

# Behavioral Economics

## Lecture 11 - Behavioral welfare economics

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References:

Sunstein, C. R. (2020). Behavioral science and public policy. Cambridge University Press.

# Humans and Econs

- The argument for nudging, or for other uses of behavioral economics in policy, can depend on a simple lack of information. If people do not know how to get where they want to go, a nudge might help. But the argument is also fortified by decades of evidence, specifying how people's judgments go wrong.
- Behavioral scientists, most prominently Daniel Kahneman in his masterful book on the topic, have distinguished between two families of cognitive operations in the human mind: fast and slow (Kahneman, 2011). Fast thinking, often called System 1, is rapid, automatic, emotional, and intuitive. Slow thinking, often called System 2, is slow, calculative, and deliberative.
- In many situations, System 1 does not err. But if we want to know what to do in unfamiliar or complex situations, System 1 may be unreliable. If it is working well, System 2 is a terrific safeguard. The label "Econs" has been used for those who act in accordance with System 2. Those who are influenced by System 1 count as "Humans".

# Welfare dilemma

- Do people's choices promote their welfare? The largest question, of course, is how to define welfare. As noted, the philosophical literature distinguishes among three different theories: preference-based theories, hedonic theories, and objective-good theories. Economists are drawn to the former. As we have seen, they often speak in terms of allocative efficiency and some form of cost-benefit analysis, by which they explore potential Pareto improvements.
- The best answer to whether people's choice promote welfare is sometimes. If people lack information, they might choose poorly. If sellers exploit people's behavioral biases, consumers' choices may go awry. We have seen that even without self-conscious exploitation of such biases, people may choose poorly because of limited attention, inertia, present bias, or unrealistic optimism, potentially justifying a regulatory response of some kind.
- People may make mistaken predictions about the effects of options on their welfare. People are susceptible to supposedly irrelevant factors or "frames". We have seen that in an opt-in system, they might end up in a very different situation from where they end up in an opt-out system.
- An emphasis on the idea that people are making choices about their lives might therefore reflect a commitment to respect for dignity and autonomy, not welfare at all.
- How should governments think about mistakes in individual decision-making? Should they be paternalistic? In what way and to what extent? In light of behavioral findings, it seems that regulators should adopt a working presumption in favor of respect for people's self-regarding choices, but only if those choices are adequately informed and sufficiently free from behavioral biases.

# Do Our Choices Make Us Happy?

- Many of us assume that people's choices generally make them happy, or at least make their lives go better by their own lights. It is tempting to believe that people's choices provide excellent evidence of what will promote their welfare – including, as part of their welfare, all of their concerns. Much of the time, the belief is right. But some of the time, it is not.
- When making a choice at one time, people tend to make predictions, or forecasts, about how they will feel about their choice at some later time. Think of these as “welfare forecasts.” Serious errors in welfare forecasting can be demonstrated in several ways: by comparing people's welfare forecasts with direct measures of welfare, such as whether they are financially better off (assuming that this is what matters to them, in context); by creating situations in which people's choices lead to lower levels of subjective well-being and demonstrably worse experiences, and by showing that people's welfare forecasts are influenced by factors that are clearly irrelevant on any account of what is relevant.
- To be clear, the claim is not that people do not know what they like. They do when the experience immediately follows the choice and when the experience is familiar: we are rarely surprised by the taste of the second spoonful from a bowl of soup. But people do not always know what they will like, and they are most likely to err when the temporal gap is long and when the agent's state and circumstances vary between the time of choice and the time of experience.
- Four areas of errors in welfare forecasting have been well-documented: (1) when people try to forecast their future adjustment to new life circumstances; (2) when the emotional or motivational state of the agent is very different at the time of choice and the time of experience; (3) when the nature of the decision focuses attention on aspects of the outcome that are not actually that important, overall; and (4) when choices are made on the basis of flawed evaluations of past experiences.

# Forecasting errors

- **Mispredicting Adaptation:** Many of the changes that people make in their lives are driven by the wish to improve their happiness or reduce their unhappiness, or otherwise to improve their welfare, and inevitably those changes are based on some ideas about the actual effects of these circumstances. The central result of many explorations of affective forecasting has been described as a “focusing illusion,” which Kahneman has described with a simple maxim: “Nothing in life matters quite as much as you think it does while you are thinking about it” (Schkade and Kahneman, 1998). As a result, people are systematically wrong in their expectations about the life circumstances that will increase or decrease their happiness, which in turn implies that life choices that people make in their pursuit of happiness are also likely to be wrong.
- **Our Biased Learning from the Past:** Consumers’ choices often involve experiences they have already had. When people decide on the basis of personal memories, they will probably like what they choose. However, welfare forecasts that are based on memories of past encounters will be biased if these memories are themselves biased – and several sources of such biases have been established. No less than forecasts of the future, evaluations of the past are anchored on the individual’s emotional state when the evaluation is made. In addition, our overall evaluations of extended outcomes systematically overweight some parts of the experience and underweight others.
- **Our Current Emotional State:** People’s forecasts of how they will feel in the future are greatly affected by how they feel in the present. The outcome has been labeled a “projection bias” (Loewenstein et al., 2003), since people are projecting their current mental state onto a future one. As a result, some virtuous choices that people make may involve a lack of sufficient empathy for the future self who will have to live with the choice – and who will decline to do so.
- **The Power of Context:** A good may be evaluated in explicit comparison with other goods or on its own. People’s preference for one or another good may be different when the two are compared explicitly to each other or evaluated separately, perhaps by willingness to pay or by a rating.

# Government

- All over the world, behavioral science in general, and nudging in particular, have been attracting high-level attention. Both the developed and the developing world are seeing opportunities. With respect to new policy initiatives, developments have been proceeding at an exceptionally rapid pace.
- Important initiatives enlist tools such as disclosure, warnings, and default rules, and they can be found in multiple areas, including fuel economy, finance, energy efficiency, environmental protection, highway safety, smoking, health care, and obesity (with behavioral findings playing an unmistakable role in efforts to improve diet). As a result, behavioral findings and nudges have become important reference points for regulatory and other policy making in multiple nations.
- It is clear that behavioral findings are having a large impact on regulation, law, and public policy all over the world. That impact is likely to grow over the next decades. Notably, the use of behavioral findings cuts across conventional political divisions, and tends to appeal to people with diverse views in diverse nations. Because behavioral findings suggest the possibility of low-cost, high-impact interventions, they are especially likely to attract considerable attention in economically challenging times.
- Behavioral findings proved especially relevant to efforts to combat the COVID-19 pandemic of 2020. In responding to the pandemic, behavioral economics and nudging were broadly appealing and came into widespread use – not only by governments but also by private institutions, including hospitals, universities, and ordinary businesses, large and small. Those social distancing markers, indicating where people should stand in line? They are nudges.

# Behavioral welfare economics

- Welfare-enhancing policies in general
  - Removing barriers to mutually beneficial interactions (free-trade agreements)
  - Banning harmful actions (stealing)
  - Mandate beneficial actions (vaccinations)
  - Impose incentives that encourage to engage in more beneficial actions or fewer harmful ones (environmental taxes, cigarette taxes)
- Behavioral economics mission
  - Improve choices by making them to conform more closely to the rational ones
  - Libertarian paternalism – make people better off but respect their liberty and autonomy
  - Little or no cost on rational/informed individuals, potentially large benefits for others - nudges

**A**



**B**



**C**



**D**





# Information, nudge, incentive, mandate

- Four types of public policies can be nicely explained using an analogy of road signs.
- Sign A (urban ring road) is purely informative. As long as the driver finds it useful to know that he is on a ring road, he can take it into account. But he can also ignore the sign and go his own way.
- Sign B (dangerous curve) is a nudge. It warns the driver that he should probably reduce speed and increase attention for his own safety.
- Sign C (toll section of motorway) is an incentive-based policy. It preserves the free will of the driver, who can decide whether to take the motorway or a different road. At the same time, however, it points out that if the driver uses the more convenient motorway, he will have to pay.
- Sign D (no entry) is a mandate. The driver can face a penalty for violating the policy.

# Nudges

- In Germany, as in most nations, the use of green energy sources was very low for a considerable time. But even in a period of low use, in the 1990s and early 2000s, two communities in Germany did show strikingly high levels of green energy use – in one period, well over 90 percent. This was a dramatic contrast to the level of participation in green energy programs in most other cities in Germany, which in the same period was minuscule (around 1 percent). What is the reason for the difference? The answer is simple: in those two communities, people were automatically enrolled in green energy programs and they had to opt out (Pichert and Katsikopoulos, 2008).
- If a green default rule is in place, people are being nudged (Thaler and Sunstein, 2008). A nudge is defined as an intervention, from either private or public institutions, that affects people's behavior while fully maintaining their freedom of choice. A GPS device is a canonical example. It tells you what route to take and thus helps you get where you want to go – but you specify the destination, and you can reject its advice and take your own route if you prefer. A default rule is a nudge, so long as you can easily opt out. The same is true of warnings and disclosure of information.
- Other nudges include reminders, simplification of forms, increases or decreases in portion sizes, choice of colors for products, and decisions about the order in which items are placed on a website, ballot, or menu, or in a cafeteria. Some institutions, including some governments, emphasize social norms or widespread social practices; they are nudging.

# Nudges

- Some nudges, such as disclosure of information, are educative. Other nudges are not educative; they change the architecture (such as default rules, or placing healthy foods in a more prominent place in grocery stores). Some nudges, like green energy defaults, are principally designed to prevent harm that choosers might inflict on others. Other nudges, like reminders that bills are due or automatic enrollment in pension plans, are principally designed to prevent harm that choosers might inflict on themselves.
- It is important to emphasize that nudges are just one tool in the behavioral toolbox. Behavioral insights can also support the use of more coercive approaches, such as taxes (including those on cigarettes and sugar-sweetened sodas). Behavioral insights can also support the use of subsidies (such as for antismoking campaigns and for electric cars). Mandates and bans might have a behavioral justification.
- If people are required to buckle their seat belts, wear motorcycle helmets, or save for retirement, or if a nation imposes fuel-economy or energy-efficiency requirements, it might be because of an understanding of people's imperfect choices, stemming from unrealistic optimism, limited attention, or present bias. As noted, governments might attempt to improve people's welfare by protecting their future selves.
- Much of the time, nudges are complements to mandates and bans, rather than substitutes. People might be prohibited from engaging in certain acts but also nudged to comply with the law. A fuel-economy mandate might be accompanied by fuel economy labels, encouraging people to buy the most fuel-efficient cars.

# Nudges vs. mandates

- Some people argue that nudges are not enough. Because people err, mandates are both desirable and necessary. Why should behaviorally informed regulators emphasize freedom of choice when they know that people can err?
- There are many reasons to think that if improving social welfare is the goal, nudges have significant advantages and are often the best approach. Nudges might well have high benefits without high costs, and in any case, their net benefits may be higher than those of alternative approaches. Five points are especially important.
  - First, nudges make sense in the face of heterogeneity, at least in the sense that they can be preferable to mandates and bans. By allowing people to go their own way, they reduce the high costs potentially associated with one-size-fits-all solutions, which mandates often impose.
  - Second, those who favor nudges are alert to the important fact that public officials have limited information and may themselves err (the knowledge problem). If nudges are based on mistakes, the damage is likely to be less severe than in the case of mandates, because nudges can be ignored or dismissed.
  - Third, nudges respond to the fact that public officials may be improperly affected by the influence of well-organized private groups (the public choice problem). If so, the fact that people can go their own way provides an important safeguard, at least when compared with mandates.
  - Fourth, nudges have the advantage of avoiding the welfare loss that people experience when they are deprived of the ability to choose. In some cases, that loss might be severe.
  - Fifth, nudges recognize that freedom of choice can be seen, and often is seen, as an intrinsic good, which government should respect if it is to treat people with dignity.
- To be sure, these points will have different degrees of force in different contexts. It is true that in the end, mandates might ultimately turn out to be justified on welfare grounds. But at least where harm to others is not involved, it makes sense to begin with less intrusive, choice-preserving alternatives and generally to adopt a (rebuttable) presumption in their favor. As we have seen, nudges are hardly the only tools in the toolbox of the behaviorally informed policy maker. But if we are trying to protect choosers from their own mistakes, they deserve pride of place.

# Nudge design

- Nudges are most effective if people (1) face a very complicated choice and, clever or not, can easily get it wrong. (2) Have had very little experience or chance to learn what is best. (3) Are relatively uninformed about what they should choose. (4) Have self-control problems, and so may not make the choices they would have wanted himself to make.
- How to design a successful nudge?
- The first idea is that if you want people to do something, make it easy for them. They have to know what to do and how to do it, and doing it should not be too burdensome, painful, or costly. Whenever the goal is to change behavior, the best question is often overlooked: Why are people not doing it already? After getting the answer, public officials, employers, schools, and others can take steps to remove the barrier.
- A corollary is that a good way to discourage people from doing something is to make it hard. In behavioral science, the term “sludge” is used for frictions, or administrative burdens.
- It matters whether an option or message is attractive. A simple and vivid communication has more impact than a dull and complicated one. People also tend to be affected by what most other people do. Notifying people of the actions of the majority can be a powerful nudge.
- Timing is everything. Often it is best to provide people with information (including warnings) right before they make a decision, not the night before or when their minds are focused elsewhere.

# Default rules

- If there were an Olympic competition for behaviorally informed policy tools, default rules (=pre-chosen alternative in case the person itself does not make an active choice) would win the gold medal.
- A great deal of research has attempted to explore exactly why default rules have such a large effect on outcomes. There are three major explanations.
  - The first involves inertia and procrastination. To alter the effect of the default rule, people must make an active choice to reject the default. In view of the power of inertia and the tendency to procrastinate, people may simply continue with the status quo.
  - The second factor involves what might be taken to be an implicit endorsement of the default rule. Many people appear to conclude that the default was chosen for a reason; they believe that they should not depart from it unless they have particular information to justify a change.
  - Third, the default rule might establish the reference point for people's decisions; the established reference point has significant effects because people dislike losses from that reference point (the behavioral finding of loss aversion).
- However, default rules have a weak effect, and potentially no effect, when the relevant population has a strong preference for a certain outcome.
- Examples:
  - Savings: Automatic enrolment vs. non-enrolment (opt-out vs. opt-in) to retirement savings plans
  - School meals: children who are eligible for benefits under certain programs can be "directly eligible" for free lunches and free breakfasts, and hence will not have to fill out applications
  - Finance: overdraft "protection" programs
  - Enrolment/non-enrolment in health-care plans
  - Default on paper vs. electronic forms
  - ...

# Disclosure

- Disclosure can take many forms, from the short and sweet to the long and sour. It can operate like a GPS device, telling people how to get where they want to go, or instead like a nightmare, leaving people badly confused. A great deal of work needs to be done to learn when disclosure is effective and exactly why. But there is no question that disclosure is proving to be an appealing nudge, and much of what has been done is behaviorally informed.
- When disclosure requirements are imposed, it is often because less informed consumers are interacting with better-informed sellers and the incentives of the consumers and sellers seem to be misaligned. Consider, for example, interactions between an automobile seller and potential customer. The seller has better information about the safety of the cars it sells; the customer may have a greater interest in driving a safe car.
- There are also situations in which disclosure serves the purpose of helping to protect consumers against themselves. Some of these cases involve “behavioral market failures”, e.g., the concept of internalities costs that individuals impose on themselves but fail to internalize at the time of decision. Nudges can respond to the problem, and if they are behaviorally informed, they might stipulate format, framing, and other requirements that take account of cognitive and other factors in such a way as to make the relevant disclosure more effective.
- Examples
  - Provision of nutritional information to consumers on the labels of products, that must contain information with respect to calories and both total and saturated fats.
  - Credit cards: every month, companies must disclose the interest savings from paying off the full balance within thirty-six months, instead of making only minimum payments every month. In addition, banks must give cardholders a forty-five-day advance notice of rate increases, and they must inform cardholders of their right to cancel the account before such increases go into effect.
  - Health-care: insurance companies are required to provide clear, plain language summaries of relevant information to prospective customers, including the annual premium, the annual deductible, and a statement of services that are not covered.
- In order for disclosure to be effective, it needs to – (A) use plain language comprehensible to consumers; (B) contain a clear format and design, such as an easily readable type font; and (C) succinctly explain the information that must be communicated to the consumer

# Saliience

- It is often possible to promote social goals by making certain features of a product or a situation more salient to consumers.
- Consider alcohol taxes. There is evidence that when such taxes are specifically identified in the posted price, increases in such taxes have a larger negative effect on alcohol consumption than when they are applied at the register
- In the context of fiscal policy, there is a question whether to provide payments in the form of a one-time check or instead in the form of reduced withholding. Would one or another approach lead to increased spending?
- A one-time stimulus payment has been found to have significantly greater effects in increasing spending than does an economically equivalent reduction in withholding. A potential explanation, with support in the evidence, involves the importance of saliience or visibility. Indeed, a majority of households did not notice the withholding changes in the relevant study, and households who found “a small but repeated boost to their pay-checks” appear to be less likely to use the money for significant purchases.



# Social Norms

- Behavioral scientists have emphasized the immense importance of social norms, which have a significant influence on individual decisions and thus operate as effective nudges.
- For example, when people learn that they are using more energy than similarly situated others, their energy use may decline – saving money while also reducing pollution. The same point applies to health-related behavior. It has long been understood that people are more likely to engage in healthy behavior if they live or work with others who so engage. And if people are in a social network with other people who are obese, they are significantly more likely to become obese themselves.
- The behavior of relevant others can provide valuable information about sensible or appropriate courses of action. If people learn about emerging norms, they are more likely to act in accordance with them, even if the majority does not yet do so.

# Principles and Mindspace

**Table 11.6** Principles for good choice architecture, spelling 'NUDGES'.

Principles	Brief description
iNcentives	People do respond to incentives such as price and cost, but only if these are salient
Understand mappings	People may need help understanding the mapping, from the choices they may make to the outcomes they will get
Defaults	Defaults matter a lot because of present bias and choice overload, so think carefully about them
Give feedback	People do learn, so give feedback on when things are going well or badly
Expect error	People make mistakes, so we need something that is as forgiving as possible to mistakes they may make
Structure complex choices	The more complex the choice, the more problems a person has, and the more likely context effects will matter; so, keep things simple

Source: Thaler and Sunstein (2008).

**Table 11.7** An overview of MINDSPACE.

Principle	Description
Messenger	We are heavily influenced by who communicates information
Incentives	Our responses to incentives are shaped by predictable mental short cuts, such as strongly avoiding losses
Norms	We are strongly influenced by what others do
Defaults	We 'go with the flow' of pre-set options
Salience	Our attention is drawn to what is novel and seems relevant to us
Priming	Our acts are often influenced by subconscious cues
Affect	Our emotional associations can powerfully shape our actions
Commitments	We seek to be consistent with our public promises, and reciprocate acts
Ego	We act in ways that make us feel better about ourselves

Source: Dolan et al. (2010).

# Incentives

- What exactly is an incentive? Simply put, an incentive is a tool used to motivate people to do something they would not do otherwise.
- However, it is important to note that incentives also change social signalling and self-signalling (devoted environmentalist or something else?)



# Perverse effects of incentives

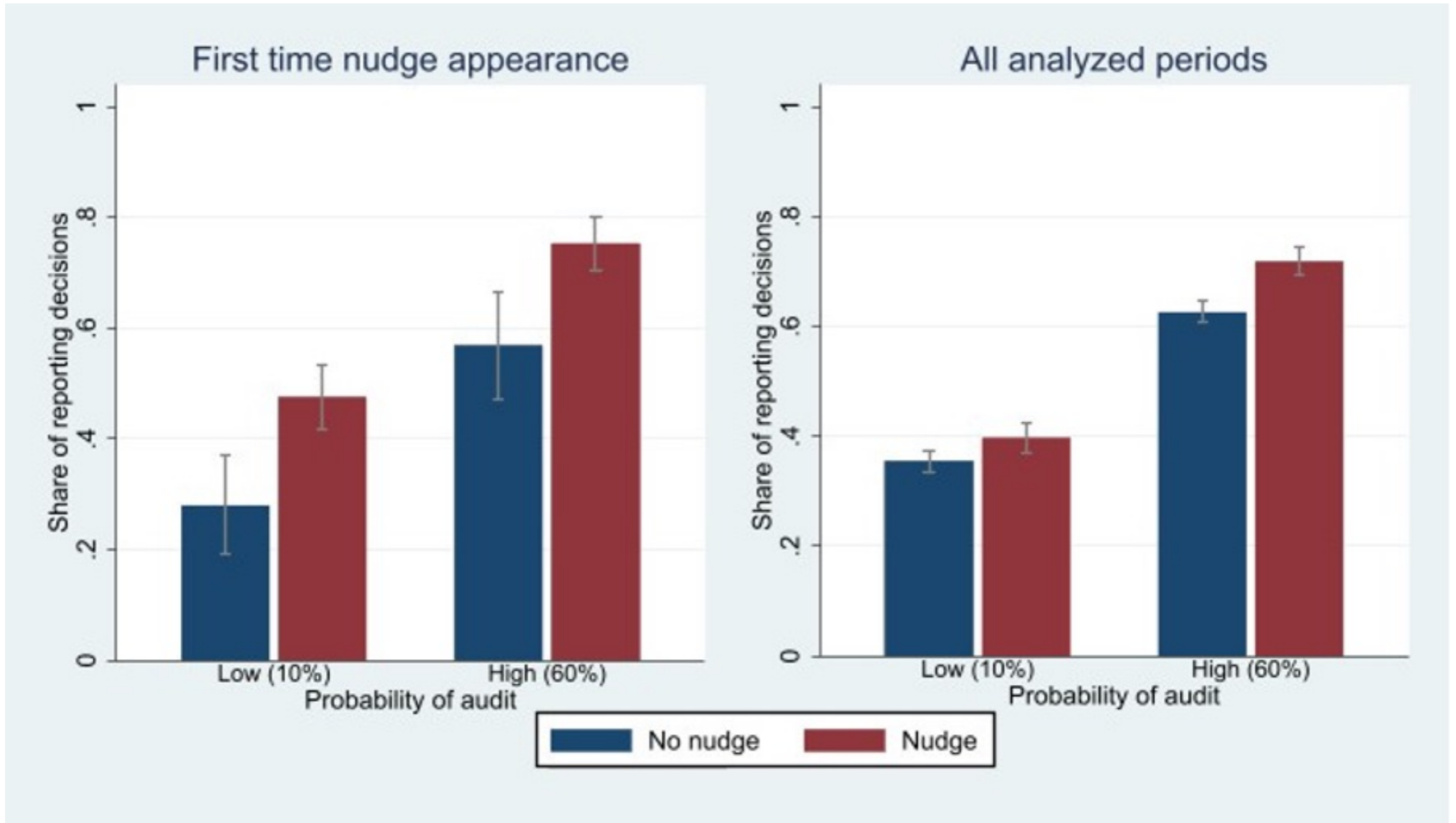
- A perverse incentive is an incentive that has an unintended and undesirable result that is contrary to the intentions of its designers. The cobra effect is the most direct kind of perverse incentive, typically because the incentive unintentionally rewards people for making the issue worse.



# Peltzman effect

- The Peltzman Effect refers to a decrease in expected benefits stemming from legislation intended to promote safety. It predicts that the introduction, or required use, of safer technologies such as seatbelts may make individuals feel more secure but that they may then offset that feeling by taking greater risks.
- In the best-case scenario, individuals' offsetting behavior may only partially offset the safety improvements. In the worst-case scenario, however, its effect may be so great that the introduction of safer technologies may lead to more accidents.
- Chong and Restrepo (2017) take advantage of ice hockey tournaments and exploit crosscountry variation in requirements for protective gear. Specifically, visors are compulsory in European leagues but optional in the NHL. Moreover, there was no NHL season in 2004. This caused US players to flock temporarily to European leagues, forcing non-wearers to put on a visor for the first time.
- By comparing players who always wear a visor with those who do so only when it is compulsory, the results show significant offsetting behavior. When players are forced to wear a visor their behavior becomes riskier and they earn an additional 0.19 penalty minutes per game.

# Nudges vs. incentives



Regulation (Bans, compliance rules, mandates)	
Useful when	<ul style="list-style-type: none"> <li>Behaviour has consequences that are a high risk to society or takes advantage of others (e.g. <i>crime, intentional fraud, pollution</i>) or against society's values or ethics (e.g. <i>racial discrimination, freedom of speech</i>)</li> <li>Third-party effects are present and the consequences of the behaviour are not entirely absorbed by the individual or corporation.</li> <li>Establishing standards that enhances standard of living or protects individuals (e.g. <i>minimum wage requirements, product safety</i>).</li> <li>Enforcement is feasible and cost-effective.</li> </ul>
Avoid When	<ul style="list-style-type: none"> <li>Regulation is perceived as overly restrictive or intrusive.</li> <li>Individuals would likely respond with defiance or by undermining regulation.</li> </ul>
When Choice Architecture Can Help	<ul style="list-style-type: none"> <li>Enforcement is in place but may not be working effectively. Choice architecture may help increase compliance.</li> </ul>
Economic Incentives (Taxes, Penalties, Grants, Subsidies)	
Useful when	<ul style="list-style-type: none"> <li>Behaviour is motivated by costs and benefits and hyperbolic discounting does not take effect (benefits are felt upfront).</li> <li>Incentives are salient to the individual.</li> <li>Market is in-line with the incentives and does not work against them. (e.g. <i>Subsidies for energy efficient products are in direct competition with cheaper products. "Green" taxes on computers must work against marketing efforts to sell the latest and greatest products</i>).</li> </ul>
Avoid When	<ul style="list-style-type: none"> <li>Behaviour is motivated by fairness, altruism, or social norms (e.g. organ donations).</li> <li>Taxes and penalties create a "license" to engage in behaviour.</li> </ul>
When Choice Architecture Can Help	<ul style="list-style-type: none"> <li>Behaviour is affected by cognitive influences (<i>loss aversion, status quo etc.</i>). Choice architecture can help highlight incentives or reduce particular barriers to accessing incentives.</li> </ul>

Information and Persuasion	
Useful when	<ul style="list-style-type: none"> <li>Combined with other policy tools.</li> <li>Encourages learning and can improve decision-making skills over time.</li> </ul>
Avoid When	<ul style="list-style-type: none"> <li>Information is presented in a complex manner.</li> <li>Message conflicts with what is being presented in the media or by other influencers such as peers.</li> </ul>
When Choice Architecture Can Help	<ul style="list-style-type: none"> <li>When information is overly complex, choice architecture can help improve information processing using nudge techniques such as salience and simplification.</li> </ul>
Nudges and Choice Architecture (Defaults, Simplification, Opt-in vs. Opt-Out)	
Useful when	<ul style="list-style-type: none"> <li>Freedom of choice is important and individual preferences vary.</li> <li>Economic incentives or penalties are not appropriate.</li> <li>Behaviour is affected by cognitive influences and individuals struggle with turning intentions into action.</li> <li>Increasing alignment with current regulations or incentives.</li> </ul>
Avoid When	<ul style="list-style-type: none"> <li>Context can be changed by businesses or other institutions in the marketplace.<sup>15</sup> Additional regulation may be needed to set boundaries for market behaviour. Or, incentives may need to be changed to improve alignment with policy goals.</li> <li>Intended outcome of the nudge may go against individual intentions<sup>16</sup>.</li> </ul>

**Table 1. A General Guide to Choosing Policy Tools**