevance. A new schema (Figure 1.1 below) is presented for conceptualising how and at what stage evidence can inform policy development. The studies presented in the chapters are ordered in keeping with the schema. However, while emphasising the breadth of the potential contribution of research evidence for policymaking, it is also important to consider its limitations. The different policy areas covered in this book vary also in the extent to which specific policy conclusions can be drawn.

THE MOVEMENT TOWARDS EVIDENCE-BASED POLICYMAKING

While governments have to varying degrees sought to use scientific evidence in the policymaking process for many decades, even centuries, since the 1990s there has been increased recognition in many countries of the desirability and potential

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5 Coverage of the new and growing literatures on knowledge management and brokerage, and on implementation science lies beyond the scope of this chapter.

of using evidence in a more systematic way to inform policy (Nutley *et al.*, 2010). Several drivers of this movement towards evidence-based policy have been suggested. One is the weakening of the traditional left–right divide in politics during the 1990s, which arguably reduced the extent to which ideology formed the basis of policy. This was exemplified by the centrist New Labour government in the UK, which became one of the international pioneers of the evidence-based approach. It stated explicitly after coming to power in 1997 that a core aim was to base more policy on evidence and to identify 'what worked' regardless of its genesis. A number of reforms of the UK civil service followed, including published guidelines on principles and practice to be followed when incorporating evidence into policy development (e.g., UK Treasury, 2011).

A second, and probably greater, factor is the vast increase in the availability of research micro-data and associated opportunities for statistical analysis that accompanied the acceleration of computing power. Right across the social sciences, the digital revolution is increasing access to data and boosting computing power for analysis dramatically. These trends have altered the balance between theory and empirics, in favour of the latter. The result has been not only greater possibilities for researchers to measure, model and estimate the magnitudes of economic and social phenomena, but also the development of the associated empirical skills within the research community. In at least some areas – where once the standard complaint was that data did not exist to test theories – data have become available before theory has developed precise hypotheses to test. Further, the digital revolution has also made it possible to access much of the latest research evidence across the globe at the click of a mouse, via search engines, databases and web portals specifically designed to organise and disseminate high quality, peer reviewed research.

A third factor behind the movement towards evidence-based policy is the success of the evidence-based approach in medicine, which has dramatically altered policymaking and practice in the health sector. In doing so, it has also highlighted some limitations of evidence and the danger when policy decisions respond to evidence that is not robust. This experience has had a knock-on effect for social science, both indirectly through the promotion of the practical benefits of applying scientific method rigorously and directly through the sharing of techniques such as randomised controlled trials and meta-analyses. It has also drawn attention to the need for multidisciplinary approaches to generating evidence in relation to major policy issues; for example, studies on child development or ageing typically involve a range of disciplines from medicine through to the social sciences.

Finally, the drive towards more open government in many liberal democracies, often coupled with legislation on freedom of information, has increased the demand for accountability and transparency. This demand has been reinforced by individual expectations of more and better use of evidence – a product of increased levels of education and greater knowledge of how governments work in other

countries. Accountability and transparency place greater requirements on government to explain its expenditure and to shine light on how policy decisions are being (or have been) made. The focus on what factors were taken into account in decision-making has come to the fore following the global financial crisis when resources available for public expenditures have fallen and where governments need to make tough and unpopular decisions.

The rise of the movement for evidence-based policy is apparent from the setting up of organisations and events designed to promote it. The Economic and Social Research Council (ESRC) in the UK established the *ESRC Centre for Evidence Based Policy and Practice* in 2001. Also in 2001, the *Coalition for Evidence-Based Policy* was founded in Washington DC. In Ireland, the *National Economic and Social Forum* held a conference to promote evidence-based policymaking in 2005 and published an account of proceedings (NESF, 2007). The conference primarily addressed barriers to the adoption of a more systematic evidence-based approach and how these might be overcome. The view was expressed that Ireland was lagging behind the world leaders in integrating research and policy and that it needed to move on from what Gaffney and Harmon (2007, p. 7) referred to in their contribution to the conference as 'this increasingly isolated position'. Ruane (2012) contains proposals for improving the use of evidence in Ireland, which are discussed alongside some other relevant ideas in the final chapter of this volume.

Nevertheless, for all the praise and promotion of evidence-based policymaking, it is not without critics. Some have questioned the efficacy of the approach, arguing that it is naive in the face of political power (Pawson, 2006), or limited by the complexity and dynamic nature of real policy problems (Sanderson, 2009). These authors do not doubt the relevance of evidence for policy decisions, but do conclude that the evidence-based policy approach is much more limited in what it can achieve than many of its proponents claim.

Consideration of the developing international literature on the relationship between evidence and policy, coupled with the experience of putting together this volume, has led us to a balanced view of this debate. The next two sections outline this perspective and aim to provide a context for the chapters that follow. On the one hand, we contend that many interpretations of the role that evidence can play in policymaking are too narrow. They focus on the evaluation of policy but ignore research evidence's ability also to raise policy challenges and to improve the understanding of those who must develop policies designed to meet them. On the other hand, as we noted in the introduction, policymaking requires much more than research evidence. It must take into account priorities, values, contexts (especially institutional factors and legal constraints), costs and benefits, risk and uncertainty. While research evidence can sometimes contribute to a better understanding of these factors, others are beyond the reach of research evidence and involve normative considerations or subjective assessments where objective measures are not possible.

WHAT EVIDENCE CAN DO

Figure 1.1 presents a new schema designed to illustrate the range of ways that evidence can inform policy and a particular set of contexts in which evidence can be relevant.[6] We refer to our schema as the 'policy landscape'. It is not meant to represent a chronological process of policy development, nor do we claim that policy development is as orderly a process as this schema might imply. In addition, like all generalisable models, it is a greatly simplified framework, wherein complex, heterogeneous, multidimensional concepts are reduced to more straightforward unitary or unidimensional ones. For instance, policy areas such as education, taxation and criminal justice differ in many ways – not only on the dimension that we have chosen to single out (which relates specifically to how much change the policy area is currently undergoing). We highlight this dimension because it is potentially important for how evidence can and should be used to inform policy. The policy implications drawn may depend on whether a policy area consists of the oversight of a largely settled and embedded system, involves an ongoing reform process with a pre-established direction, or constitutes new territory for government. Overall, the aim of the policy landscape is to present a simplification that highlights those aspects of a complex system that are of particular interest for understanding the relationship between evidence and policy in the economic and social domains to which the chapters in this book relate.
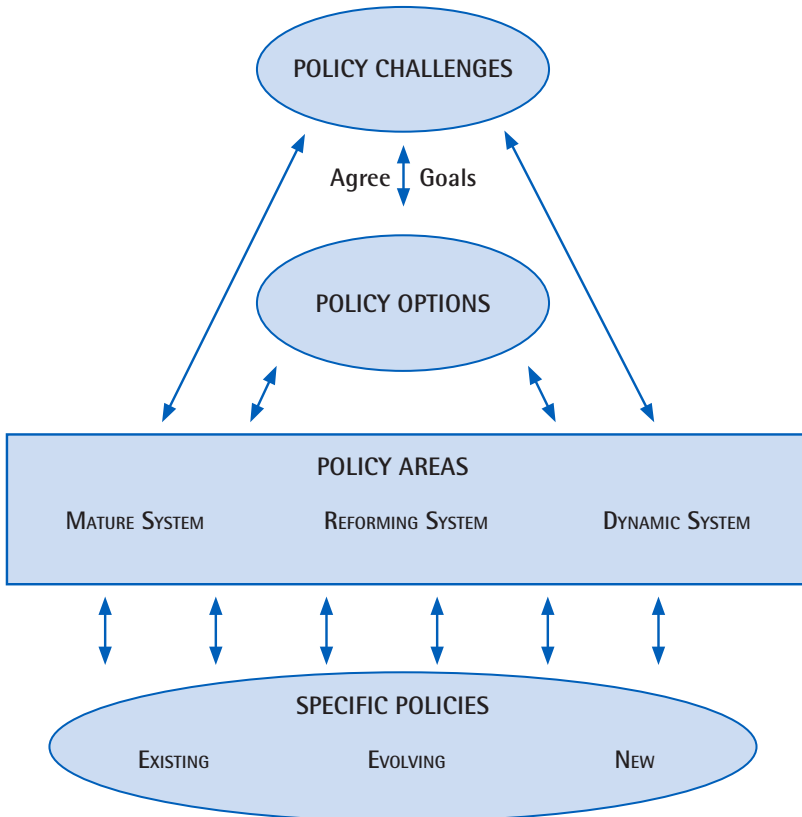
Policy Challenges

Starting at the top of the schema, an issue for policy may develop from the recognition of a new challenge (or opportunity) that government might need or be expected to meet. Such policy challenges can arise either when something in our world changes or when our understanding of the world changes. Sometimes the change and the challenge it poses arise from an event that is plain for all to see. Other times it is researchers who are the first to identify, quantify and bring such challenges to the attention of policymakers, for example, through media articles, public lectures or submissions to Oireachtas Committees. It may be a global challenge, arising for all countries simultaneously (e.g., climate change), or a domestic challenge that is largely unique (e.g., an exceptionally high proportion of young households encumbered with unserviceable mortgage debt).

   Alternatively, it may be a domestic challenge that is not new to the world but varies in its severity and timescale in individual countries (e.g., data protection, obesity), or may be led by an international driver (e.g., a European Commission policy target or actions taken by one country in respect of taxation or intellectual property policies that will affect other countries). In principle, and in these examples, evidence provided by researchers has a strong role to play in first

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6   As noted above, we are not seeking here to set out a framework for the full researcher–
     policymaker interface.

tackling such policy challenges. Key facts must be established and the extent of the challenge assessed. Where the challenge is partly international, national policy and research communities need to stay abreast with and, where appropriate, engage with international research and policy formation. In this volume we concentrate on domestic challenges – issues that are currently important for Ireland but are not necessarily as important elsewhere. But even where challenges are primarily domestic rather than global, some lessons may be drawn from international as well as domestic evidence and experience. The key questions to be considered range from the positive to the normative: 'What is the extent of the problem?', 'What processes underpin it?', 'What happens if nothing is done?', 'Can something be done?', 'Should something be done?'

Figure 1.1: The Policy Landscape

Policy Options

For policy challenges where it has been recognised that something should be done, there is often a period when the goal of policy has been broadly agreed but the policy mechanisms need to be developed. In this case, a range of alternative policy options is likely to be considered. In this part of the policy landscape there is sometimes a need for rapid decision-making, for example, when seeking to restore stability during a financial crisis. Other times, the time horizon is long and drawn out, as when dealing with a slowly developing problem such as the need to fund adequate and sustainable pensions in the face of demographic change. Ideally, research evidence can be used to estimate the likely outcomes of different policy options, including a critical assessment of the success or failure of such options (or similar approaches) where they have been implemented in other countries. More often, this ideal will be out of reach: only in certain policy areas are fully developed quantitative models specified that can be used to predict the success or otherwise of policy options in relation to agreed goals. Examples would be models of carbon emissions or tax-benefit simulation models. Nevertheless, valuable insight can be gained from research that categorises and quantifies who is likely to be affected by proposed policies, and from evidence in relation to the existence and/or strength of the causal mechanisms involved. To change outcomes, a policy must have a causal impact; an effective policy often provides additional support for a positive causal effect, or seeks to block or diminish a negative one. While in many policy areas the causal connections can be highly complex and involve many interacting effects, research has the capacity to increase understanding of the mechanisms involved and hence to make positive policy outcomes more likely. Understanding the mechanisms can be particularly important in helping to identify the possible risk of unintended negative side effects, especially where these are not the focus of the policymakers who are directly involved. It can also help to identify positive side effects that would draw attention to the value of the policy intervention. As a result, research evidence might contribute to answering the questions: 'How many people will this policy option affect?', 'Who are they?', 'How likely is this option to have the desired impact?', 'What other indirect impacts, either intended or unintended, may occur?'

Policy Areas

Over time, policy areas form. Governments develop structures for administering policy, through departments, agencies, legislation, agreements, contracts, and so on. This part of the policy landscape, which is marked by the rectangular box in Figure 1.1, differs from those marked by ovals in that it does not involve abstract ideas or processes, such as policy challenges, options or specific policies. Some debate surrounds the issue of how a public 'policy' is defined, but it is generally considered to be a guide for action at the level of principles and is hence a more abstract and potentially fluid notion than the concrete entities that characterise a

policy area. Large or powerful institutions may play a particularly important role in shaping a policy area, as may specific pieces of legislation, but other characteristics will be influential too in determining the potential scope for change. These can include people, infrastructure, jobs, reports, available expertise, data sources, and even influential historical events. Here, we emphasise a dimension on which policy areas differ that we believe to be important for the relationship between evidence and policy. Figure 1.1 distinguishes different policy areas in terms of the extent to which the area is currently undergoing change.

Some policy areas are **mature** (e.g., defence, schools). While policy changes do occur, mature policy areas for the most part rely on settled systems that have evolved over time and bear the hallmarks of how the system originally developed and perhaps previous periods of more vigorous reform. At any given time, some policy areas are likely to be less settled and instead undergoing a period of more **systematic reform**, often with a prescribed overall direction. Present examples in Ireland include public service reform and tax policy. These are long-standing policy areas that are currently dynamic because they are in pursuit of agreed overall aims – cost reduction, increased accountability and the broadening of the tax base respectively. Lastly, there are policy areas that have only been in existence for a few decades and are therefore, in historical terms, relatively new. These **dynamic** areas are often associated with advances in technology (e.g., promotion of renewable energy, roll-out of broadband infrastructure), but may also reflect changing social trends (e.g., equality policy) or significant historical events (e.g., bank-restructuring).

The distinctions drawn above are not absolute and are, in many cases, debatable. But they nevertheless assist in understanding the variety of ways that evidence and policy relate. When engaging with a mature policy area, researchers and policymakers must be particularly mindful of the fact that the canvas is not blank. Measurements of the performance of the current system and understanding of its pre-existing underlying processes (some of which themselves may be due to previous policies) constitute both essential evidence and precursors for new policies or reforms. Institutions and practices become embedded, with positive effects for learning-by-doing, for building institutional memory, for developing administrative data systems and minimising operational risk. However, this can bring negative consequences in terms of a lack of flexibility or a lack of willingness or ability to absorb new ideas. Mature systems often evolve effective ways of achieving ends that are not centrally planned or monitored, such that aspects of the system may work well without much recognition and without being fully understood. Furthermore, a more mature policy area is more likely, in practice, to involve a genuine 'system' – a whole made up of interrelated parts.

Failure to recognise this systemic dimension can have serious consequences if elements of the system are considered in isolation when examining specific policy changes. For example, a specific policy, even if backed by good evidence of benefits, may have a negative or positive knock-on effect for other aspects of the

system's performance, which may not have been considered by the researchers who produced the evidence on which the specific policy was formulated. Complex systems can also display 'path dependency', such that previous decisions alter or constrain present ones. For instance, policy on teachers' pay needs to consider not only comparative evidence regarding how pay rates and outputs/outcomes align with those in other countries, with jobs elsewhere in the public sector or with jobs in the private sector requiring similar skill levels and responsibilities, but needs also to take into account existing and historical aspects of the system. These might include historic remuneration agreements, the pattern of engagement in voluntary extra-curricular activity, measures of teacher performance, or incentives surrounding posts of responsibility or retirement. In a mature policy area, researchers' and policymakers' understandings of existing systems and their potential responses to change matter and need to be taken into account.

A policy area already undergoing reform is in some senses an easier environment for evidence to enter, provided it does not contradict a predetermined overall direction of reform (e.g., greater deregulation, increased preventative care, sustainable waste management, etc.). In such an area, there may be greater receptiveness to new information and ideas, some acceptance that the system concerned is underperforming and needs to change, and less need to tread carefully for fear of damaging the system's better features. Nevertheless, even in an already reforming area, researchers and policymakers must be mindful of unintended consequences. Accordingly, useful evidence may consist not only of research that is relevant to the pros and cons associated with specific parts of the system, but to the emergent properties of the system as a whole and how they change over the longer term. Such whole-system measures would include literacy and numeracy (education), life expectancy and quality of life (health), water quality (environment), among others. Furthermore, the process of reform itself usually requires that resources be temporarily devoted to making change happen, until the new system becomes sustainable. There is only so much reform a system can cope with simultaneously, so priorities and sequencing matter.

While some of the issues associated with changing established systems still apply, spreading policy on to a new canvas generates its own challenges, especially because of the unknowns involved. Researchers in newly developing policy areas can assist by assembling and analysing available data and studying systems in other countries, or perhaps in analogous policy areas, aiming to bring evidence of relevant successes and failures to the attention of policymakers. This requires a thorough understanding of systems in these other countries and how readily and reliably they might be successfully transplanted. Moreover, in many developing policy areas, it may be too early to evaluate the success or failure of policies introduced elsewhere. It can be dangerous to presume success merely because a more developed economy country, such as the United States or one of the Nordic countries, has taken a particular approach – countries do make policy mistakes and policy successes can reflect cultural factors that simply do not translate.

Emulation without careful contextualisation is also a potential hazard of the open method of coordination in the EU, which encourages comparative reference points as a basis for policy. There is therefore a need for caution and it is advisable to seek out independent evaluations or commentaries on the policy in the exemplar country.

A particular challenge that may arise in new policy areas is the need to communicate the rationale behind and operation of the policy to those affected, so that they understand the policy's purpose and as a result are willing to abide by new restrictions or to take advantage of new opportunities. Traditional analyses of how people respond to incentives may need to be supplemented by research that explores people's perceptions. Consequently, piloting of schemes, early evaluations and rapid evidence-gathering may bring substantial rewards in these particular areas.

Specific Policies

The final oval of Figure 1.1 relates to specific policies. Long-standing individual laws, regulations, systems and services are often subject to change, many as once-off changes rather than as part of far-reaching reform agendas. Yet apparently small changes to specific policies can nevertheless have lasting benefits or incur irritating costs, sometimes of surprising magnitude. They can also generate major reputational risks for the departments and agencies involved when they are unsuccessful. For example, the same government department that introduced Ireland's plastic bag levy, widely regarded as a successful policy, also attempted to introduce electronic voting machines, widely regarded as what might be politely called a policy fiasco. Research that can more accurately indicate the likelihood of success or failure of specific policies is obviously an attractive concept.

Again we think it useful to distinguish broad policy-intervention types: existing, evolving and new. In the case of the former, research can be undertaken to evaluate the existing policy's performance and, with appropriate methods, to identify where changes might be introduced. The analysis should identify a control group[7] to ensure that the benefits of the policy are not being over/under-estimated. Rigorous evaluation of an existing policy can be difficult where the policy is widely used and where it interacts with other policies; for example, it is not possible to evaluate one element of enterprise policy without taking into account the other policies in place and the relationships between them.

At the other end of the spectrum, where a new policy is under consideration, research can help to inform the design of the intervention and to predict the likely outcomes of different policy designs. Best practice is to design an evaluation process at the time the policy itself is being developed, as set out in the UK Treasury Magenta Book (UK Treasury, 2011). This takes the analysis beyond the

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7   The control group is one that is similar in characteristics to the group that has experienced the new policy changes but that has not been subject to these changes.

application of the simple logic model[8] in use in Ireland today to evaluate the effectiveness of programmes, by identifying a control group against which it is possible to measure rigorously the impact of the policy.

Specific policies or policy proposals are perhaps those most often considered in the context of the movement towards evidence-based policy, in the hunt for 'what works'. Thus, the *Coalition for Evidence-Based Policy* (CEBP, 2012) in the US describes its mission as 'to increase government effectiveness through the use of rigorous evidence about what works'. Better data and improved analysis methods have greatly increased the potential for researching the likely success of specific policies and policy proposals. The CEBP draws the parallel with advances in medical research through proper scientific evaluations, including via randomised controlled trials and 'natural experiments'. The idea is to measure agreed outcomes in equivalent areas with and without the policy intervention, or where that is not possible to compare outcomes before and after the intervention, trying to control for any other time-varying factors to the greatest extent possible. The increased availability of longitudinal data sets, collected by surveys or drawn from administrative records, provides the type of panel data needed for such analyses. In short, the aim is to subject specific policies to rigorous pre-testing and evaluation.

The Policy Landscape

However, the benefits of rigorous policy evaluation notwithstanding, part of the aim of this section and the policy landscape presented in Figure 1.1 is to show that the potential contribution of research evidence to policy is much broader than this. Establishing 'what works' is but one, narrow, channel through which evidence can inform policy. Returning to the top of the schema, evidence can highlight an issue hitherto unnoticed or underestimated. It can quantify and categorise the numbers and types of people affected. Research can help decision-makers to understand the most important causal mechanisms underpinning a policy area. It can therefore improve judgements of likely outcomes associated with different policy options. Good evidence can increase our understanding of systems in mature policy areas, contributing to more judicious reforms. It can inform policymakers as to the potential success of a policy that has been successful in another location but might interact with unique domestic contextual factors if introduced. Research can locate obstacles and opportunities associated with newly developing policy areas. While rigorous pre-testing and evaluation of specific policies are important, they are only part of what evidence can do for policy – and applicable to just one stage (the bottom oval) of policy development identified in Figure 1.1. Thus, the strong focus on policy evaluation should not be allowed to constrain the contribution that evidence can make to policy.

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8   The logic model is a simple framework used to evaluate the effectiveness of a programme. It links the logical relationships between the resources, activities, outputs and outcomes of a programme to assess the causal relationships between the elements of the programme.

The order of the chapters that follow is designed in accordance with the schema presented. We begin at the bottom with studies that analyse the evidence relating to specific policies and end with studies that show how evidence raises new challenges for policy and which invite a policy response. Before fitting the analyses into the schema more precisely, however, it is worth considering not only what evidence can do but also what it cannot do.

WHAT EVIDENCE CANNOT DO

Policymaking requires more than evidence, as we noted at the outset. To policy-makers, this statement is obvious; to researchers it can sometimes be less so. Social scientists have long distinguished between positive and normative analysis – how things work versus how they should work. For many normative issues, there is no amount of evidence that can be decisive for policy decisions. While evidence might be available that indicates likely outcomes of policies, in terms of impact and cost as well as winners and losers, it cannot determine whether these outcomes should be regarded as fair. Even in unusual circumstances where, for example, survey evidence reveals that the large majority regard a given policy as fair or unfair, the evidence cannot tell you whether that large majority are right to do so. More generally, however, research into perceptions of fairness (e.g., Charness and Rabin, 2002) reveals considerable heterogeneity – individuals reach different conclusions from each other about what is and what is not fair. Even where there is agreement about the fairness of a given policy, normative judgements may be required regarding the priority it should be accorded relative to other prospective policies. This judgement can be assisted by objective evidence, which might estimate the scale of expected benefits and identify the people affected, but policy-makers cannot escape normative considerations, which are not the responsibility of researchers.

Similarly, no amount of evidence can determine how much risk to take. Yet it is a rare policy change that does not involve some risk. How accurate is the assessment of risk? How can even the best-researched policy insulate itself from unintended and unforeseen consequences? What is the likelihood of such consequences? Even where risk can be assessed, a significant amount of uncertainty will remain. Uncertainty is inherent in policymaking and, consequently, so is subjective judgement about what constitutes a risk that should be borne and what constitutes a risk that should be avoided. Furthermore (and this is perhaps one of the recurring tensions between researchers and policymakers), while the researcher may be in a better position than the policymaker to understand the evidence in terms of soundness of method and validity of statistical inference, the policymaker may often be better able to judge the risk of implementing the policy to which the evidence lends support. The success of a policy may depend crucially on the context into which it is launched. Policymakers will often have a better awareness of stakeholders' and the public's likely response, greater familiarity with the

communication and managerial abilities of those tasked with implementing the change, and more imagination when it comes to envisaging potential pitfalls. To understand whether a policy is implementable and to gauge the likelihood of successful implementation requires knowledge of multiple aspects of the given policy area and judgement as to how it might respond to change. Note, however, that this unavoidable uncertainty underlines the advantages of an open and systematic process of policy review, combined with a willingness to alter policy if it does not deliver as expected. So, while the reasoning suggests that policy cannot be inferred from evidence alone, it does suggest a further need for additional evidence regarding how the chosen policy performs.

These considerations matter even where evidence is of a very high scientific standard, such as from repeated randomised controlled trials. Inductive logic is not foolproof. Even a policy that has proven to be successful everywhere it has been tried may fail for the first time in a new setting. Cartwright and Hardie (2012) delve deeper into the issue of when it is and when it is not valid to infer that a policy shown to work in one context is likely to work in another. These scholars expose the complex logical conditions required for this specific form of inference from evidence to policy to be valid. For example, a policy that has been shown to work well in some contexts may be unsuccessful in another because a key causal effect differs between the contexts. More subtly, a condition for success may be necessary but not sufficient, leading a policy to fail because of the absence of one or more necessary support factors. Research evidence can help to make the causal mechanisms involved better understood, making a sound inference from evidence to policy more probable, but any assessment of the likelihood that a causal mechanism has been misunderstood or a key support factor missed is always going to be a matter of subjective judgement.

The issues raised so far in this section (fairness, priorities, risk, uncertainty, and the complexity of the inferences from evidence to policy) introduce both normative and subjective aspects to the decisions policymakers are required to make. Thus, they limit the extent to which research evidence can be decisive for a policy decision. They arise over and above the two factors that are perhaps more often raised in this context, namely political and financial realities. Policymakers may of course be unwilling to pursue a policy backed by evidence because it is politically unpalatable or because they are not willing (or able) to fund it, regardless of the estimated return. Even so, in trying to comprehend the relationship between evidence and policy, and between researchers and policymakers, it is vital to understand that these are far from the only considerations when assessing the implications of research evidence for policy.

Some scholars who have addressed the issue go further, arguing that in the relationship between policymakers and researchers, political considerations are not the preserve of the former. This more fundamental critique of evidence-based policymaking posits that researchers are incapable of the objectivity that is, theoretically, the cornerstone of the evidence-based approach. For instance,

Boden and Epstein (2006) argue that researchers in higher education have been subject to a 'neo-liberal colonisation', which biases their thinking and restricts their imagination. Boden and Epstein use the phrase 'policy-based evidence' to describe the phenomenon of how researchers themselves can become constrained or captured by prevailing political philosophies. This criticism is not without force, as researchers need constantly to question the assumptions they bring to their analysis, but nor does it mean that researchers who strive for objectivity cannot produce evidence that is genuinely objective and informs policy. This interpretation challenges researchers to be sufficiently questioning and reflective and is far from the other interpretation of 'policy-based evidence' often employed by researchers themselves, when referring to the cherry-picking of evidence by policymakers to support predetermined policies (e.g., Tombs and Whyte, 2003).

Still, the uncertainty and subjectivity inherent in the process of inferring policy conclusions from evidence has arguably become more apparent as the movement towards evidence-based policy has progressed and lessons have been learned along the way. William Solesbury, Senior Visiting Research Fellow at the *ESRC Centre for Evidence Based Policy and Practice*, told the UK House of Commons Science and Technology Committee in 2006:

> *I think the concept that policy should be based on evidence is something that I would rail against quite fiercely. It implies first of all that it is the sole thing that you should consider. Secondly, it implies the metaphor 'base' and implies a kind of solidity, which […] is often not there, certainly in the social sciences although I think to a great degree, […] not always in the natural and biological sciences.*
> (House of Commons Science and Technology Committee, 2006, p. 45)

This report, which investigated the use of science in policymaking via interviews with a selection of professionals at the interface of research and policy in the UK, considered a range of criticisms of the evidence-based approach. It concluded that it was possible to overplay the mantra of evidence-based policy, preferring instead the notion of 'evidence-informed policy'. Despite recognising these limitations, the report nevertheless went on to make the case for greater public investment in research to assist policymaking. The committee also called for transparency regarding when policy is based on evidence, when it is the product of other considerations, and when it ignores or contradicts available evidence.

We return to the issue of how best evidence can be incorporated into policymaking and whether evidence can realistically be considered a 'base' for policy in the final chapter, since the analyses we present in the intervening chapters shed light on this very issue. For the time being, given the discussion above regarding what evidence can and cannot do, we advocate a balanced conclusion: good evidence is likely to result in better policy decisions, but good policy cannot be deduced from evidence alone.

THE RESEARCHER–POLICYMAKER RELATIONSHIP

The complexity of the issues discussed above, when research evidence is produced, policy implications are derived, and policymakers must infer how best to employ the evidence for policy, is such that the nature of the relationship between researchers and policymakers has also been subject to greater scrutiny as the movement for evidence-based policy has progressed. Various theoretical frameworks for understanding this relationship have been proposed (e.g., Levin, 2004; European Commission, 2007; Best and Holmes, 2010). Space does not permit a thorough review of these frameworks here, but the Knowledge-to-Action framework developed by Allan Best and various colleagues (and described in Best and Holmes, 2010) merits brief discussion.

These analysts distinguish three models of increased effectiveness that characterise the relationship between researchers and policymakers (or in some cases also practitioners such as teachers, health workers, regulators etc.). The most basic 'linear' model is one that views knowledge as a product. Researchers supply it; policymakers demand and consume it. Under such a model, the communication is largely one way and the focus is on the dissemination or diffusion of the research findings. In contrast, the 'relationship' model is one where knowledge comes not only from research, but from policy and practice too. That is, the relationship between researchers and policymakers is just that: a relationship. Ideas and information flow in both directions when researchers and policymakers engage in collaboration. Lastly, the 'systems' model is one where researchers and policymakers are embedded in a dynamic system that involves not only them, but other stakeholders too. The system has opportunities for communication in all directions and multiple feedback loops. Best and Holmes argue that the systems model has the capacity to be transformative and to result in what they call 'engaged scholarship'. By embedding research and researchers into the key systems of the policy area, it is argued that the likelihood of effective transference of knowledge into action is greater.[9]

Based on our own experience, these models of the relationship between researchers and policymakers represent helpful ways of thinking about the relationship and how it might be improved. Embedding good, objective, research in systems is likely to bring benefits from better use of knowledge. The emphasis on the word 'objective' is key, however. Researchers are likely to learn more and to be more influential when regularly engaged with policymakers and stakeholders, but must ensure that the relationships generated do not compromise their

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9   This 'systems view' in a policy space mirrors approaches developed by Lundvall (1992), Nelson (1993) and Freeman (1995) to conceptualise the innovation process, wherein the concept of a 'national innovation system' was developed to describe the relationship between scientific discovery and economic growth through the process of innovation. It highlighted the context in which scientific researchers and businesses operate and the institutional structures that link them.

objectivity. In other words, the researchers must not suffer 'capture' by the policy process. Independence, as well as high quality analysis, is crucial for good research (Ruane, 2012). One way to enhance independence and objectivity is for researchers to maintain close professional links with national and international research networks as well as with national policymakers and other stakeholders.

THE STRUCTURE OF THIS BOOK

This introductory chapter provides a context for the chapters that follow. While the contribution that evidence can make to policy is much broader than is often envisaged, perhaps especially by those who beat the constant drum of policy evaluation, that contribution is nevertheless limited. This needs to be recognised at the interface between the policy system and the research community. In each of the chapters to follow, ESRI researchers have specified a clear research question of relevance to Irish policy. The context for the questions addressed is one where fiscal resources are in decline and where there is great emphasis on efficient policy delivery. The researchers have sought to apply appropriate methods, ranging from a comprehensive review of international and domestic findings to fresh analysis of newly obtained Irish data. Each chapter considers the policy implications of the evidence it presents. In some cases this goes as far as to suggest entirely untried policy options. In many cases the discussion involves an evaluation of potential policy options tried or considered elsewhere, while in still others it seeks only to ensure that policymakers take decisions with awareness of relevant evidence that is informative as to quantities and underlying causes. The aim is to present the evidence and suggest its potential implications.

Each chapter begins with a brief discussion that relates the analysis to some of the themes discussed above, and specifically to the policy landscape. This is intended to draw attention to implications or telling examples relating to the relationship between evidence and policy. Some of the work presented exemplifies the issues raised above. Other elements of the research raise further questions for consideration in the final chapter, where we revisit the relationship between evidence and policy in light of the material presented.

The chapters are organised according to the schema presented above, beginning at the bottom and moving towards the top. Chapter 2 considers not only a specific policy, namely the systematic evaluation of infrastructure projects, but focuses on two particular methodological aspects of the evaluation process. In other words, it looks at evidence in favour of two specific alterations to established evaluation policy. Chapters 3 and 4 consider the evidence for introducing two specific policies that are in operation elsewhere but not yet in Ireland: loan-to-value limits on residential mortgages and pay-for-performance in healthcare. The first of these policies relates to a policy area that is developing in response to crisis, while the second is relevant to a long-established policy area currently undergoing major reform. As we will see, this distinction alters the way the available evidence

must be weighed. Chapters 5 and 6 present evidence relating to the primary aims of mature policy areas: education policy (improving the quality of second-level education) and industrial policy (boosting innovation in enterprises). The focus in each case is on understanding the role of specific policies within the unique Irish system, with implications for interpreting the lessons from international and domestic evidence.

Chapters 7 and 8 relate to somewhat more dynamic policy areas, namely, labour-activation policy and competition (and associated regulatory) policy. In both cases, there is a clear direction in which policy has moved internationally, with Ireland lagging behind developments elsewhere. This leads to a greater focus on how policy is evolving in the context of the Great Recession and on international evidence from countries that have travelled further in the given policy direction.

Chapters 9 and 10 explore further evidence directly related to the causes and impact of the recession itself. In the first case the focus is on the role played by consumer financial decision-making in the period leading up to the crisis and on the policies needed to ensure that such mistakes are not repeated. Consumers' financial decision-making is an area where knowledge is developing and new policy challenges are being identified, with some initial policy options sketched out by international researchers. Hence, most of the evidence in Chapter 9 relates to understanding the policy challenge in this area, and what this might imply for some of the initial policy responses that have been proposed. Chapter 10 explores the policies adopted by different countries seeking to achieve fiscal consolidation from an unsustainable fiscal position. It seeks to draw lessons for how to complete a successful consolidation in Ireland, exploiting case studies that appear most relevant for Ireland's current predicament.

Lastly, two chapters concern themselves with new statistical analyses that highlight policy challenges. Chapter 11 explores the extent to which private-sector labour costs adjust through market processes in a time of very high unemployment, and asks whether policy interventions can be designed that would help the labour market to clear. Chapter 12 presents an example of where analysis of new data raises potential policy challenges for Ireland, namely, the varying perceptions of public service quality across different policy domains. The marked differences between Ireland and other EU countries might prompt some to consider that policy responses are necessary, while others might judge that policy intervention either should not or could not be considered.

Thus, as the topics move from specific policies, through policy areas, to options and eventually to challenges for which policy response options are more matters of debate than development, while evidence remains highly relevant, the use of evidence changes. In the early chapters the focus is on specific policy evaluation. By the latter three chapters, the evidence no longer relates to the evaluation of specific policies or even to estimates of the likely impact of policy options. Instead, the provision of evidence informs policymakers about outcomes presently

beyond their control and aims to increase understanding of the forces that produce them.

The final chapter draws together the findings and links them back to the issues discussed in this opening chapter and to the growing international literature on evidence-based policy. Clear themes and commonalities can be identified, which vary across the policy landscape, and which give insight into the primary relationship of interest: how evidence relates to policy.

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