CHAPTER 4

Behavioural Insights

DO Hoang Van Khanh and Sharon THAM

"Humans, more than Econs, also need protection from others who deliberately exploit their weaknesses—and especially the quirks of System 1 and the laziness of System 2."

(Daniel Kahneman 2011, 413)

What Is Behavioural Insights?

Standard economic theories are based on the assumption that people are rational, i.e., self-interested agents who make decisions to maximise their utility. This assumption of economic rationality has influenced public policy designs in many countries, including Singapore.

However, in real life, contradictory to standard economics, people do not always act rationally and often make choices that do not lead to the best possible outcomes for them. We consistently overpay, underestimate, and procrastinate. We fail to understand the profound effects of our emotions on what we want, and we overvalue what we already own. Yet these irrational behaviours are neither random nor senseless—they are systematic and predictable. Humans make the same type of mistakes over and over, because of the basic wiring of our brains. (Ariely 2008)

Behavioural Insights (BI) is a discipline based on economics, psychology, and sociology. It believes that people are susceptible to influences from their immediate environment (context effects), emotions, short-sightedness and other forms of irrationality. It studies people's cognitive biases, how they make choices and behave in real life situations, and develop "nudges" (see **Box 1**)—new methods, mechanisms and other interventions—that would help people

achieve what they want. As people's behaviours are usually context-dependent, BI as a discipline and its interventions are heavily reliant on empirical evidence.

BOX 1

How People Think: System 1 versus System 2

A relevant and quick way to understand the basis of our cognitive biases is to consider the distinction between System 1 (automatic) and System 2 (in-depth) thinking.

For instance, if a ball and a bat cost $1.10 and the bat costs $1 more than the ball, what is the price of the ball? If your immediate response was 10 cents, you are probably not different from the majority who would have responded likewise. This is a result of relying on the System 1 (automatic) thinking. System 2 thinking takes longer but you will arrive at the correct answer of 5 cents.

People go about most of their daily lives using System 1 thinking, as System 2 thinking requires greater mental effort and is used only on specific occasions. System 1 makes judgements based on biases while System 2 opts for detailed calculations, relying on analytical reasoning and is less influenced by biases.

What is a 'Nudge'?

The premise of BI is that people's mistakes in decision-making are systematic. Put simply by Darling and Mullianathan (2013), when someone makes a mistake, it is important to understand the context that led to that mistake. From this, patterns begin to emerge. Instead of labelling people as irrational (e.g., consistently lazy, stupid, or hot-tempered), BI research identifies specific situations in which they may appear irrational. This can inform policymakers on what to avoid and how to nudge people to make better decisions (see **Box 2**).

BOX 2 Examples of Nudges in Public Policy

Various BI interventions have become effective in influencing behaviour. The use of choice architecture, such as defaults with an opt-out option has successfully increased participation rates in organ donation (under the Human Organ Transplant Act). Other useful nudges include framing, making use of social norms, and setting up commitment devices to lock in desired behaviour.

Singapore's Ministry of Manpower has used social norms ("96% of foreign domestic worker employers pay their levies on time") together with other nudges to encourage employers to pay their overdue Foreign Worker Levy, resulting in an estimated $1.5 million increase in fees paid (also see **Box 3**). The Singapore Workforce Development Agency introduced commitment devices such as a booklet for job seekers to set personal goals and monitor their own progress in job searching.

According to Richard Thaler and Cass Sunstein (2008), authors of *Nudge: Improving Decisions About Health, Wealth, and Happiness,* a nudge is "any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates."

However, it is easy to get confused between what constitutes a nudge and other ways to change behaviour, such as incentives, penalties and legislation. When exploring the option of using nudges, it is important to keep the following principles in mind.

First, a key feature of a nudge is that it *preserves the element of choice*. People should still be able to choose the option they desire. The difference is that nudges facilitate and make it easier for people to make better choices. For example, putting fruits at eye level in the cafeteria counts as a nudge, while banning junk food does not. Nudges also generally work better if subjects are unaware of the fact that they are being nudged.

Second, financial incentives can be considered nudges if they *do not significantly alter the economic incentives people face* (Thaler and Sunstein 2008), i.e., they have to be small relative to the effect of behaviour change. The context around the incentive, i.e., its size, when it is delivered, how salient it is made, are all critical to its effectiveness. Uncovering these contextual lessons is one of the broad goals of Behavioural Insights. For example, imposing a 10-cent charge for a plastic bag in stores is a nudge. However, slapping a $100 charge for not bringing your own bag is not a nudge. In other cases, providing a substantial subsidy for a skills upgrading course cannot be considered a nudge. But behavioural insights can help us to think of better ways to frame the subsidy, either as a discount or as a free module, to nudge more people to sign up.

Third, the *context of financial incentives* can be considered nudges. Attention needs to be paid to how large the incentives are in their specific contexts, when and how they are presented, and how salient they are. The EAST framework (see **Figure 1**) developed by the UK Behavioural Insights Team (BIT) summarises how nudges can be designed effectively—they need to be **E**asy (simple and causing least friction), **A**ttractive (attracting attention), **S**ocial (taking advantage of social norms, team spirit) and **T**imely (delivered at the right time by the right person).

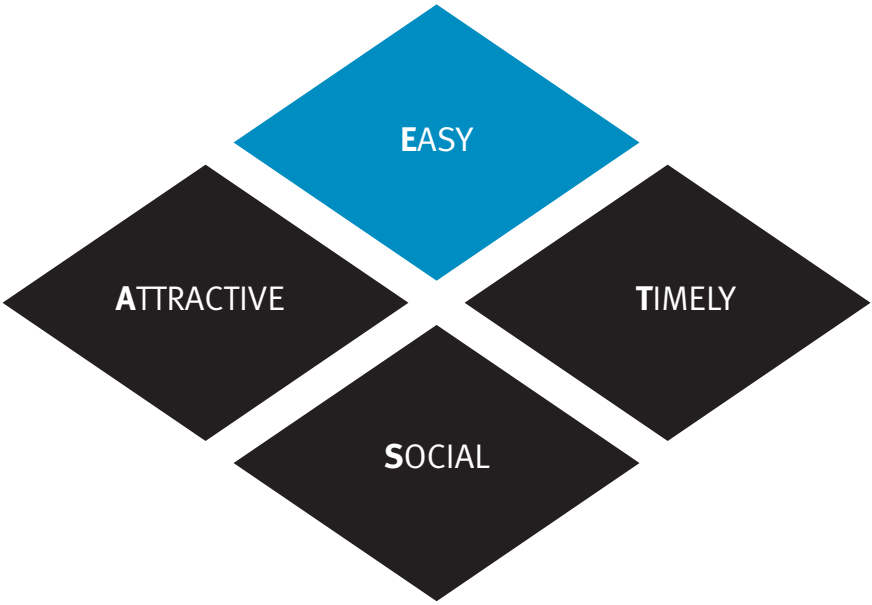

Figure 1: The EAST Framework

Source: UK Behavioural Insights Team 2014

For example, it is commonly understood that people usually demand less of a good when its price goes up. However, the change in price first needs to be noticed in order for any change in behaviour to be observed. Nudges can help with making changes in prices more salient. Making the increases in the price of electricity more salient is likely to have a greater effect on reducing consumption. Hence, cost-disclosing thermostats might have a greater impact than a modest price increase alone designed to decrease the use of electricity.

Fourth, nudges are not about manipulating behaviours, but *about helping people make better choices for themselves*. These choices tend to be in line with people's intentions but they are unable to execute them due to certain cognitive biases. It is widely recognised that people often know what is good for them but unable to follow through (e.g., people continue to consume junk food even though they are aware of the health risks). In addition, the environment we live in already nudges us one way or another, where our choices are often manipulated by more intrusive or subtle measures such as taxation, regulation, marketing and advertising. As Thaler and Sunstein (2008) put it, "... there is no such thing as a 'neutral' design", and "... some kind of nudge is inevitable, and so it is pointless to ask government simply to stand aside. Choice architects, whether private or public, must do something."

Thus, the role of a nudge is to help people make choices that they would have wanted to make, and avoid making decisions that they would have considered as mistakes. In this sense, nudging is acceptable when used in public policymaking to change behaviour—as long as the freedom of choice of citizens is preserved, and the ends nudged towards are consistent with general preferences of citizens (e.g., to have fewer health problems; to have adequate savings for retirement; and to tap on available financial assistance schemes).

When Should BI Be Used?

BI can be applied to policies that aim to influence behavioural elements. It can help in the design of new policies, make improvements to existing ones, or elucidate why target groups of a policy reacted in a particular way. There are three main domains where BI applications can be most effective (Bavel et al. 2013):

i. ***When behavioural change is the main objective of the policy.*** For example, getting people to eat healthier, quit smoking, or drive slower.

ii. ***When people's behavioural response can influence the effectiveness of a related policy.*** Policies intended to protect the consumer are a good example—they do not seek to change consumer behaviour, but seek to prevent abuse by industry in response to how people behave. If policymakers know that consumers are vulnerable to pre-set default options by industry players, regulators can take action and limit their use to protect consumer interests.

iii. ***In the policymaking process itself.*** Policymakers are also subjected to biases and a number of other influencing factors. Being aware of these potential pitfalls can help when developing and implementing new policies.

There is no single BI model or theory that can explain human behaviour in its totality. Any attempt at explaining behaviour in a particular context requires specific empirical observations. BI interventions are often contextual, which means a specific nudge might work in one context but might not work, or even backfire, in another. Hence, to fully understand the effectiveness of a nudge, it needs to be tested out using Randomised Controlled Trials (RCTs) or quasi-experiments. Policies involving people's expected behaviour need to be first tested, then reassessed (i.e., implemented, modified or dropped) according to the results.

As more trials are conducted in different contexts, certain patterns may emerge which will bring further insights to guide policymaking. Popular interventions such as incorporating social norms, personalisation, and saliency in messages or letters could work well in some contexts while producing lacklustre results in others. The example in **Box 3** sent the right message that attention was needed for more timely response but was perceived negatively when applied to a public survey.

BOX 3

Context Matters—Pink Letters

One of the trials conducted by the Ministry of Manpower's Work Pass Division and the Central Provident Fund Board was to nudge employers of foreign domestic workers to make timely levy payments. For employers who defaulted, MOM sent them a letter to remind them to make payment. In the trial, a randomly selected half of 1,000 people received the usual monthly letter on white paper. The other half received a letter on pink paper which had a simplified layout, containing clearer important information in addition to the social norm that 96% of the employers pay their levies on time. The pink letter was intended to invoke the norm of overdue bill notices sent by telecommunications and utility companies and reinforce the message that the due levy payment was late. The pink letters resulted in an increase in compliance of 3% to 5%, which was equivalent to $1.5 million more in levies collected.

However, when another agency—based on the success of this RCT—decided to use pink letters for their surveys to encourage more returns, it resulted in complaints from the public. The pink letter in this context did not invoke the appropriate norm as there was no overdue payment. Instead, it confused and annoyed the recipients.

These two examples illustrate the importance of applying the appropriate context with BI interventions, which policymakers can only validate through testing and experiments.

Source: Gallagher 2014

Challenges and Limitations

For policymakers, BI cannot replace economic theories. When designing policies to change behaviours, policymakers cannot ignore the effect of economic incentives and only focus on BI. Instead, BI should be embedded within the discipline of economics to help improve our understanding of human behaviour. Likewise, BI's applications must be seen in the wider context of wider economic environment and economic policy.

In addition, there are also specific contexts in which BI would not be applicable or have very limited use:

i. ***Correcting externalities where a third party is financially harmed.*** Government intervention in this scenario would require economic incentives in the form of taxes or regulation to mitigate the problem.

ii. ***Preventing certain types of crimes, such as violent crimes and drug abuse.*** BI in these cases is not quite enough. Legislation which could include outright bans and strong deterrence like jail sentences are needed.

Conclusion

Broadly speaking, people continue to respond to incentives as predicted by standard economic theory, but their decisions are also greatly influenced by the context they are in. From improving take-up rates of assistance schemes

to helping people find jobs, harnessing the strengths of both incentives and nudges will increase the effectiveness of many policies aimed at addressing society's problems. However, the effect of nudges cannot be expected to stay the same over time. As conditions in our environment and expectations change, new challenges that emerge will require us to assess the effectiveness of interventions previously put in place.

In the longer term, there is great potential for academics and policymakers to accumulate experience and gain further insights into which BI interventions work better, and when.

References

Ariely, D. *Predictably Irrational: The Hidden Forces that Shape Our Decisions*. New York, NY: HarperCollins, 2008.

van Bavel, René, B. Herrmann, G. Esposito, and A. Proestakis. *Applying Behavioural Sciences to EU Policy-Making*. Luxembourg: European Union, 2013. Accessed August 5, 2015. http://ftp.jrc.es/EURdoc/JRC83284.pdf. doi:10.2788/4659.

Behavioural Insights Team. "EAST: Four Simple Ways to Apply Behavioural Insights". 2014. Accessed August 5, 2015. http://www.behaviouralinsights.co.uk/wp-content/uploads/2015/07/BIT-Publication-EAST_FA_WEB.pdf.

Darling, M., S. Datta, and S. Mullainathan. "The Nature of the BEast: What Behavioral Economics Is Not". Essay, Centre for Global Development, October 2013. Accessed August 5, 2015. http://www.ideas42.org/publication/view/the-nature-of-the-beast-what-behavioral-economics-is-not/.

Gallagher, R. "Applying BI to Policy: An International Perspective". 2014. Accessed August 5, 2015. https://www.cscollege.gov.sg/Knowledge/Documents/CGLEI32%20BE%20Symposium%202014%20Gallagher.pdf.

Kahneman, D. *Thinking Fast and Slow*. New York: Farrar, Straus and Giroux, 2011.

Thaler, R H., and C. R. Sunstein. *Nudge: Improving Decisions about Health, Wealth and Happiness*. New Haven, CT: Yale University Press, 2008.

Further Readings

Hansen, P. G., and A. M. Jespersen. "Nudge and the Manipulation of Choice". *European Journal of Risk Regulation* 1: 3–28. Accessed August 5, 2015. http://www.lexxion.de/pdf/ejrr/02%20Nudge%20and%20the%20Manipulation%20of%20Choice.pdf.

Hartung, R. "Policy Making Tip: Nudge Not Shove". Challenge, January/February, 2014. Accessed August 5, 2015. http://www.challenge.gov.sg/print/cover-story/a-tip-for-policy-making-nudge-not-shove.

Thaler, R. H, C. R. Sunstein, and J. P. Balz. "Choice Architecture". Accessed August 5, 2015. https://www.sas.upenn.edu/~baron/475/choice.architecture.pdf.