



Secretariat Covid-19 Working Paper Series

The Foundations of ‘Behavioural Insights’

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NOTE 1: The NESC Secretariat Covid-19 Working Paper Series is to provide timely, concise analysis for policy-makers and other stakeholders. This research work, in normal circumstances, would be used to produce NESC reports, which would be published following detailed deliberation by the Council. The Council has members appointed by the Taoiseach, comprising representatives of business and employers’ organisations, trade unions, agricultural and farming organisations, community and voluntary organisations, and environmental organisations; as well as heads of Government departments and independent experts. By putting it in the public domain earlier, it is hoped this research can help those now working on Ireland’s response to Covid-19. It will also inform Ireland’s discussion of its recovery from the Covid-19 crisis. These papers are un-refereed material and are a work-in-progress by members of the Secretariat. The authors are solely responsible for the content and any views expressed therein, and welcome any comment on these papers (email info@nesc.ie). Working papers may be downloaded for personal use only. Given the nature of the crisis, these working papers are likely to be updated on a regular basis. This will be done in as timely as manner as possible.

NOTE 2: Sections of this paper are based on or taken directly from the NESC Secretariat paper ‘The Framing of Climate Action in Ireland: Strategic Considerations’ (FitzGerald, 2018) and ‘Leading to Crisis: Decision-Making in Ireland’s Celtic Tiger’ (FitzGerald, 2016). Reproduced with permission.

As a new ESRI paper on this topic notes, recent decades have seen ‘increases in the quantity and quality of research in behavioural science. In the last ten years, this science has been increasingly applied to policy problems by governments and international organisations around the world. Consequently, there is a body of applied scientific knowledge and evidence that can be called upon in the fight against Covid-19’.¹ This is the subject of a separate working paper, *Covid-19 & Behavioural Change*.²

That research in behavioural science and the behavioural insights it provides, has its foundations in the field of behavioural economics. Behavioural economics revealed or brought to the fore three specific phenomena at play in decision-making (heuristics; loss/gain asymmetry; framing effects), phenomena which are often utilised in behavioural interventions.

Behavioural insights are based on empirical research in the field of behavioural economics which illustrates that human emotions limit our ability to make purely rational decisions, an ability which is (or perhaps *was*) fundamental to traditional (or classical) economics. Traditional economics rested to a significant extent on *expected utility theory*, a normative theory of how people should make decisions. It is based on the assumption that decision-makers are fully rational, making decisions on the basis of full information, accurately weighing up the costs and benefits of potential options, and then acting on a preference which maximises their utility. Empirical research in behavioural economics shows that expected utility theory ‘makes faulty predictions about people's decisions in many real-life choice situations’.³⁴

The limits to rational human behaviour and the powerful role of emotions in decision-making have been facets of economic and political theory for centuries.⁵ Adam Smith’s first book *The Theory of Moral Sentiments* (1759) noted that behaviour is the outcome of the struggle between what he termed the ‘passions’ and the ‘impartial spectator’. Similar concepts persisted through to the 1930s where, for example, Keynes wrote of ephemeral factors influencing markets.⁶

¹ ESRI, 2020

² See nesc.ie for all associated working papers.

³ Kahneman and Tversky, 1984

⁴ Briggs, 2019

⁵ FitzGerald, 2016: 14 and 15

⁶ Keynes, 1936: 98

It was only in the post-World War II era, particularly with the work of Paul Samuelson (1947) that the rational-actor model, with assumptions of rationality, expected utility and optimisation became embedded in theory. In the 1950s, Milton Friedman examined the realism of these assumptions and posited his 'as if' theory: actors may not be entirely rational but can be assumed to behave as if they are. It was believed that deviation from rational decisions may occur but does so randomly, is randomly distributed, that deviation had a mean of zero, and could thus be accommodated within the error term of the rational-actor model.

In the subsequent fifty years, the notion of irrationality (bounded rationality and decision-making biases) emerged to again place the limits to rational behaviour and the power of emotions at the centre of decision-making theory. Empirical research has shown that deviation from rational decisions is not random or randomly distributed, and thus cannot be accommodated within the rational-actor model's error term. Herbert Simon questioned the capacity of the human mind to formulate and solve complex problems, as assumed by rational-actor models (*bounded rationality*).⁷ Kahneman and Tversky provided 'experimental evidence that the departures from the normative ideal of expected utility theory are not just random (*decision-making biases*). They are systematic and this upsets the comfort of... accommodation of the facts with the theory'.⁸

In providing the basis for what went on to become behavioural economics (and thus, the basis for behavioural insights), Kahneman and Tversky observed decision-making under uncertainty and risk. By analysing decision-making in risky scenarios, Kahneman and Tversky demonstrated how their *prospect theory* (as opposed to expected utility theory) accounts for observed attitudes toward risk. Central to this are the biases of loss/risk aversion and loss/gain asymmetry where losses loom larger than gains and people's experiences of losing an amount of a good appear to be greater than the pleasure associated with gaining the same amount. These theories are further extended in their later studies which demonstrated how decisions 'can be described or framed in multiple ways that give rise to different preferences, contrary to the invariance criterion of rational choice'.⁹

⁷ Simon, 1957.

⁸ Hargreaves Heap, 2016: 62

⁹ Kahneman and Tversky, 1984: 341

In summary:

- **Heuristics** (mental short-cuts): Such as the availability heuristic where a decision-maker estimates probability based on the ease of which an instance comes to mind. For example, prominent reporting of the lethal nature of a disease may make it more difficult for decision-makers to conceive of a less serious outcomes for themselves.
- **Loss/gain asymmetry** (losses loom larger than gains): Where a decision-maker places more weight on a loss than on a gain of equivalent size. For example, panic buying during an emergency may be spurred by a decision-maker fearing future regret for not purchasing items when they had a chance.
- **Framing effects** (seemingly inconsequential variation in the presentation of choice impacts on preferences): For example, decision-makers may perceive medical treatment to be more or less risky depending on whether it is presented in a negative frame (e.g. 10 per cent of patients suffer side effects) or a positive frame (90 per cent of patients do not suffer any side effects).

The attachment of significant weight to irrational forces in economic decision-making presents a challenge to the dominant utilitarian, rational choice perspective on economic behaviour, whereby an economic actor balances the costs against benefits of a choice and pursues the action to maximise advantage. Whereas the rational choice/utilitarian approach ignores the motivation for choice, the behavioural approach is very much concerned with why and how the actor estimates the cost and benefits, and the cognitive process that precedes the choice. Behavioural economics (or behavioural science) has been increasingly influential since the 1980s, notably in the sphere of behavioural finance¹⁰ and so-called nudging techniques.¹¹ Criticisms and limitations are discussed in a separate working paper.¹²

¹⁰ Barberis and Thaler, 2003

¹¹ Thaler and Sunstein, 2008

¹² See www.nesc.ie

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