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The use of behavioral economics in promoting public policy

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Abstract. *Behavioral economics is a recently developed area of science which brings together information from the fields of economics, sociology and psychology. The knowledge which has resulted from this approach allowed decision makers to make improvements upon the way in which public policy is promoted by the government, by taking into consideration the natural preferences of individuals for certain types of behaviors. This paper will first present a comprehensive literature review of the results, which have been obtained in the study of nudges. However, in an effort to best show the practical value of a public policy, that includes nudges, the main focus of the paper will be the Behavioral Insight Unit. Also known as the Nudge Unit, this organization has collaborated with different branches of the British government and has helped them implement policies ranging from reducing medical prescription errors to improving commitment to job centers or even improving tax collections.*

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JEL Classification: J24, G01, O34, Q01.

The use of the principles of behavioral economics in regulating preferences and decisions of individuals is becoming a continuously growing global trend. Behavioral economics methods are used often in the shaping of public policies that are based on the actual behavior of individuals and not hypothetical one. Countries like the United States and Great Britain already successfully implemented such policies, opening up new ways of thinking and regulating public policies based on studying the behavior of individuals and introducing the concept of choice architecture.

Behavioural economics, a relatively new branch of the economic discipline, seeks to identify and explain the way in which individuals make decisions. Established at the intersection of economics with other social sciences, it takes into account theories derived from psychology and sociology in studying of human economic behavior. Moreover, researchers are interested in studying the motivations and factors determining seemingly irrational behaviors (loss aversion, anchoring, overconfidence, framing, herd mentality, etc.) observed in different socio-economic backgrounds.

The evolution of behavioral economics

In many respects, behavioral economics is positioned in contrast with the standard economic theory - especially through its controversial in nature in raising a number of relevant questions with philosophical implications, methodological and historical. Being characterized by many of its theorists as a new economic science that uses methods and analytical techniques from psychology to the study the decision-making processes and economic behaviors in order to grow "the explanatory and predictive power of economic theory by providing it with more plausible psychological motivations" (Weber and Dawes, 2005, p. 91).

The opposition to the neoclassical mainstream is especially obvious when regarding the claim that individuals seek to maximize their utility and economic gain in any case, due to the fact that the behavioral approach generally attributes a slightly irrational behavior characteristically to all individuals, which from a scientific perspective can be determined by a number of factors (judgmental biases, mental accounting, manipulation techniques, etc.). All aiming to contribute to rethinking the standard image, *homo economicus*, ultra-rational individual who is constantly in possession of all the information and is able to perform all calculations to maximize economic gain regardless of his environment.

It should be noted that behavioral economics does not imply a rejection of neoclassical economic approach based on utility maximization, balance, and efficiency - on the contrary, this approach is considered useful, by providing economists with a theoretical framework that can be applied in formulating and hypothesis for testing on various types of economic behavior and much more. (Camerer and Loewenstein, 2002)

The term "behavioral economics" was first used in 1958 (Johnson 1958), as an umbrella term that combines elements from several disciplines and research areas. However, some researchers believe that the ideas of new directions date even from the time of Adam

Smith's writings (1759), Alfred Marshall (1890), Vilfredo Pareto, Tarde (1892), Veblen (1899), Mitchell (1914) or Keynes (1936).

Among the researchers who achieved remarkable in the field of behavioral economic in the recent decades, we can remember economists like George Katona, Irving Fisher and Herbert Simon, whose efforts in explaining the term "bounded rationality" (Simon, 1987, p. 222), which defines the limited capacities of an individual in the decision-making process, were awarded the Nobel Prize just a few years later.

However, the economists Richard Thaler and Sheffrin Hersh (1988) showed through extensive laboratory research and experiments that people are generally less interested in their welfare in the long term, rather seeking to gain immediate rewards for themselves, reacting more easily and more widely to various external stimuli than to their own inner projection of a future welfare that could be eventually achieved.

Other common concepts associated with the study of behavioral economics have as a central focus constraining the choices of individuals, in order to "protect" them from certain cognitive biases that might impair them from achieving the expected utility.

In this respect, Mathew Rabin (2008) identifies several weaknesses of the "standard economy", pointing out that, when individuals have to choice from a set of (x, y), they do not always make use of their absolute freedom and are influenced by different manipulation techniques, often choosing x when desired y. He also emphasizes three very important hypotheses about behavioral economics:

1) Loss-aversion overtakes the pleasure of winning;
2) Individuals' disposition concerning personal interest may appear due to various issues, such as fairness, altruism or even revenge;
3) In uncertain circumstances, misconceptions and judgmental biases (including those generated by too much or too little information) can lead to errors.

Moreover, Akerlof and Shiller argue the need for a government to maintain an active role in economic policy and guiding the human behavior and decision-making process. They consider government intervention to be necessary, noting that just allowing the markets and socio-economic mechanisms to function without regulating them will simply not be enough.

Behavioural economics represents a new direction of economic thinking opposed to neoclassical economics. This is because the approach to the subject is less influenced by the assumptions made in order to build the economic model and more than the current processes that govern human behavior.

One of the key issues of behavioral economics is how it can be used to improve the decisions of individuals and organizations. The idea of offering a helping hand to guide the decision-making process has come to be known as a Nudge (push), due in no small part to the book with the same name written by Thaler and Sunstein. A nudge is defined as 'an aspect of choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives.' (Thaler and Sunstein, 2008).

Governments around the world design more "nudges" to encourage people to live healthier and more responsible. To better understand how widespread the phenomenon, the paper presents further activity and measures applied by Insight Behavioral Unit (Unit understanding of the behavior) in the UK.

The 'Nudge' Unit

Behavioural Insights Team (BIT), also informally known as the Nudge Unit, was born in 2010 at the initiative of the ruling coalition at that time in the UK. It was created following the success of the MINDSPACE report which highlighted the importance of using the lessons learned from behavioral economics in the implementation of public policies.

The Mindspace report proposed a methodology, called "test, learn and adapt", which was comprised of nine steps and emphasized the importance of using empirical methods in order to validate decisions. (Institute for Government, 2010)

The steps in the methodology will be presented below (Behavioural Insight Unit, 2013):

Test:
1) Identify two or more public policy interventions to compare
2) Determine the desired result of changing public policy and how it will be measured
3) Decide whether the random test to be conducted will be made at the individual, institutional or geographical level
4) Determine the sample size
5) Randomly assign each sample unit to the control or treatment group
6) Apply those public policies to the selected sample
7) Learn
8) Measure results and determine the impact of policy interventions
9) Adapt
10) Modify public policies based on the results obtained in the previous
11) Return to point 1 so as to better understand what works and what does not

Using behavioral economics to reduce tax evasion, errors and debt

In order to analyze, in better detail, human behavior concerning how people report income, whether they pay on time, BIT used the "test, learn and adapt" methodology to check if there are some key elements that can influence people's attitudes towards taxes. In this regard a series of eight tests was proposed, which are to be described below, and are based on a number of key ideas proposed by the specific behavioral economics literature and are associated to the concept of Nudge.

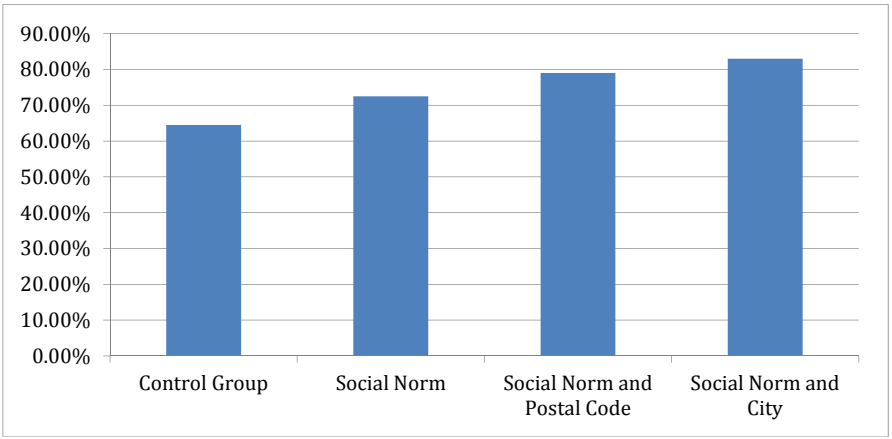
- Make it easy: the process should be simple so as not to create barriers (Dohrmann and Pinshaw, 2009)
- Highlight key messages: people don't use all of the information they are presented with and give greater importance to certain elements (Kahneman, 2011, pp. 363-376)

- Use a personal style: use less formal language to increases the likelihood that people consider the message in question as relevant to them (Behavioural Insights Kingdom, 2012)
- Promote honesty: use certain formulations during the interaction, remind the person that it is important to be honest in what they declare (Shu et al., 2011)
- Use social norms: pointing to the fact that most people have a certain behavior will increase the likelihood that the person to whom it is addressed in turn adopt that behavior (Schultz et al., 2007)
- Reward desired behavior
- Highlight of risk of dishonest behavior: point out the negative impact that a dishonest behavior can have on the person and on others (Kleven et al., 2010)

Test 1: Use social norms

This test is based on a number of other studies which have shown that the use of social norms provided satisfactory results when trying to promote a certain type of behavior. (Schultz et al., 2007) To increase the rate of collection, BIT researchers have modified the information letter sent so some taxpayers so that some would receive a standard text and others a text which contains the sentence "9 out of 10 people pay their taxes on time" with some variation in terms of people referenced. (Behavioural Insights Kingdom, 2012)

The results can be seen in the table below and show a significant increase when compared to the control group for which there is no reference to any social norm.

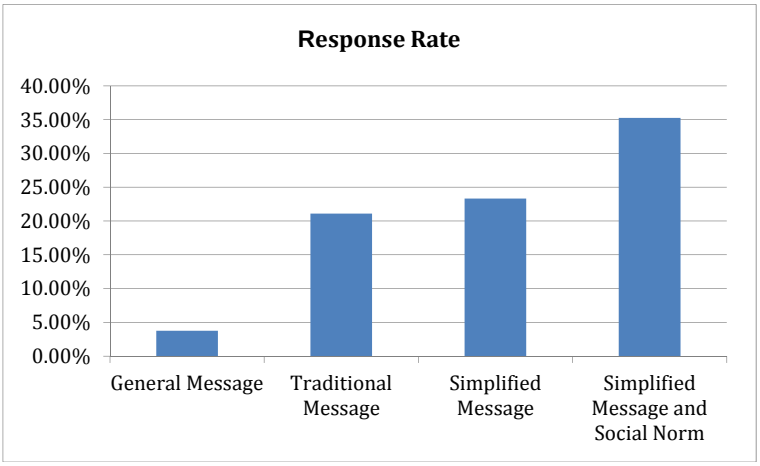


Source: Behavioural Insights Unit, 2012, p. 23.

Test 2: Highlighting key messages and social norms

The starting hypothesis for this second test applied by the BIT was that, by using clear and simple messages that highlight what is desired from the person and what are the implications should the message be ignored, the number of those who declare their income on time may be increased. The methodology was similar to the first test, except that the sent message changed. The control group received a traditional letter and the treatment group received a simplified message. Actual results can be seen in the table

below, however, it should be mentioned that in all cases the data showed significantly better results for the simplified message when compared to the classic message.



Source: Behavioural Insights Unit, 2012, p. 25.

Test 3: Use salient images

This test seeks to determine whether certain images may be used in order to increase the response rate. To do this, the traditional letter sent to car owners who have not paid their taxes was modified as follows: the control group received the traditional letter, the first treatment group received a simplified letter and the second treatment group received the simplified message along with a picture of the car for which no tax was paid. Data from this test yet to be made public. (Behavioural Insights Kingdom, 2012)

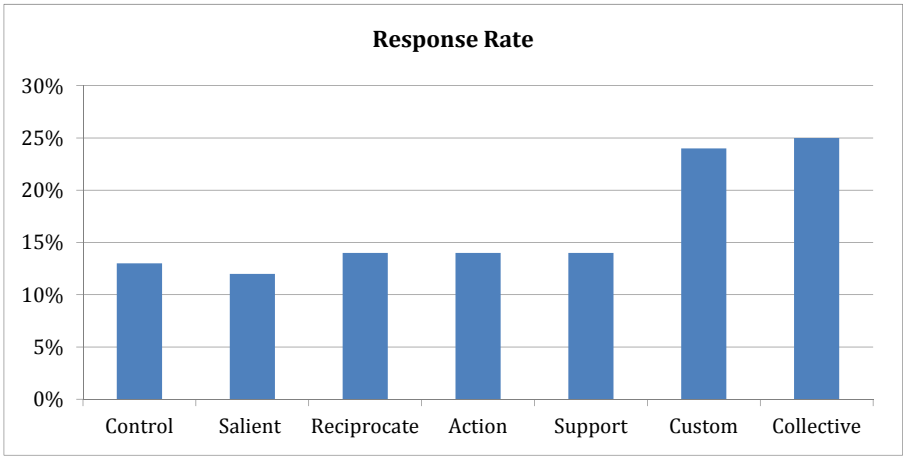
Test 4: Better Presentation of Information

The starting hypothesis for this test is that presenting information in a clear manner may increase the number of those who comply with the instructions (Dohrmann and Pinshaw, 2009). In order to increase the number of people who get in touch with tax authorities so as to solve a specific issue, a test was conducted which divided, at random, a sample of 39,000 people who received one of several variants of a letter (Behavioural Insights Kingdom, 2012):

- Control group: a simple letter with a phone number.
- Sent message: a letter containing a summary at the end of the letter along with the key information.
- Reciprocity: a letter explaining the services provided by the tax authorities and how they can help solve the problem.
- Action: a letter requiring a person to choose a particular day when to get in touch with tax authorities.
- Support: Letter reiterating the readiness of the authorities to help.
- Custom message: the message is formulated so that it resembles a personal message and asks the person to not miss the opportunity to get in touch with authorities.

- Collective message: the message is formulated so that it resembles a collective message and asks the person to not miss the opportunity to get in touch with authorities.

Again, the results are more in favor of personalized messages that speak directly to the taxpayer.



Source: Behavioural Insights Unit, 2012, p. 27.

Test 5: Using custom text messages

This test seeks to determine whether, by using a text message, either simplified or a more complex one that takes into account certain identifying details of the person to whom it is addressed, may or may not increase the number of people who pay their taxes. Similar to Test 3, the final data is being collected and have yet to be published yet. (Behavioural Insights Kingdom, 2012)

Test 6: Prompting honesty

This test seeks to verify the hypothesis that people when they are asked explicitly to be honest in their statements are more likely to declare the truth. To check whether this happens or not, part of Manchester city residents, who requested a specific exemption from property taxes, received a letter asking them to confirm this request. Again, there were 3 types of letters, a standard letter of information for the control group, a simplified letter and a simplified letter asking them from start for their signature to confirm the information that they would declare.

It is worth mentioning that the differences between the 3 groups are not significant, the proportion of those who continued to seek tax relief was 78%, 72% and 75% respectively. (Behavioural Insights Kingdom, 2012)

Test 7: Varying the tone of letters

This test verifies whether by using different styles of communication one can increase the number of people who file their tax returns. The test uses 3 letters: one to inform, a simplified one that warn that it is the; last chance and a last letter to encourage cooperation. Again, the final data has not been collected and is yet to be released. (Behavioural Insights Kingdom, 2012)

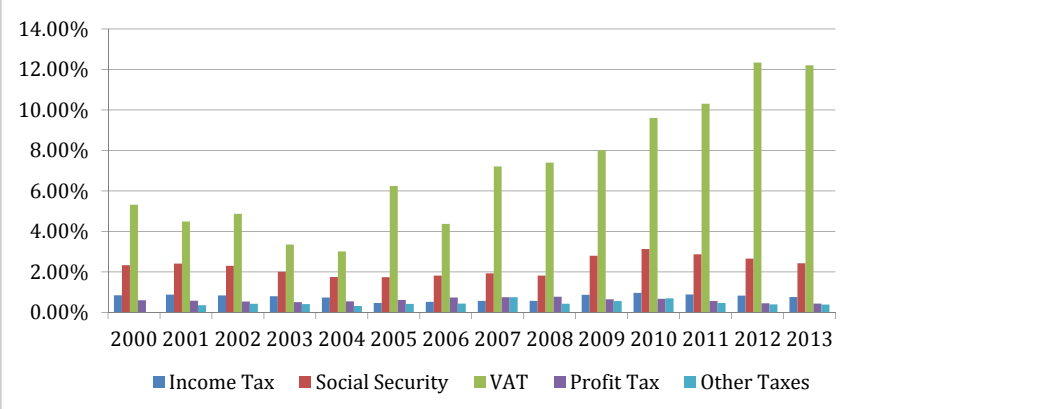
Test 8: Using beliefs about tax

This test seeks to ascertain whether there are significant differences in behavior, concerning the payment of taxes, between individuals and businesses. To do this, BIT researchers applied the aforementioned tests in the interactions between the state and companies. The procedure is similar to the variants presented and the data is still being collected. (Behavioural Insights Kingdom, 2012)

Losses due to tax evasion, collection errors and uncollected amounts are valued at about 40 billion pounds annually in the UK and improving the collection should be an important matter for the authorities. The results obtained from the application of the above tests are encouraging, test 1 helped gather £160 million in the period in which it was conducted, test 2 brought in an extra £1 million and the third test helped Manchester City to save about 240,000 pounds. (Behavioural Insights Kingdom, 2012) In the following a short presentation of the situation in Romania will be made and, even though it is clear that there are major differences regarding the causes, one need to remember that significant results can be achieved by making a few key changes.

Tax Evasion in Romania

Tax evasion is a particularly important issue for Romanian society due to the very high level it has reached. According to the annual report published by the Fiscal Council, should Romania collect all taxes due, at their maximum level, budget revenues should be above the level of the European Union, as a percentage of GDP (Consiliul Fiscal - România, 2013).



Source: Consiliul Fiscal - România, 2013, pp. 128-129.

As can be seen from the above data, the problem of tax evasion in Romania is growing. However, it cannot be said that there is a strategy to combat tax evasion and, even if there can be found certain regulatory changes towards that purpose, their impact is difficult to measure and difficult to determine which strategies are directed towards which category. Also, it is quite difficult to achieve a comparison with other countries because of the difficulties encountered in the case of Romania can somewhat different, the biggest problem being the efficient collection of VAT, with the others being secondary.

Conclusion

The issue of tax evasion is a particularly serious for most countries of the world and its economic impact is felt even more so in a period of economic contraction when budget revenues decrease. The difficulties experienced by Romania can be alleviated by programs aimed at reducing tax avoidance and, even if changes are required at the level of in the entire system in order to reduce losses from VAT, one must remember that significant results can be achieved using small changes, based on certain behavioral changes. To this point we have presented above results obtained by BIT in the UK who have contributed to revenue growth simply by changing how they addresses taxpayers.

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