Chapter 2

Mapping out applications of behavioural insights to environmentally relevant policy

This chapter provides a snapshot of the governance approaches that different governments have adopted in leveraging behavioural insights to tackle environmental problems. It maps out the policy areas where behavioural interventions have been developed, and specifies the behavioural levers that policy makers have used to design them. Finally, it outlines the most common methodologies applied in assessing the impacts of behavioural interventions.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
Governance

Different governance levels may be better positioned to apply behavioural insights to tackle different environmental problems. Certification schemes for fuel efficiency and energy efficiency, for instance, have been tested at the national, federal or international (e.g. European Union) level to support the adoption of more efficient products. On the other hand, interventions acting upon services provided at municipal level (e.g. local transport, water supply, waste collection management) can be launched and monitored more easily at that level. These factors are reflected in the increasingly active role that different administrative levels have been taking up in applications of behavioural insights: from teams and projects launched within city administrations, to teams within a prime minister’s office, to specialised units within a given ministry or government agency.

Since the launch of the pioneering Behavioural Insights Team in the United Kingdom in 2010, governments and institutions at different territorial levels have been organising their work on applications of behavioural insights to environmentally relevant policy following two main approaches:

1. Setting up in-house behavioural insights teams:
   a. at centralised or regional level, working on a range of policy areas (Australia, Canada, European Commission, France, Germany, United Kingdom, United States and South Africa),
   b. within the Ministry of Environment, working specifically on environmental policy (Australia, Israel, The Netherlands).

2. Developing ad-hoc projects, usually in co-operation with consulting firms, NGOs, international organisations or universities or research centres specialised in the development of behavioural interventions and the assessment of their impacts (Chile, Colombia, Costa Rica, Denmark, European Commission, the European Economic and Social Committee, Germany, the Nordic Council, Norway, Sweden, Switzerland).1

Within both groups, there is substantial heterogeneity in the extent to which countries and institutions have embraced the integration of behavioural insights in policy making. This translates in different levels of financial and human resources devoted to this process. In general, countries and institutions which have chosen to build an internal specialised team currently seem to be more advanced than their counterparts which have started to explore the potential of behavioural interventions solely through external partnerships. This is apparent both in the scope of the interventions that have been implemented (i.e. the range of policy areas covered) and in the sophistication of methodologies applied in this process. The next sections discuss these two points.

Scope

This report analyses 36 behavioural interventions, mainly implemented between 2010 and 2016. As shown in Figure 2.1, the vast majority of interventions developed so far have focused on energy consumption and energy efficiency investments (18 applications). This is due to the importance of energy policy in the context of climate change action, and to the fact that monitoring energy consumption is relatively easy and, thus, facilitates empirical impact assessment (see chapter 3).
Interventions developed in other policy areas have not garnered a comparable level of attention. For instance, evidence for only 4 such interventions to resource efficiency and waste management policies was gathered. Interventions aimed at encouraging sustainable food consumption patterns are 3: it is important to note that most of them targeted food waste, hence they also present a resource efficiency rationale.

The transport domain has not attracted a large number of behavioural interventions (3). Initiatives in this area have thus far mainly revolved around fuel efficiency indicators. Behavioural interventions aimed at enhancing compliance with environmental regulation and at increasing participation in voluntary schemes are also 3, as are applications of BIs to water conservation policy. When it comes to the latter, it is important to note that behavioural insights have attracted attention also in contexts where water scarcity is not an issue.

This report presents and analyses behavioural interventions from a range of countries and institutions. It includes interventions from Australia (2 interventions), Chile (1), Colombia (1), Costa Rica (1), the European Economic and Social Committee (1), the European Commission (7), Israel (3), the Netherlands (1), the Nordic Council (1), Norway (1), South Africa (1), Switzerland (5), the United Kingdom (7) and the United States (3). Some institutions have focused on a single environmentally relevant policy area (e.g. energy in the case of the Behavioural Insights Team in the UK) whereas others have diversified considerably the scope of their BI applications to environmental issues (e.g. the Social and Behavioral Sciences Team in the US and the European Commission). This choice may be due to several factors: political priorities in the environmental policy agenda; ease in monitoring results; economies of scale or learning effects.
Methodologies

As mentioned in the previous chapter, this report analyses behaviourally informed and behaviourally tested policy interventions (see Reader’s Guide for definitions of all technical terms). Between these two types, behaviourally informed interventions are less resource-intensive, as they build upon existing behavioural evidence (e.g. from scientific literature or from trials developed in other contexts) rather than on evidence from tailor-made pilot programmes. Behaviourally tested interventions (e.g. field or lab experiments, stated choice experiments) may be more demanding in terms of dedicated human and financial resources, but they have the major advantage of delivering evidence on a specific geographical, cultural and regulatory context. Box 2.1 provides a brief description of commonly used experimental methods to test behavioural interventions.

As illustrated in Figure 2.2, behaviourally informed interventions constitute about 14% of the interventions analysed in this report, whereas the remainder are behaviourally tested interventions, with a clear prevalence of field experiments (56%), followed by stated preference studies such as stated choice experiments (22%) and lab experiments (13%). Some interventions have also built upon multiple methodologies at once.

**Box 2.1. Methodologies for behaviourally tested interventions**

Experiments enable the estimation of a policy’s causal effect. The empirical findings of such experiments can inform policy makers, motivating the launch of new policies or changes in existing ones. However, List and Price (2016) argue that the cornerstone for credibly identifying the causal effect of a policy is the construction of the correct counterfactual. The idea behind the establishment of a counterfactual is to compare the impact of the policy of interest on a group that is exposed to it (or, in the experimental jargon, “treated” with it), with its impact on a control group, which is unaffected by the policy intervention.

Harrison and List (2004) argue that “[c]ontrolled” experiments, which include laboratory experiments and field experiments, represent the most convincing method of creating the counterfactual, since they directly construct a control group via randomization” (p. 1014). In fact, randomisation ensures that the individuals or groups of people exposed to the policy to be tested and those instead belonging to the control group are truly comparable (Haynes et al., 2012). Experiments based on the randomised assignment of participants (individuals, households, firms…) to treatment or control groups are called randomised controlled trials or, in short, RCTs (see also Haynes et al., 2012; Gertler et al., 2016). According to the type of randomisation process, Charness, Gneezy and Kuhn (2012) distinguish two different types of design:

- **In a “within-subject” designed experiment**, each individual is exposed to more than one of the treatments being tested, whether it be playing a game with two different parameter values, being treated and untreated, answering multiple questions, or performing tasks under more than one external stimulus. With such designs, as long as there is independence of the multiple exposures, causal estimates can be obtained by examining how individual behavior changed when the circumstances of the experiment changed.

- **In a “between-subject” designed experiment**, each individual is exposed to only one treatment. With these types of designs, as long as group assignment is random, causal estimates are obtained by comparing the behavior of those in one experimental condition with the behavior of those in another.” (Charness, Gneezy and Kuhn, 2012, p. 1)
Likewise, one can talk about between-group and within-group experimental design, if the randomisation is carried out at the level of groups of individuals (e.g. a village, a cohort of students…) rather than at the level of single individuals. According to the experimental context, one can distinguish between:

- **Laboratory (lab) experiments** are conducted with volunteer participants in a controlled laboratory facility (Levitt and List, 2009; Noussair and van Soest, 2014).

- **Field experiments** are carried out in naturally occurring settings, often with subjects that are unaware of being part of an experiment. Field experiments also include experiments carried out on real online platforms (e.g. e-commerce websites or social networking platforms), which are becoming increasingly popular. Such experiments are denoted in this report by the term **online field experiments** (Chen and Konstan, 2015). These should not be confused with experiments carried out on simulated online environments specifically designed for experimental purposes.

Falk and Heckman (2009) state that “the lab offers possibilities to control decision environments in ways that are hard to duplicate with the use of naturally occurring settings”. Namely, in this environment, participants take part in the experiments in the presence of examiners. This ensures they carry out the tasks within a given time frame and without external influences. This kind of control is hardly replicable in other types of experiments. On the other hand, Levitt and List (2009) argue that “[f]ield experiments (…) represent a mixture of control and realism usually not achieved in the lab or with uncontrolled data, permitting the analyst to address questions that heretofore were quite difficult to answer.” For example, consider the choice of a household appliance among a set of options differing in their energy efficiency rating. When faced with this choice, an individual may act differently in the context of a lab experiment, where usually a fixed budget is provided, and within a field experiment, where one’s own budget is at play.

For some of the interventions described in this report, impact evaluation is not based on the randomised assignment of experiment subjects to a treatment or control group. In such cases, causally identifying the impact of the policy intervention requires different methodological approaches based on the analysis of what Levitt and List (2009) call “naturally-occurring data” or “uncontrolled data” (see e.g. Blundell and Costa Dias (2009) for a technical overview of such methodologies and Gertler et al. (2016) for a non-technical one). This approach to causal identification of policy impacts works as long as the policy is introduced as an “exogenous shock”, and randomly – in a statistical sense – allocates subjects to control (unaffected by the policy) and treatment (affected by the policy) groups.

An entirely different category of policy interventions involves **stated preference studies**, such as stated choice experiments. In this type of experiments, subjects are presented with hypothetical choice scenarios where they have to select their preferred alternative among a menu of hypothetical options (see also Alpízar, Carlsson and Martinsson, 2003). This type of experiment can be carried out in the context of a survey (with the help of a questionnaire), or in simulated online environments. The aim of this type of studies is to elicit individual preferences and willingness to pay for specific goods or attributes (usually for ones not yet available in the market or for ones where no market exists).

**Sources:** Alpízar, Carlsson and Martinsson, (2003); Blundell and Costa Dias (2009); Charness, Gneezy and Kuhn (2012); Chen and Konstan (2015); Falk and Heckman (2009); Gertler et al. (2016); Harrison and List (2004); Haynes et al. (2012); Levitt and List (2009); List and Price (2016); Noussair and van Soest (2014).
Governments and international institutions have typically started to consider the potential of behavioural insights applications through literature reviews, scoping studies and workshops. Some of these reviews have focused on applications to policy making in general (Jonkers and Tiemeijer, 2015; Lunn, 2014; Policy Studies Institute, 2006; Sousa Lourenço et al., 2016; van Bavel et al., 2013; van Bavel, Rodriguez-Priego and Maghiros, 2015). Other governments (Beckenbach et al., 2016; Cabinet Office Behavioural Insights Team, Department of Energy and Climate Change and Department for Communities and Local Government, 2011; Mont, Lehner and Heiskanen, 2014; Oullier and Sauneron, 2011) and international institutions (European Commission, 2012; Mont et al., 2013; UNEP, 2017) instead have focused on the role of behavioural sciences in improving the design and implementation of environmentally relevant policy. This kind of stock-taking exercise can inform environmental policy by helping practitioners diagnose the presence of given behavioural biases underlying environmental issues. Furthermore, it is fundamental to motivate the integration of behavioural insights in environmental policy making. However, this report does not provide a review of such stock-taking publications, instead zooming in on concrete policy applications at the diagnostic and policy design stage: behaviourally informed and behaviourally tested interventions.

**Behaviourally informed interventions** can be designed to tackle behavioural biases identified following a diagnostic. One such example comes from the United States, where in 2011 the Environment Protection Agency mandated a change in the framing of fuel efficiency labels to include information on the fuel costs associated with car use (see chapter 4). Behavioural insights can also help reshape more effectively government communications: in another example from the United States, behavioural scientists from the Social and Behavioural Sciences Team – a cross-agency group of behavioural scientists and policy makers nested within the Executive Office of the President of the United States – have supported the United States Global Change Research Program (USGCRP) in developing climate indicators that more effectively communicate information to non-scientists (Social and Behavioral Sciences Team, 2016).2
Other types of interventions which do not involve empirical impact assessment are surveys. In some cases, surveys have also been used in conjunction with behaviourally tested interventions (e.g. randomised controlled trials) to gather information on participants’ characteristics.

While some countries have, for the time being, focused on stock-taking and behaviourally informed interventions (e.g. France, Sweden, Germany), other governments and institutions have moved towards behaviourally tested interventions. This has translated into designing, implementing and evaluating the effectiveness of concrete behavioural interventions through field, lab or online experiments. The next section provides an overview of the types of behavioural levers used in such interventions.

Types of behavioural levers

Following the typology presented in Box 1.2, Figure 2.3 provides a snapshot of the distribution of types of levers leveraged in the behavioural interventions reviewed in this report (see Reader’s Guide for technical definitions). The majority of interventions (69%) are based on simplification and framing of information. Some of these interventions rely on simplification in order to ease cognitive limitations arising e.g. in the interpretation of particularly complex communications that environment agencies may direct to regulated firms. Others instead increase the salience of future costs and benefits associated with the investment in energy efficient insulation for housing. This can help consumers tackle the short-sightedness hampering such inter-temporal choices.

Changes to the physical environment (17%) have included the introduction of stickers reminding of the importance of water conservation next to water taps, or the installation of real-time in-home displays connected to smart electricity meters to enhance salience of power consumption. Social norms and comparisons (17%) have been used to induce energy and water conservation, as well as to prevent littering.

All the other types of behavioural lever have been relatively underexploited. Green defaults, for instance, could be further exploited to promote energy conservation by e.g. altering thermostat settings (as tested in an office environment by Brown et al., 2013).

Figure 2.3. Behavioural levers applied across policy areas

Note: As some of the reviewed BI applications are based on multiple behavioural levers, the total numbers of levers represented in this figure is higher than the total number of BI applications reviewed in this report (36).
Notes

1. The European Commission has adopted both approaches: it has a dedicated team working on the application of behavioural insights across different policy fields (approach 1), which also provides ad-hoc support to policy directorates in the context of framework contracts with specialised, external consortiums (approach 2). While Germany has a specialised unit in the application of behavioural insights at the Office of the Federal Chancellor, projects evaluating the potential contribution of BI applications to environmentally relevant policy are also carried out by the German Environment Agency (UmweltBundesamt).

2. Behaviourally informed interventions can be somewhat harder to detect and document than behaviourally tested interventions, as they are not usually accompanied by impact assessment reports.

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Reader’s guide

The objective of this report is twofold: first, to understand the extent to which behavioural insights are being incorporated in environmentally relevant policy making, as well as the outcomes of this process; and second, to provide policy makers with concrete examples of successful as well as unsuccessful applications of behavioural insights to the design and implementation of relevant policies.

This reader’s guide presents all definitions of terms related to behavioural biases, interventions and levers, as well as those related to the methods used to test and assess the impact of behavioural interventions. While the definitions of these terms are also presented in Chapters 1 and 2, this guide mainly aims to support the reading of the chapters reviewing applications of behavioural insights to various policy areas: energy consumption and energy efficiency, water consumption, food consumption, transport and car choice, waste management and resource efficiency, and compliance with environmental regulation. These chapters make frequent use of the terms defined here.

Which behavioural biases affect environmental policy outcomes?

Behavioural biases are the features of human behaviour that, if observed through the lens of standard economic theory, can be defined as deviations from rational decision-making. Following Mullainathan and Thaler (2000), behavioural biases can be grouped into three categories, depending on the behavioural deviation from the characteristics of homo economicus: bounded rationality, bounded willower and bounded self-interest. While behavioural sciences have provided evidence for many more behavioural biases, the focus here is on the biases which have the potential to impact environmental policy and its effectiveness.

Bounded rationality

“Bounded rationality reflects the limited cognitive abilities that constrain human problem solving.” (Mullainathan and Thaler, 2000)

- **Framing effect**: the way an option is presented (or framed) affects individual choice among alternatives. More specifically, individuals can draw different conclusions from the same amount of information, depending on how it is presented and the relative salience of its elements.

- **Loss aversion** arises when the cost associated with giving up something is perceived as greater than the benefit that would accrue to the acquisition of the same thing (Gsothbauer and van den Bergh, 2011). Loss aversion can help explain the endowment effect and the status-quo bias:

  - **Endowment effect**: “The value of a good to an individual appears to be higher when the good is viewed as something that could be lost or given up than when the same good is evaluated as a potential gain” (Kahneman, 2003)
- **Status-quo bias**: “Because the reference point is usually the status quo, the properties of alternative options are evaluated as advantages or disadvantages relative to the current situation, and the disadvantages of the alternatives loom larger than their advantages. This leads to inertia.” (Kahneman, 2003)

**Bounded willpower**

“**Bounded willpower** captures the fact that people sometimes make choices that are not in their long-run interest.” (Mullainathan and Thaler, 2000)

- Inconsistencies between individual beliefs and behaviours can be denoted as **cognitive dissonances**. This phenomenon leads to an attitude-behaviour gap, a mismatch between beliefs and concrete behaviours. Sometimes, people may react to this mismatch by aligning their beliefs to their behaviour instead of the opposite (Carlsson and Johansson-Stenman, 2012).

- **Myopia in intertemporal choices**: individuals tend to show time-inconsistent preferences when considering decisions characterised by time-varying discount rates. This means that they will apply discount rates that are higher in the short run than in the long run (hyperbolic discounting), rather than constant over time. In other words, individuals with this type of preferences would rather obtain one Euro today than one Euro tomorrow, but when presented with the choice between receiving one Euro in one year and the same amount in one year and one day, they will gladly wait for an extra day. This type of discounting drives short-sighted decisions, placing disproportionate weight on immediate costs and benefits relatively to long-term ones (Gsottbauer and van den Bergh, 2011).

**Bounded self-interest**

“**Bounded self-interest** incorporates the comforting fact that humans are often willing to sacrifice their own interests to help others.” (Mullainathan and Thaler, 2000)

- Individuals are not motivated exclusively by their own utility: **altruism, fairness and social norms** also affect individual decision-making. While altruism and fairness need not be defined, social norms and their impact on consumer behaviour deserve further scrutiny. People conform to behaviours which are perceived as the norm in society, and compare their own behaviour to these ideal benchmarks.

What are behavioural interventions?

A recent report from the European Commission (Sousa Lourenço et al., 2016) provides a typology of the extent to which behavioural insights have been taken into consideration and have informed the policy process:

- **Behaviourally tested interventions** are “initiatives based on an ad-hoc test, or scaled out after an initial experiment”;

- **Behaviourally informed interventions** are “initiatives designed explicitly on previously existing behavioural evidence”;

- **Behaviourally aligned interventions** are “initiatives that, at least a posteriori, can be found to be aligned to behavioural evidence”.
This report focuses solely on behaviourally informed and behaviourally tested interventions, as they are the outcomes of deliberate efforts of policy makers to draw upon behavioural insights when developing and implementing policies. Here, these two types of interventions are denoted as *behavioural interventions*. Conversely, while behaviourally aligned initiatives may be effective in delivering policy results, they are not based on a good understanding of the behavioural mechanisms upon which they act. This limits the possibilities to replicate them in the future or in other contexts.

**What types of behavioural levers can policy makers use?**

Policy makers can use a range of behavioural levers to design and roll out an appropriate policy intervention. These levers are, in fact, the building blocks of behavioural interventions and, as such, constitute concrete tools for policy makers. Extending the classification provided by Mont, Lehner and Heiskanen (2014), seven main types of *behavioural levers* can be distinguished:

- **Simplification and framing of information**: simplifying complex information can prevent information overload. Framing aims at representing information by consciously activating certain values and attitudes of individuals. The way information is framed can also affect how it is processed by its recipients. For example, energy efficiency labels can be framed to provide a sense of the relative ranking of an electric appliance with respect to the best-in-class one, and the savings that one could enjoy when switching to the latter.

- **Changes to the physical environment**: the physical environment can substantially affect individual decision-making, especially in contexts in which choices are made spontaneously, on the basis of automated mechanisms and habits. Examples of such interventions are changes in the location and appearance (e.g. colour) of recycling bins, or the installation of automatic (sensor-based) water taps to curb water consumption.

- **Changes to the default policy**: as individuals are prone to status-quo bias, they often postpone making decisions until or unless it becomes inevitable to do so. Defaults can, thus, have a great impact in contexts in which people are resistant to change. An example of such interventions is a change to the default setting of thermostats (i.e. to a lower baseline temperature in order to foster energy savings).

- **Use of social norms and comparisons**: as individuals are social beings, not solely driven by their own payoffs, they are affected by the way people surrounding them behave (social norms), by how they compare to their peers (social comparison) as well as by moral injunctions. An example of this type of intervention is the comparison of a household’s energy or water consumption to the consumption of a same-sized household in the same neighbourhood.

- **Use of feedback mechanisms**: several routine behaviours, such as energy consumption or waste disposal, have considerable environmental impacts. However, these impacts are often not sufficiently salient for consumers. Providing them with timely feedback can make such contexts more transparent, increasing awareness of environmental externalities stemming from daily consumption choices. For example, real-time in-home displays connected to smart energy meters can provide real time feedback on energy consumption and costs.

- **Reward and punishment schemes** can be used as “carrots and sticks”, associating a salient, material payoff to consumers’ achievements. For example, rewarding
households who have been particularly savvy with water consumption during scarcity periods may generate a positive norm for water conservation.

- **Goal setting and commitment devices**: as individuals are bound by status-quo bias and inertia, effortful behaviour changes can be encouraged by setting specific and measurable goals and using commitment devices to regularly follow up on progress. One such example involves pinning down an objective of energy savings and following up on the objective with regular feedback and tips.

Note that “hybrid” interventions can be designed by building upon several of these insights at once. For example, energy conservation can be prompted by reframing energy bills in order to make them more intuitive and by using social comparisons therein.

Price-based policies, instead, leverage the most traditional form of market-based tools, such as taxes, to induce economically rational changes in individual behaviour. They should, thus, not be confused with policies building upon behavioural insights, which aim at tackling behaviours that are not consistent with the model of rational economic behaviour.

**What methods can be used to test and assess the impact of behavioural interventions?**

*Experiments* enable the estimation of a policy’s causal effect. The cornerstone for credibly identifying the causal effect of a policy is the construction of the correct counterfactual (List and Price, 2016). The idea behind the establishment of a counterfactual is to compare the impact of the policy of interest on a group that is exposed to it (or, in the experimental jargon, “treated” with it), with its impact on a control group, which is unaffected by the policy intervention. The empirical findings of experiments can inform policy makers, motivating the launch of new policies or changes in existing ones.

Harrison and List (2004) argue that “[c]ontrolled” experiments, which include laboratory experiments and field experiments, represent the most convincing method of creating the counterfactual, since they directly construct a control group via randomization” (p. 1014). In fact, randomisation ensures that the individuals or groups of people exposed to the policy to be tested and those exposed to the control condition are truly comparable (Haynes et al., 2012). Experiments based on the randomised assignment of participants (individuals, households, firms…) to treatment or control groups (in short, randomised treatment allocation) are called randomised controlled trials or, in short, RCTs (see also Haynes et al., 2012; Gertler et al., 2016). According to the type of randomisation process, Charness, Gneezy and Kuhn (2012) distinguish two different types of design:

- “In a **within-subject** designed experiment, each individual is exposed to more than one of the treatments being tested, whether it be playing a game with two different parameter values, being treated and untreated, answering multiple questions, or performing tasks under more than one external stimulus. With such designs, as long as there is independence of the multiple exposures, causal estimates can be obtained by examining how individual behavior changed when the circumstances of the experiment changed.

- In a **between-subject** designed experiment, each individual is exposed to only one treatment. With these types of designs, as long as group assignment is random, causal estimates are obtained by comparing the behavior of those in one experimental condition with the behavior of those in another.” (Charness, Gneezy and Kuhn, 2012, p. 1)
Likewise, one can talk about between-group and within-group experimental design, if the randomisation is carried out at the level of groups of individuals (e.g. a village, a cohort of students...) rather than at the level of single individuals. According to the experimental context, one can distinguish between:

- **Laboratory (lab) experiments** are conducted with volunteer participants in a controlled laboratory facility (Levitt and List, 2009; Noussair and van Soest, 2014).

- **Field experiments** are carried out in naturally occurring settings, often with subjects that are unaware of being part of an experiment. Field experiments also include experiments carried out on real online platforms (e.g. e-commerce websites or social networking platforms), which are becoming increasingly popular. Such experiments are denoted in this report by the term **online field experiments** (Chen and Konstan, 2015). These should not be confused with experiments carried out on simulated online environments specifically designed for experimental purposes.

How to assess policy impacts when treatment allocation is not randomised? For some of the interventions described in this report, impact evaluation is not based on the randomised assignment of experiment subjects to a treatment or control group. In such cases, causally identifying the impact of the policy intervention requires different methodological approaches based on the analysis of what Levitt and List (2009) call “naturally-occurring data” or “uncontrolled data” (see e.g. Blundell and Costa Dias (2009) for a technical overview of such methods and Gertler et al. (2016) for a non-technical one). This approach to causal identification of policy impacts works as long as the policy is introduced as an “exogenous shock”, and randomly – in a statistical sense – allocates subjects to control (unaffected by the policy) and treatment (affected by the policy) groups.

What about stated preference studies? An entirely different category of policy interventions involves stated preference studies, such as **stated choice experiments**. In this type of experiments, subjects are presented with hypothetical choice scenarios where they have to select their preferred alternative among a menu of hypothetical options (see also Alpízar et al., 2003). This type of experiment can be carried out in the context of a survey (with the help of a questionnaire), or in simulated online environments. The aim of this type of studies is to elicit individual preferences and willingness to pay for specific goods or attributes – usually for those not yet available in the market or those for which no market exists.

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