

“To Nudge or Not to Nudge”: Public Policies and People’s Resistance to Change

Aurora Murgea
West University of Timișoara,
Faculty of Economics and Business Administration, Romania
aurora.murgea@e-uvt.ro

Abstract

Almost two centuries distance from John Stuart Mill and Adam Smith’s works, the Homo economicus concept seems to have fewer and fewer supporters. Designing economic policies based on the idea of an entirely rational individual who has access to all the relevant information and takes decisions strictly following his interest is no more realistic. Several politicians, such as Barack Obama and David Cameron, have used behavioural insides to draw public policies. In this context, this paper has as a main objective to realise a SWOT analysis of nudge-based policies, also trying to answer the next questions: Are they effective? Are they ethical? Are there any limitations in applying nudging in public policies to overcome the main downsides?

Key words: behaviour, change, nudge, public policies

J.E.L. classification: D91, E71, G40, H30

1. Introduction

"Economists assume people have brains like supercomputers that can solve anything, ... But human minds are more like really old Apple Macs with slow processing speeds and prone to frequent crashes." says famous Nobel prize winner Richard Thaler. The human capacity to process, understand and assimilate a large volume of information and stimuli assails it is limited. The hundreds of decisions and judgments that individuals make daily are constrained by personal circumstances, time, hunches, peer pressure, habit, inertia, short-term thinking, optimism, emotion, loss aversion, and ignorance and are rarely based strictly on criteria of rational economic logic.

Public policies often change behaviours to improve economic development for the greater good of all society members. Kreitner (1992) compares change to a stone tossed into a still pond, which causes ripples that radiate in all directions with unpredictable consequences. On the one hand, you need strength to toss the stone because you will have to face air and water resistance; on the other hand, the effects may differ from those you expect.

Grounding the proposed policy on behavioural economics instead of classical economics seems to be more realistic, considering that the main actors and beneficiaries of such policies do not fit very well with the Homo Economicus concept. The nudge theory proposed by Thaler and Sunstein (2008) may represent a fundament of such policies but it also raises the problem of possible manipulation.

This paper aims to develop the theoretical framework of nudging and analyses the pros and cons of using nudges in public policies both from the perspective of their efficiency and from the point of view of potential downsides. In this sense, the second part offers a theoretical background to explain the purpose and the core of nudging. The third explains the research methodology used. The fourth section includes the main findings and the last section concludes.

2. Theoretical background

People are very often resistant to change and prefer to maintain the initial position, despite the effects. Samuelson and Zeckhauser (1988) observed that faced with particularly complex decisions, individuals will choose to do nothing or follow a former decision, an error named Status quo bias or Omission bias. This inaction may be a way to *avoid cognitive dissonance* - individuals are psychologically committed to a decision that has already been made; *transitional costs* -doing nothing is seen as cost-free compared with the change that may incur costs; *the perceived risk of taking action* - individuals weigh losses more than they weigh gains in their decision-making.

Change is not easy to be made. The existing behaviours are deeply rooted in the people's previous experiences, traditions, and community behaviour. When new conflicting information arises, the individuals feel a sort of emotional discomfort, the cognitive dissonance. To reduce the cognitive dissonance, the investor's cortex, through the mechanism of psychological self-defence, filters or minimises the importance of negative information, contrary to the previously formed creed, and fixates on positive information, which is in line with the initial ideas. This reduces the initial emotional discomfort but predisposes him to maintain the initial position and perpetuate the status quo.

Second, people are prone to see change as a costly process and to experience myopia regarding the long-term costs of inaction. Costs may be not only financial but also emotional because the change itself can elicit negative emotions from the people who have become used to a given status quo. Any change has a certain level of associated uncertainty. Very often, individuals are averse to uncertainty, so they prefer to stick to what they know, irrationally believing that what they know has a lower degree of ambiguity than a new situation. In other words: "Better the devil you know than the devil you don't". Even positive changes may be unsettling and lead to status quo inertia (Telesetsky, 2017).

Lastly, people prefer to maintain inertia because of their loss aversion. Individuals have a stronger natural tendency to avoid losses than to obtain profits (Tversky and Kahneman, 1991). Many studies on this topic have outlined the following rule: from a psychological point of view, the possibility of a loss is, on average, twice as strong a motivational factor compared to the chance of winning the same amount. This is why, despite the change may bring a positive outcome, the forecasted positive effect has to be at least double compared with the estimated financial and emotional costs to be a good incentive for the change.

Still, governments often have to find ways to influence people's behaviour in their battle to reduce inflation, unemployment or fiscal deficits and increase well-being. We live in a complex world where everything is interconnected, so each of us is like a small piece of a giant puzzle. Convincing people to use less energy at home, eat healthily, recycle or use public transport instead of driving are only a few examples of government interventions that, through shaping the behaviours, may influence the citizen's well-being. The connections are endless. For instance, convincing people to eat healthily may reduce public medical expenses and indirectly impact the general budget. Spare money may be used for investments and other costs to improve people's lives. At the same time, healthier people may work more efficiently and increase economic development, so it is a win-win situation in all senses, and the examples may continue.

If the need for government intervention seems clear, the optimum way to do it is still in debate. Based on the provision of information and direct and indirect regulations, the traditional approach has many drawbacks, mainly because it starts from the idea that the individual is generally capable of acting rationally. This means that, in public policy-making, humans may perform optimally if we are given accurate information, the right incentives, and we have a reasonable regulatory framework. We may see that, contrary to this belief, people often choose to behave in bad ways for themselves, their loved ones and the entire society even if the conditions mentioned above are met.

Thaler and Sunstein (2008) suggested that, instead of using the traditional approach, policymakers may try to depict how and why the subtle changes in the behavioural and decision-making context manage to drive the individuals away from their best interest and after use this insight to "nudge" the people in the good direction considering their health, wealth and wellbeing. Thaler and Sunstein define a nudge as "... any aspect of the choice architecture that predictably alters people's behaviour without forbidding any options or significantly changing their economic incentives" (Thaler and

Sunstein, 2008, p.6). Going further, in their view, a „good nudge” is seen as one in which one agent carries out the intervention to influence the choices and the behaviour of another; the key to being „good” is that the influence has to be by the interests of the latter.

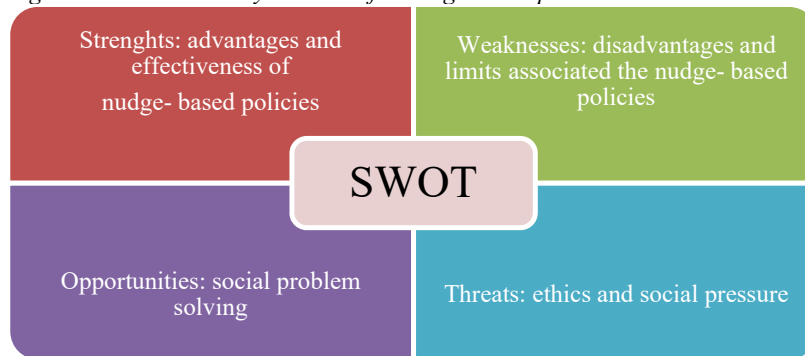
The theory, known as “The nudge theory, “gained supporters and opponents over time. Two of the largest Western democracies (US and UK) used nudge approaches in Barack Obama’s and David Cameron’s mandate (Sunstein was an advisor on regulatory affairs for US President Barack Obama, and Thaler was an advisor for UK Prime Minister David Cameron’s Behavioural Insights Team (BIT), known as “Nudge-unit) and other governments followed their examples more recently. Despite this, the theory also raised much criticism. First, one of the main concerns raised was ethical criticism, voicing the claim that nudging works by „manipulating people’s choices” and limiting their freedom (Bovens, 2009, note 14, p4). The second problem is translating from the micro to the macro level. Considering the empirical evidence on how people make choices (OECD, 2017), behavioural policymakers try to influence the micro-foundation that leads to individual actions (Jilke et al., 2019) but is that effect enough to generate a change at the macroeconomic level?

3. Research methodology

Aiming to develop the nudging existing theoretical framework, this paper uses the SWOT analysis as a strategic tool to analyse the public economic policies based on the nudge theory. Even if SWOT analysis is usually used in the business environment several examples of SWOT analysis used to assess public policies may be found in the literature (Duson, 2004; Ghazinoory and Ghazinoory, 2006; Asriani and Herdhiansyah, 2016).

Using a framework of internal strengths and weaknesses and external opportunities and threats SWOT analysis helps planners to be realistic about their plans and signal the strategic points where they should focus. The analysis may be extended from the firm level to the macroeconomic policy level. In this context the SWOT analysis matrix may be adjusted as follows:

Figure no.1. SWOT analysis matrix for nudge based policies



Source: author’s adjustment of a classical SWOT analysis matrix

Strengths, opportunities, weaknesses and threats will be addressed in pairs in the next paragraph, focusing on one side of the positive side of the nudge-based policies and, on the other side, on the main disadvantages, limits and downside risks.

4. Findings

4.1. Strengths and opportunities: positive nudges in public policies.

Several central and local governments have recently designed policies to reflect behavioural science inside. For instance, in the US, the direct effect of such policies was a substantial improvement in the well-being of individuals and communities and growth in the businesses they serve. Automatic enrolment and automatic escalation in retirement savings plans enhanced Americans’ propensity to save for the future and helped them to cumulate billions of dollars in

additional retirement savings. Similarly, streamlining the application process for Federal financial aid helped millions of students to gain easier financial access to college (The White House, Office of the Press Secretary, September 15, 2015).

Another classic example of a nudge is the „opt-out” organ donation system. For instance, in countries such as Austria, Belgium, France, Hungary, Poland, and Portugal, laws make organ donation the default system at the time of death, so if the people disagree with this, they have to explicitly „opt out” of organ donation. As a result, more than 90% of people register to donate their organs compared with the „opt-in” countries such as the US, UK, Germany, and Denmark, where less than 15% of people register (Johnson and Goldstein, 2003, Davidai et al., 2012).

A few other examples of nudging may be found in the following table:

Table no. 1. Other examples of nudges in public policies

No.	Objective	The nudge	Project name	Effect
1	Reducing gang violence in Cincinnati by using norms and messengers to change behaviour	Gang members were forced to participate in face-to-face forums as a condition of their parole. The forums were, on the one side, meant to show that the gang’s “code” is mainly illusory and, on the other side, to point out the impact of the gang’s violence in the area. The power of the message was increased when coming from someone known, in connection with the gang, as when the mother of a dead gang member warned: “If you let yourself get killed, your mother will be standing here. She will be me.”	Cincinnati Initiative to Reduce Violence (CIRV), US	Founded in 2007 after an increased number of murders in the city, CIRV reduced murders involving gang members by 41 per cent and non-deadly shootings dropped by 22 per cent (according to a 2013 University of Cincinnati review of police data- Bach, 2013). Unfortunately, after two years of budgetary cuts (2010-2011), the project lost its mission.
2	Improving the street cleanliness in Southwark borough	To raise awareness and attract attention, the council hired actors wearing giant litter costumes to play scenes on the streets along the borough. The actors actively engaged with the public, cheering and thanking passers for putting litter in the nearby bins.	„Stalking Litter”, London Borough of Southwark, UK	Data provided by the Southwark council show that the percentage of dirty streets decreased from around 45 per cent in 2002-2003 to less than 10 per cent in 208-2009 because the program started in 2004.
3	Increasing contraceptive use in Zimbabwe	The project uses trained hairdressers to inform their clients about the benefits of female condoms and their use. A familiar person provided the information in a safe environment. Plus, associating condoms with a friendly person and an enjoyable experience increased women’s propensity to use them.	„Get Braids Not Aids” campaign in Zimbabwe.	Center for Health and Gender Equity found out, based on a study amongst 400 hair salon clients, that women who had seen a female condom demonstration by a hairdresser was 2.5 times more likely to use the product than those who had not (Edge, 2008)
4	Increase the volume of pension savings in the UK	The change in regulation introduced auto-enrolment. It requires employers to enrol eligible employees into a workplace pension scheme. Unless they opt out, employees must build up a private pension through their contributions and those of their employer.	Pension Act 2008, UK	The policy has reversed the decrease in workplace pension savings and increased total membership in a private pension plan from 2.1 million in 2011 to 21 million in 2019. The number of active contributors also increased from a low point of 0.9 million active members in 2011 to 10.6 million members in 2019 (Thurley and Mirza-Davies, 2022)

Source: author’s compilation based on Dolan et al. (2010)

More other newer initiatives may be found in very different domains. For example, in 2016, an Australian hospital (St Vincent’s Hospital) discovered that they might save A\$66,000 if patients turned on to their appointments on time. After several trials, they implemented an SMS reminder system that cut 19% of missed appointments. The winning message sounded like this: „You have an appointment with Dr [XXXX] in [clinic XXXX] on [date] at [time]. Attending the hospital will not lose the \$125 that we lose when a patient does not turn up. This money will be used to treat other patients” (Behavioral Insights Unit, 2016).

Another example regards tax compliance in Guatemala (Kettle, 2016). A randomised controlled trial was used to test how to remind the receivers to pay their taxes. The Guatemalan Tax Authority has used four types of reminder letters with adapted behavioural design in contrast with the original letter sent prior or not. The best two letters were the one that included a deterrent message framing non-declaration as an intentional and deliberate choice rather than oversight (that message was created to overcome status quo bias), and the second message stated that 64.5 % of taxpayers already paid this tax (join the status quo of the others). As a result of these two interventions, tax payments increased by 43% in just 11 months.

In environmental policies, United Nations Development Programme China, with the Giant company Baidu used behavioural insights to nudge people to motivate them to recycle more electronics (Chin, 2017) through an app that links users who want to get rid of their used electronic appliances with legitimate waste recycling firms. To increase the user’s motivation, the behavioural insights experts suggested ways to motivate users to recycle more, such as introducing a rewards system to the app. The app was first piloted in Beijing and Tianjin and is now used in many Chinese cities.

Several factors were considered important for the effectiveness of a good nudge (Ong, 2019). First, the nudge is more effective if its need is determined by the existence of a cognitive bias as the status quo. The biases may inflict on decisions that lead to an increase in personal welfare, so if the nudge is designed to overcome the bias effect, then the chances of being effective are pretty high. Easily opt-out is also essential for a nudge to be considered good and effective. For instance, following the UK Pension Act, citizens are protected from the status quo through automated enrolment. Still, they may easily opt-out if, for example, their financial interests are better served by other private arrangements than the ones offered by the state or company. The effectiveness of the nudge is reduced in matters that require a change in people’s preferences or mindsets because the nudge may be effective for a short time when people are under its influence but may vanish after when they are in a different scenario (for instance the pupils in the high school cafeteria may choose fruits because are in their sight and the other suits are hardly visible but later if they prefer chocolate will go to buy some despite the nudge in the cafeteria).

If designed correctly, it is clear that nudging may help state and citizens achieve their goals. The question arises: although all those positive effects, is there any downside, any other face of the coin? This is the question we are trying to answer in the next paragraph.

4.2. Weaknesses and threats: The dark face of nudging

Despite the positive side of nudging and its potential effectiveness in public policies, several criticisms were addressed over time.

One criticism is that the initiators of the nudge are often influenced by the same heuristics and biases they try to correct in others. Framing, confirmation, the illusion of similarity, optimism, and the illusion of control are just a few. But the existence of behavioural biases in government may even increase, not reduce, the need for behavioural insights (policymakers et al., 2018). Different strategies may be used to reduce the biases impact on government decisions as using re-framing techniques for framing bias, „premortem” scenarios where government forecasts future failure of the project and then work back to identify why things went wrong for optimism bias, incorporating mechanisms for feedback and adaptation in implementation plans for the illusion of control (for more details about it one may see Hallsworth et al., 2018).

Other authors such as Conly (2012) or Hausman (2018) raise the point that nudging is disrespecting people by treating them like children is unethical and undermine autonomous decisions, is condescending and arrogant and not in a last way instead of reducing deliberative flaws sometimes

perpetuates and amplifies them. The most important one seems to be the idea that nudge works by manipulating people's choices. (Bovens, 2008). It seems clear that nudging is a result of the deliberative decisions to influence the choice, in theory trying to promote specific goals and values but may one guarantee that those goals and values are consistent with one's own? Another question asked is how one could distinguish nudging from other methods that influence citizens to act if not against their will, at least in the absence of consent. Here, what Thaler and Sunstein see as ultimate goals for the nudges may bring some light because they state that policy makers have to apply nudges to promote ends that are in the interest of citizens, as judged by themselves. However, it is still in debate if governments have all the time a correct idea about the citizens' interests and if they can overcome the regulatory rules that may limit architectural change. For instance, in 2012, New York Mayor, Mr Bloomberg, proposed a very controversial ban on sugary drinks to reduce obesity (under the plan, all New York City-regulated restaurants, fast-food establishments, delis, movie theatres, sports stadiums and food carts would be banned from selling sugar-sweetened drinks in cups larger than 0.5 litres). Mr Bloomberg said in an interview on Wednesday in City Hall's sprawling Governor's Room. "New York City is not about wringing your hands; it's about doing something" "I think that's what the public wants the mayor to do." (Grynbaum, 2012). Despite the good intentions, under the social pressure and lobby of the major beverage companies, on June 2014, the New York Court of Appeals ruled that the New York City Board of Health, in adopting the regulation, exceeded the scale of its regulatory authority.

The individuals' perceptions regarding nudging as intrusive on the freedom of choice seem to differ among countries and individuals and different types of nudges. In a 2015 study, Hagman et al. analysed the attitude toward two kinds of nudges: pro-self-nudges (aiming for private welfare) and pro-social nudges (targeting social welfare) and found out that the level of support for this kind of politics was relatively high, with a greater acceptance in Sweden compared with the US (Branson et al., 2011 also found relatively high levels of support for government involvement across countries). Paradoxically, most respondents considered the presented nudge interventions as intrusive to freedom of choice despite their support (more individualistic individuals perceived the intervention as more intrusive than individuals more prone to analytical thinking). The acceptance rate among the two types of nudges was also different: pro-social nudges had a significantly lower acceptance than pro-self nudges.

To overcome this possible ethical problem, Lades and Delaney (2022) proposed an ethics framework that suggests that nudges have to consider seven ethical dimensions when they design the nudge: *Fairness, Openness, Respect, Goals, Opinions, Options and Delegation* (FORGOOD). In terms of *Fairness*, it is essential to assess if the proposed policy may lead to any undesired redistributive effects. Suppose the nudge affects a group more than another group. In that case, a specific nudge may bring positive results for a part of the citizens and negatively influence others since the groups may be different in terms of preferences and available resources. To be considered *open*, a nudge has to be openly communicated and readily acknowledged by the citizens, not to be hidden and manipulative. Regarding the third element, *Respect*, a nudger should ask himself if the policy harms autonomy, dignity, freedom of choice and privacy since an ethical nudge has to respect people. In terms of *Goals*, it is essential to see if the nudge aims to make people's lives better off, as judged by themselves and not by the policymakers (Thaler and Sunstein, 2008). It has to be a change people approve of and, thus, is ethically legitimate. Going further, not only the goal has to be agreed upon, the ends, but also the means, and the methods used to obtain those ends. In other words, public *Opinion* is essential, and nudgers may question themselves if the nudge would withstand public scrutiny. Speaking about *Options* is important to note that nudging is not the only way to achieve results. In some cases, hard interventions such as bans, differentiated taxation, and different restrictive regulations or incentives may generate better results. A cost-effectiveness analysis is needed to establish if a nudge is a way to tackle the issue. The last point, *Delegation*, raises the question of whether the nudgers have the right and the knowledge needed to implement the nudge and if they are not in any conflict of interest in the process. If the nudger has a personal interest is hard to believe that the nudge will be designed in the citizen's interests and not in his own, and competency in designing, administrating and evaluating behavioural policy is a must-have.

5. Conclusions

Many examples of effective application of the Nudge theory in public policies may be found in the literature. Still, the intrusion into the freedom of choice seems to determine a lot of criticisms. For instance, in the UK, the libertarian blog Spiked, supported by a series of liberal academics, went as far as declaring „war on nudge”.

The problem seems to be connected with the general role of the government since, in fact, any type of governmental intervention, whether we speak about nudging or fiscal, environment, health, education or other policy, may be seen as intrusive on the freedom of choice. Increasing excise taxes on tobacco and alcohol to reduce their consumption and different incentives to reduce pollution, for instance, may also be seen as intrusive if we follow this line of arguments, even if their acceptance level is higher. The government is responsible for establishing the economy's educational, technological, physical, environmental and social infrastructure to fulfil its central role in increasing wealth and living standards. (Stiglitz, 1997). In this context, well-designed governmental policies may overcome the existing imperfection of information, competition or incomplete market problems if the imperfection is severe enough to be addressed and the policy is designed so that the benefits outweigh the cost.

If we go deeper, at the emotional level, Fineman’s theory of vulnerability (Fineman, 2010) states that we all, as human beings are vulnerable and prone to dependency, so the state must find ways to reduce and compensate for this vulnerability establishing and supporting societal institutions. Fineman distinguishes between two alternative state primary obligations: autonomy and equality. Nudging practices may be even more intrusive if the primary obligation is to guarantee autonomy. But as we have seen in the US last decades in the US, the ascendancy of a narrow understanding of autonomy from state regulation and intervention has led to diminishing options and autonomy along with an increasing level of inequality. For instance, one may remember the effects of the “laissez-faire” policy regarding the regulation of derivatives markets, which led the world economy into a deep financial crisis and accentuated inequalities. Convinced that the economy works better free without state intervention, U.S. Congress decided to deregulate financial derivatives with the Commodity Futures Modernization Act (CFMA) in 2000. The high level of banks’ greed, associated with a poor understanding of some of the contracts such as Credit Default Swaps and this deregulation, represented a clock bomb that detonated in 2008, affecting not only the American economy but the entire world economy, increasing poverty and inequalities (Stout, 2009). On the other side, if we assess the relationship between state and individual with the primary objective of enhancing equality, opportunity and access, then the state has to move in a more active and responsive position definitely. This does not imply casting aside autonomy and choice freedom but creating support from society and institutions to give individuals the needed resources to develop options and make choices.

Our choices are always influenced by the context where the decision is made and often „manipulated” by the state through taxation and regulation. Nudging is not a lot different. If we accept the idea that the state has to play a role in the economy, then we must also accept the idea that if the nudge is transparent and never misleading, easy to opt out and orientated towards improving the welfare of those being nudged, then is admissible. Plus, using the FORGOOD ethics framework may reduce the manipulation and intrusion into freedom of choice and increase political effectiveness.

6. References

- Asriani and Herdhiansyah, D., 2016. The Implications of Government Policy for the Development of Agro-industry Sago with SWOT Analysis. *International Journal of Business and Management Invention*, 5(7), p.18-22.
- Bach, J., 2013. Killer data. Researchers save lives by unlocking the street code in Cincinnati. *UC Magazine* [online] Available at: <https://magazine.uc.edu/issues/0408/killer_research.html > [Accessed 22 September 2022].

- Behavioural Insights Unit, NSW Government, (2016). *Behavioural Insights in NSW. Reducing missed hospital appointments with better text messages.* [online] Available at: <<https://www.nsw.gov.au/behavioural-insights-unit/blog/reducing-missed-hospital-appointments-better-text-messages>> [Accessed 2 October 2022].
- Bovens, L., 2009. The ethics of nudge. In: Grüne-Yanoff, T., Hansson, S.O. eds. 2009. *Preference change. Theory and Decision Library.* Dordrecht: Springer, 42, p.207-219. https://doi.org/10.1007/978-90-481-2593-7_10
- Branson, C., Duffy, B., Perry, C. and Wellings, D., 2011. *Acceptable behaviour? Public opinion on behaviour change policy.* Ipsos Social Research Institute. [online] Available at: <<https://www.ipsos.com/sites/default/files/publication/1970-01/sri-ipsos-mori-acceptable-behaviour-january-2012.pdf>> [Accessed 12 October 2022].
- Chin, C., 2017. How this app is tackling China's e-waste conundrum. [online] Available at: <<https://govinsider.asia/inclusive-gov/how-this-app-is-tackling-chinas-e-waste-conundrum/>> [Accessed 17 September 2022].
- Conly, S., 2012. *Against Autonomy: Justifying Coercive Paternalism*, Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781139176101>
- Davidai, S., Gilovich, T., and Ross, L. D., 2012. The meaning of default options for potential organ donors. *Proceedings of the National Academy of Sciences*, 109(38), p.15201-15205. <https://doi.org/10.1073/pnas.1211695109>
- Dolan, P., Hallsworth, M., Halpern, D., King, D., and Vlaev, I., 2010. *MINDSPACE: influencing behaviour for public policy.* Institute for Government UK Report [online] Available at: <<https://www.instituteforgovernment.org.uk/sites/default/files/publications/MINDSPACE.pdf>> [Accessed 29 September 2022].
- Dyson, R. G., 2004. Strategic development and SWOT analysis at the University of Warwick. *European journal of operational research*, 152(3), p.631-640. [https://doi.org/10.1016/S0377-2217\(03\)00062-6](https://doi.org/10.1016/S0377-2217(03)00062-6)
- Edge, L., 2008. *The female condom: still an underused prevention tool.* The Lancet. Infectious diseases [online] Available at: <[https://www.thelancet.com/article/S1473-3099\(08\)70103-8/fulltext](https://www.thelancet.com/article/S1473-3099(08)70103-8/fulltext)> [Accessed 9 October 2022].
- Fineman, M. A., 2010. The vulnerable subject and the responsive state. *Emory LJ*, 60, p.251.
- Ghazinoory, S., and Ghazinoori, S. (2006). Developing Iran's government strategies for strengthening the national system of innovation using SWOT analysis. *Science and Public Policy*, 33(7), p.529-540. <https://doi.org/10.3152/147154306781778759>
- Grynbaum, M.M., 2012. *New York Plans to Ban Sale of Big Sizes of Sugary Drinks*, [online] Available at: <<http://www.nytimes.com/2012/05/31/nyregion/bloomberg-plans-a-banon-large-sugared-drinks.html?pagewanted=all>> [Accessed 30 September 2022].
- Hallsworth, M., Egan, M., Rutter, J., and McCrae, J., 2018. *Behavioural government: Using behavioural science to improve how governments make decisions.* BIT Report [online] Available at: <<https://apo.org.au/sites/default/files/resource-files/2018-07/apo-nid303550.pdf>> [Accessed 10 September 2022].
- Hausman, D. M., 2018. Nudging and other ways of steering choices. *Intereconomics*, 53(1), p.17-20. <https://doi.org/10.1007/s10272-018-0713-z>
- Jilke, S., Olsen, A.L., Resh, W. and Siddiki, S., 2019. Microbrook, mesobrook, macrobrook, *Perspectives on Public Management and Governance*, 2(4), p. 245–53. <https://doi.org/10.1093/ppmgov/gvz015>
- Johnson, E. J., and Goldstein, D., 2003. Do defaults save lives? *Science*, 302(5649), p. 1338-1339. <https://doi.org/10.1126/science.1091721>
- Hagman, W., Andresson, D., Västfjäll, D., Tinghög, G., 2015. Public Views on Policies involving nudges, *Review of Philosophy and Psychology*, 6, p.439-453. <https://doi.org/10.1007/s13164-015-0263-2>
- Hansen, P. G., and Jespersen, A. M., 2013. Nudge and the manipulation of choice: A framework for the responsible use of the nudge approach to behaviour change in public policy. *European Journal of Risk Regulation*, 4(1), pp.3-28. <https://doi.org/10.1017/S1867299X00002762>
- Kettle, S., Hernandez, M., Ruda, S., and Sanderson, M. A., 2016. Behavioral interventions in tax compliance: Evidence from Guatemala. *World Bank Policy Research Working Paper* 7690. <https://doi.org/10.1596/1813-9450-7690>
- Kreitner, R., 1992, *Management* .5th Edition. Boston: Houghton Mifflin.
- Samuelson, W. and Zeckhauser, R., 1988. Status quo bias in decision making. *Journal of Risk and Uncertainty*, 1, pp. 7-59

- Lades, L. K., and Delaney, L., 2022. Nudge FORGOOD. *Behavioural Public Policy*, 6(1), p.75-94. <https://doi.org/10.1017/bpp.2019.53>
- OECD, 2017. *Behavioural Insights and Public Policy: Lessons from Around the World*, Paris: OECD Publishing.
- Ong, Qiyang, 2019. *How to nudge better in public policy*. Etos digital issue 5[online] Available at:< <https://www.csc.gov.sg/articles/how-to-nudge-better-in-public-policy>> [Accessed 4 October 2022]
- Samuelson, W., and Zeckhauser, R. 1988,. Status quo bias in decision making. *Journal of risk and uncertainty*, 1(1),p.7-59. <https://doi.org/10.1007/BF00055564>
- Stiglitz, J. E.,1997. The role of government in economic development. In *Annual World Bank Conference on Development Economics*, vol. 1996, p. 11-23. Washington DC: World Bank.
- Stout, L. A., 2009. How deregulating derivatives led to disaster, and why re-regulating them can prevent another. *Lombard Street*, 1(7), p. 09-13.
- Telesetsky, A., 2017. Eco-restoration, private landowners and overcoming the status quo bias. *Griffith Law Review*, 26(2), p.248-274. <https://doi.org/10.1080/10383441.2017.1355770>
- Thaler, R. and Sunstein, C., 2008. *Nudge – Improving Decisions about Health, Wealth and Happiness*. New Haven, CT: Yale University Press.
- The White House (Office of the Press Secretary), 2015. *Executive order-using behavioral science insights to better serve the American people* [online] Available at:< <https://obamawhitehouse.archives.gov/the-press-office/2015/09/15/executive-order-using-behavioral-science-insights-better-serve-american>> [Accessed 15 September 2022].
- Thurley, D. and Mirza-Davies, J., 2022. *Pensions: automatic enrolment - current issues*, Research Briefing, House of Commons Library, [online] Available at:<<https://researchbriefings.files.parliament.uk/documents/SN06417/SN06417.pdf>> [Accessed 15 September 2022].
- Tversky, A., and Kahneman, D., 1991. Loss aversion in riskless choice: A reference-dependent model. *The quarterly journal of economics*, 106(4), p.1039-1061. <https://doi.org/10.2307/2937956>