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NUDGE AND PENSIONS*

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SUMMARY: 1. Introduction; 2. What is nudge?; 3. Why nudge?; 4. Do people take rational savings decisions?; 5. Different types of nudge; 6. When does a nudge work?; 7. The importance of evaluating a nudge; 8. Examples of nudge, retirement and savings; 8.1. Passive choice; 8.1.1 Automatic participation; 8.1.2 Passive choice in the premium pension system; 8.2. Active choice; 8.2.1 Commitment to save; 8.2.2 Commitment to save more and more; 8.2.3 Social norms and comparisons; 8.2.4 Framework; 8.2.5 Reminders; 9. Nudge lessons in the Swedish pension system; 9.1. The premium pension system; 9.2. Withdrawal of occupational pension; 9.3 Salary exchange; 10. Conclusions.

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ABSTRACT: Do we take the “right” decision when we save money for our retirement? Many of us probably do not save enough for a pension and perhaps we may not save in the best way possible. Can *nudge* make us taking better pension decisions? Nudge means that someone, such as an authority or an insurance company, designs the decision-making situation to influence people’s behaviour without simultaneously changing economic incentives and by removing relevant available options. This text analyses different types of nudge and under what conditions these may have effect. The discussion illustrates examples of how nudge works in terms of pensions and savings. The analysis also includes the decisions that individuals should take at the date of retirement.

Nudge can affect people’s pension savings. However, the knowledge about how and why nudge exactly works or does not work is incomplete. The effect on total savings is also unclear. A good knowledge about why people choose and save as they do is necessary in order to design an effective nudge. Therefore, each nudge should be followed by an evaluation. In the nudge “save more tomorrow”, saving turned out successful. By committing to save future pay rise, some problems related to poor self-control can be solved. This type of saving could be introduced within the occupational pension scheme. Automatic participation and pre-selection have a great effect too. Automatic withdrawal of occupational pension at the age of 65 (pre-selection) represents a strong (unintended) nudge to retire. Abolishing this nudge would probably be an effective way to raise the retirement age. There are also many indications that pre-selection with lifelong payout of the occupational pension is important.

KEYWORDS: nudge, pensions, retirement, savings.

1. INTRODUCTION

Imagine that you have to choose between the following two options: 1) receiving 1000 Swedish crowns right now or 2) receiving 1010 crowns tomorrow. What would you choose? Experiences from research studies show that many people choose the first option -it would simply not be worth waiting one day to earn another 10 crowns. Even though the return on an annual basis is higher -imagine that you make an investment of 1000 crowns, which increases in value by 10 crowns per day in one year- many people are still so impatient that they choose the first option. Now we slightly change the conditions. Instead, you should select 1) 1000 crowns in exactly one year or 2) 1010 crowns in one year and one day. What would you choose? Most people now go for the second alternative, although they selected option 1 in the first case. The prerequisites are basically the same: waiting one more day for 10 crowns or not. Nevertheless, the choices vary for many people. In economic terms, this is called dynamic inconsistency. The human trait explaining this behavior is impatience, a characteristic that leads to focus on the present day. This is one of several reasons for saving too little that I will discuss in this report. Furthermore, this points out that if people were to choose in advance, they would take another decision.

Conversely, if I give the following options: you should now -today- decide what to choose in a year's time 1) 1000 Swedish crowns in exactly one year or 2) 1010 crowns in a year and one day, then many people would choose option 2. At this point in time, we would prefer to make a different decision than the one we would take in the future. Differently expressed: we ourselves think that we are too impatient (and save too little).

Getting people to save more, and to save better, is something that is discussed in policy circles, but also in academic circles. It has been thought about the motive for saving, what role economic incentives play and whether education and information can affect people's choices and savings. However, in this report I will investigate a slightly different form of influence, which is nudge.

Nudge can be translated as push or boost. I have chosen to use this English word throughout the report since it is already commonly used in Swedish. On Google, you get over 11 million hits if you search for *nudge* and on Amazon, more than 2500 hits. In both England and the United States, the so-called nudge units have been created -with the purpose of using

behavioral sciences to improve the way public sector works and to help people make better decisions.

Even companies say that they work with nudging to improve their results –at the same time they create a better world. Nudge is used in areas such as health, environment and savings. In this report, I will discuss what role nudging can play when it comes to affecting people’s savings behavior, not least for their retirement. While reading different reports, it is easy to get the impression that the use of nudge is the solution to most of the problems in this world, but that is certainly not the case, especially when it comes to saving. Returns, income and other economic factors are very important for explaining how much people save.

Nudging is about an impact beyond traditional economic factors. Saving for retirement and decisions that directly affect the pension, such as retirement age and types of withdrawals, will be the focus of the report. There is a number of other factors that also affect pension levels, such as parental leave, participation in the labor market, educational choices and length of education. It is quite possible that nudge would also have an effect within these areas, but this will not be discussed here.

2. WHAT IS NUDGE?

The research about nudging was popularized when the book *Nudge: Improving Decisions About Health, Wealth, and Happiness* by RICHARD THALER and CASS SUNSTEIN was published in 2008. The authors define nudge as:

“Any aspect of the choice architecture that changes people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting the fruit at eye level counts as a nudge. Banning junk food does not” (p. 6).

Consequently, it involves designing the decision situation (choice architecture) so that people’s behavior is affected. At the same time, the financial incentives should not be affected, and people would still be able to choose between relevant available options. It is not about monetary incentives or prohibitions.

An important addition to the definition of nudge is that the individual will be making better decisions than she or he would do without a nudge. Better decisions for themselves or better

decisions for the society. This is an important aspect and something that distinguishes nudging from, for example, the traditional marketing in which the focus is on increasing profits/sales.

Nudging has therefore mainly been used in areas where individuals can be expected to make bad decisions, such as savings and health decisions. However, recently, nudge has been also applied to areas involving negative external effects, primarily negative environmental impact. Then, it is about getting people to make decisions that are better for the society, which obviously does not have to rule out that the decisions are also better for the individual at the same time.

3. WHY NUDGE?

Wrong decisions can be said to be the basic reason why nudge is needed. It concerns situations in which individuals can be expected to make irrational decisions under given preconditions. These irrational decisions can also entail social costs in the long-term. If people make irrational decisions and eat unhealthy food, healthcare costs can increase and if people save too little or too risky, the burden on welfare and insurance systems can be bigger.

A claim of irrational behavior in many cases then leads to some form of paternalism. This means that the person who designs a nudge (or any other means of control for that matter) considers himself aware that individuals are taking the wrong decision for themselves. However, with nudge the individual's freedom is maintained since the decision-making situation is affected without restricting the choice options. This reason for nudge is often termed "Libertarian paternalism" (Thaler & Sunstein, 2003). Libertarian because the individual's freedom of choice is considered important, paternalism since the person who designs a nudge knows better than the individual what is a good choice. For the same reason, it is also important that a nudge is not hidden in any way, especially if it is designed by the state.

Nevertheless, if the designer of a nudge considers himself to know better, why a more direct impact, such as prohibitions or rules, is not preferable? First of all, because freedom of choice can have its own value. In addition, maintaining freedom of choice means that if the person who designs the situation to choose is wrong, the damage will not be too big. This is particularly important when there is a high heterogeneity of human preferences and behavior.

When it comes to decisions over time, such as that of saving money, a nudge can be relevant even without paternalism. Self-control problems are an important factor that can explain the reasons for saving too little to which I will return. Then, a person who is aware of her/his problems with self-control may be subjected to a nudge.

The fact that individuals make irrational decisions can depend on several factors. In the literature about nudge, this is usually explained with a psychological theory of dual processes. DANIEL KAHNEMAN, the recipient of the economics prize in Alfred Nobel's memory, is one of the advocates of a model in which decisions are made through two different processes, or systems:

“System 1 operates automatically and quickly, with little or no effort and without any sense of deliberate control. System 2 is devoted to the strenuous intellectual activities that require attention, such as complex calculations” (Kahneman, 2016, p. 31).

The basic idea is that people normally act and choose with as little effort as possible since it is costly to make decisions, this means that decisions are made within the framework of system 1. In new and more difficult decision situations, system 2 is activated. System 1 is not irrational by definition, but rather the opposite. Irrational decisions are usually based on system 1 nonetheless. In most cases, automatic and intuitive decisions are thus wise and cost effective, but without a systematic decision making, they can also go wrong.

Information and traditional incentives are largely aimed at system 2, which can handle complex information in a systematic and calculative way. Conversely, the nudge is directed towards system 1. A nudge is not used to enable system 2 when system 1 has failed to make a rational decision. Instead, it is via system 1 that a nudge operates. The idea is, therefore, that a nudge will lead to better decision making although system 1 still takes the decision. Simple examples could be to make healthy food more accessible, to mark the way to a trash bin with green footsteps or to change the printer's default setting from single to double-sided printing. There is a type of nudge that is also aimed at providing people with a positive self-image. For many different reasons people care about who they are, how they perceive themselves and how others perceive them. It may be that one wants to be seen as a responsible, environmentally conscious or altruistic person (Akerlof & Kranton, 2000).

The behavioral mechanism and the paternalistic view are also strongly related to what is commonly called dynamic inconsistency and to self-control problems. This concerns

decisions that involve a time aspect. At time zero, before making a decision, individuals are convinced that they should act in a rational way, for example, eating healthy and saving enough money. However, when people are actually facing a choice, they often make another decision, and this choice can often be seen as irrational: eat too much sweets and save too little (Laibson, 1997; O'Donoghue & Rabin, 1999). This is what is called dynamic inconsistency. Such inconsistency, in turn, leads to incentives for people to commit themselves to a certain type of behavior in the future. Later I will return to this important form of nudge.

In economic theory, this type of behavior is modeled as a so-called hyperbolic discounting. Hyperbolic discounting means a relatively high discount rate (very impatient) in short time horizons, and a relatively low discount rate (not impatient) for longer time horizons¹. This is exactly what I illustrated with the introductory example. The many who choose money today are willing to wait if the election instead involves two options in the future. This means that they have different discount rates for the two decisions because in both cases it is about whether to wait one day extra to get 10 crowns more.

The dynamic inconsistency should also be noted. Once a year passed, the person who previously said s/he would be willing to wait one day for 10 crowns would no longer want to do that.

4. DO PEOPLE TAKE RATIONAL SAVINGS DECISIONS?

An important question is whether people make rational savings decisions. If they do so, then a nudge will not be particularly meaningful. Either it has no effect at all or it is counter-productive if it makes people take worse decisions. As I have already said, a nudge also implies that the person who designs it knows what the best decision is. This is an even more complicated issue to which I will return.

There is extensive research on why people save and what affects the level of people's savings (Browning & Lusardi, 1996). According to the traditional economic theory, people aim to even out their consumption over time by saving and borrowing money. One saves in periods

¹ A discount rate reflects people's relative valuation of, for example, income at an early point in time compared to a later point in time.

of relatively high income, then uses the savings during periods of relatively low income. People make their decisions about savings and consumption based on stable and time-consistent preferences. These types of models are usually called permanent income hypothesis.

In empirical studies, it has been found that economic factors such as income and returns, and expectations about these factors, affect household savings in a way that can be considered consistent with the traditional economic theory. Although we can draw some conclusions from it, it does not mean that people are rational when they make decisions about savings. The question of whether people save too much or too little is considerably more complex.

It is also important to understand that the traditional model of saving money predicts that people with low income will generally have low savings and that this can be completely rational for the individual, but not necessarily for the society. Furthermore, it may be more important to look at the total assets and not at the level of savings at a specific point in time (Crossley, Emmerson & Leicester, 2012).

There is a rather big disagreement in the research on whether people save too little. Some argue that if households wish to maintain their current consumption level, their savings must be relatively higher in order to meet future cuts in, for example, social security systems (Bernheim et al., 2000; Skinner, 2007). Others argue that people can rather easily reduce their expenses when they retire or that they can rely on social security systems (Aguiar, & Hurst, 2007; Scholz, Seshadri, & Kithatra-kun, 2005).

THALER & SUNSTEIN (2008) bring forward two important aspects. Firstly, some people probably save too little, but the majority saves enough. Secondly, the cost of saving too little is generally bigger than the cost of saving too much.

In this context, it is also important to mention that there are differences between traditional savings and, for example, insurance schemes for pensions. In an insurance system, individual policyholders' decisions affect the entire insurance policy. Thus, even if policyholders make rational decisions that are rational to themselves, there may be reasons to influence their decision with a nudge, given the limits set by the insurance system.

Self-control problems and dynamic inconsistency are central when discussing rational savings behavior. If there are problems with self-control, some people will even think that they save

too little. One can see it as a conflict for people between themselves today and themselves in the future.

There is also research on people's financial skills. Investigations test people's understanding and knowledge of concepts such as inflation, interest rate and risk diversification. These turns out that the knowledge is relatively limited, even in a country like Sweden (Lusardi & Mitchell, 2014; Almenberg & Widmark, 2011). More importantly, surveys found that people with good knowledge plan better and save more for their pension (Lusardi & Mitchell 2007; 2011). There are obvious problems in this type of surveys when the person who plans and has big savings has greater incentives to acquire knowledge. Nevertheless, even in studies that try to take this into account, as in experimental studies, it has been shown a connection between financial knowledge and, for example, the level of savings (Song, 2015; Alessie, van Rooij & Lusardi, 2011).

Increased information and education should therefore be important factors in people's saving habits. However, within research there is mixed support for this. A study found that information on the benefits of pension savings increased the likelihood of saving for retirement among younger people (Clark, Maki, & Morrill, 2014).

Another study shows a positive link between information about savings within companies and the savings of the employees (Bernheim, & Garrett, 2003). On the other hand, there are studies that do not find that training seminars or concrete information about what is profitable for a person who saves money have any effect at all on savings (Choi et al., 2002; Duflo & Saez, 2002; Choi et al., 2004).

Decisions on savings and health are characterized by a long time-horizon and, in many cases, by the absence of quick feedback. The strong feedback for pension retirement decisions only takes place when the person retires. Although people can observe their total amount of savings and forecasts the size of their pension, it is difficult to get clear and good information about how the decisions taken now will affect the pension in 30 years. Nor is there a decent group to compare with, since the conditions for the person who retires right now are different from those of people who save for their retirement in 30 years (Sugden, 2014). This makes the decisions considerably harder to make.

5. DIFFERENT TYPES OF NUDGE

A nudge can take many different shapes. CASS SUNSTEIN goes through the ten most important forms of nudge (Sunstein, 2014). The list can be clearly enlarged depending on how the nudge is defined. Here I will list seven different types of nudge, most of which are on Sunstein's list. The focus will be on the types of nudge that may be relevant for savings decisions; this is the reason why the list is by no means comprehensive. In order to clarify the meaning of a specific type of nudge, examples from some other areas will also be given.

1. *Passive selection* (default). A nudge with a passive choice means that the given option is by default. The basic idea is that it is more likely that a person passively selects the default option. This can depend on several things, such as low cost of making the decision or interpretation of the pre-selection as a signal for a better option or an option that many people choose. Examples of successful passive choices are the automatic participation in a pension scheme (Madrian & Shea, 2001) and the default two-sided printing (Egebark & Ekström, 2016). Automatic participation means that a person must make an active choice not to participate. This usually increases the number of people participating. Similarly, the likelihood of double-sided printing is higher when it is pre-selected than when it is actively selected.

2. *Information*. Information that affects the selection may in some cases be seen as a nudge. A common and interesting example is the eco-labelling of goods. It is not evident that eco-labelling should be seen as a nudge. A label gives better information, and consumers can therefore make decisions that are more informed. Nevertheless, labels also give more general information about good and bad choices. The consumer can therefore choose an ecological alternative to send signals to himself and to the others that s/he is a good person who chooses the right alternative. In that case, the information can be seen as a nudge. Information may also be a reminder of something that the person already knows. I will return to this type of nudge under item 6.

3. *Commitments*. A nudge in the form of a commitment focuses on people who have self-control problems that want to act in a certain way. By committing to a certain behavior in the future, it is more likely that one acts in accordance with the commitment in the future. One example is to deposit money that you can get back only if you act in a certain way. One study shows that this reduces the likelihood of relapse for smokers trying to quit; however, the

willingness to participate in such a program is low, so the overall effect is relatively small (Halpern et al., 2015). It may also be that one formulates how to behave under specific circumstances; by investing in long-term thinking and for avoiding falling in the temptation to go with the flow in case of sudden changes of price (Slifka, 2013). This formula of desirable behavior should be explicit and not least known to have effect.

4. *Social norms*. One of the stronger forms of nudge is made out of social norms. These are informing about what is done by other people (descriptive norm) and what you should do (regulatory norm). For example, a number of studies have shown that households' energy consumption decreases when they receive information about their own consumption in relation to other households (Allcott, 2011; Ferraro, & Price, 2013). An important aspect of this type of nudge is the regulatory norm. Without it, there is a high risk that people who use relatively little energy will increase their energy consumption. Therefore, it is important that people get to know that they are doing something good.

5. *Framing*. Framing is about how options and information are presented. This can refer to the order in which the options are presented, or the way in which the outcome is presented. Psychological studies have shown, for example, that the choice among different public action programs depends on whether they express the effect of the number of deaths with and without the measure or the number of lives saved through the action (Kahneman & Tversky, 1984). Another example is the order of a menu, since this affects the choice of a dish: it is more likely that people select the options appearing at the top or at the bottom of the menu (Dayan & Bar-Hillel, 2011). If you want people to choose organic or healthier options, these should be in the first or in the last places of the menu.

6. *Ask about intentions*. Asking people about their intentions affects their behavior. The effect can be even stronger if you ask which their exact intentions about making a choice are. Asking people if they intend to vote increases the likelihood of them voting, but asking them about when (for example, what day or at what time) increases such a likelihood too (Nickerson & Rogers, 2010). In a similar way, people's willingness to be vaccinated increases if they are asked more specifically about how and when they intend to use vaccination (Milkman et al., 2011).

7. *Reminders*. In situations in which people may have problems with self-control, reminders can play an important role. In one study, the effect of reminders has been investigated in relation to the likelihood of making an appointment at the dentist. One control group received

no reminder, another group received a neutral reminder, the third group received a reminder along with information about the benefits of going to the dentist and, finally, the fourth group received a reminder along with information about the disadvantages of not going to the dentist. For the people of all four groups it was time to book an appointment with their dentist. The sole reminder mostly affects the probability of making a reservation. The positive or negative information has no further impact (Altmann & Traxler, 2014).

6. WHEN DOES A NUDGE WORK?

It is hard to draw simple generalizable conclusions on when nudging works and when it does not work. With some certainty we can say that it is more likely that a nudge plays a part when the decision:

1. Is quick and intuitive, that is, when people use system 1 and not system 2;
2. Is associated with self-control problems;
3. Touches aspects that affect our identity and includes relatively strong regulatory norms.

The research in behavioral economics and nudging is largely empirical, although in many cases its starting point is in a model. Empirical results have also been mostly theoretical. Within behavioral sciences such as psychology and economics, interesting research and self-examination also take place in terms of results and generalizability from individual empirical studies. These deal with several aspects.

First of all, there is a discussion about the possibility to generalize results from individual studies or from a certain type of experimental context to another (Deaton, 2010; Falk & Heckman, 2009; Levitt & List, 2007). In my opinion, one should therefore be careful while drawing excessively general conclusions from individual studies, since the effect of a nudge depends on specific underlying mechanisms and on the fact that often there is a large individual heterogeneity.

Secondly, problems with so-called publishing bias should be pointed out; that is, scientific journals want to publish studies that show interesting results and not the studies that show no effect. There are also attempts to replicate previous empirical surveys. Replicability has generally not been considered particularly valuable in behavioral sciences, but at the moment

the pendulum seems to have turned slightly in favor of replication studies. Nevertheless, the results of the major investigations are quite disappointing. In a larger study of experimental analyses in psychology, approximately 40 percent could be reproduced (Open Science Collaboration, 2015), and in a larger study of economic experiments approximately 60 percent of the results could be reproduced (Camerer et al., 2016).

7. THE IMPORTANCE OF EVALUATING A NUDGE

Since the effect of a nudge depends on how it is designed, the context in which it is addressed, who the target is and so on..., it is important to rigorously evaluate such effect. In most academic studies, this is done with an experimental approach. What is important in such approach is that there is a treatment group and a control group, and that participation in these two groups is random. By studying the difference in outcomes between treatment group and control group, we can measure the effect of, for example, a particular type of nudge.

In some cases, it is relatively simple to perform a strict evaluation with random distribution. For example, if a company sends information to its customers, it is easy to randomly distribute different versions of the correspondence to a treatment group and a control group, respectively. In other cases, it may be harder, for example, if it is difficult to define a control group, difficult to prevent side effects of a nudge on the control group, difficult to measure the effect, etc. In these cases, it is important to be aware of this and try to take into account aspects like the absence of a control group in the analysis.

8. EXAMPLES OF NUDGE, RETIREMENT AND SAVINGS

This section provides a number of examples of nudge and savings that have been found in the scientific literature. The focus will be on studies of actual saving, although some experimental studies will also be discussed. Most of the studies are from the United States, and especially of the field of pension savings. Many Americans have the opportunity to save in a so-called 401(k) plan, in which employee and employer pay money into a tax-free account. Thus, such money can be invested and can generate profit. How much the individual receives in pension money depends on the amount saved and on the return on savings. Such a system requires a great deal to those who save. They should actively choose to participate and then determine the size of the savings, how to place the savings and what to do with the return.

8.1. Passive choice

8.1.1. Automatic participation

As mentioned above, participants in a 401(k) plan need to make an active choice to participate. If people make considered and rational choices, a preferred option -regardless of whether it is about participating or not- should not affect the number of people participating. In 1998, a large American company changed its routines. Previously, employees who were eligible for participation in a 401(k) plan were forced to fill in a form in which, among other things, it was determined how much they would save and how the savings would be invested. Then it was changed in a way that, although everyone participated automatically with a certain amount of savings and a specific placement of these, they could decide not to participate or to change amount of savings and placement (Madrian & Shea, 2001).

Participation was significantly higher with automatic participation, 87 percent compared to 37 percent for the group that participated before the change. Participation was also high in groups with employees who are usually underrepresented. Many of those who participated automatically also did not make an active choice in terms of savings or placement. Instead, they received the savings that were automatically managed. It should be noted that this option was available even in the previous system, but the people who chose it were significantly fewer.

There was also a follow-up to this study. It was found that, although participation increased, the average amount of savings decreased due to pre-selection and the overall effect on the average savings for employees was small (Choi et al., 2004). In another study, it was seen that by changing the pre-selected savings from 3 percent of the salary to 6 percent of salary, the proportion of savers that saved 3 percent of the salary decreased, from 28 percent to 4 percent. At the same time, the amount of people that saved 6 percent of the salary increased (Beshears et al., 2009).

With automatic participation comes the fact that the preferences made in the system are important. Since participants tend not to change default selections, a too low or too high-savings or risk-free or risky savings can easily be achieved. Of course, it is not obvious what an excessive or low saving is. Regardless of that, studies show that there is an effect of pre-selection even in the long term. Adapting a pre-selection to a heterogeneous group of employees can be difficult, but in terms of savings, it is at least possible to adjust it to

important parameters such as age and income. In this way, a potential negative effect of pre-selection may be slightly reduced.

8.1.2. Passive choice in the premium pension system

Initially, the Swedish premium pension system provided for a pre-selection for placement. Nevertheless, when the system was introduced, participants had been encouraged to make active choices and major campaigns in this regard had been implemented. Accordingly, about two thirds (67 percent) of them made an active choice. The passive pre-selection was still the most occurring choice, which is not surprising given the large number of options. Without the encouragement to choose actively, however, it is likely that the proportion of those who had not made an active choice were even bigger. In 2003, three years after the system started, the group of newcomers that made an active choice was just over 8 percent. In 2000, the proportion of the comparable group -those corresponding to newcomers in 2003- was almost 57 percent (Cronqvist & Thaler, 2004). There is therefore no reason to believe that the effect of passive choices is a specificity of the American context.

In a survey regarding choices in the premium pension system, it was found that active choices were more common among people who generally are active savers and in those cases in which there was more money to be placed (Hedesström, Svedsäter & Gärling, 2007).

In the premium pension system, people also have to choose how money will be managed at the time of retirement. One option is selling and switching the fund units to a traditional insurance, so that the pensioner receives at least a guaranteed amount. The second option is a unit-linked insurance in which the funds are retained; hence, these can also change over time.

The design of this selection has been interestingly changed in the meantime. For a short period of time (January 2010-May 2011), the future retiree had to make an active choice. Prior to and after this period, the pre-selection has been a unit-linked insurance, and the future senior citizen had to make an active choice if he wanted to switch from unit-linked insurance to traditional insurance. In a study conducted by the Office of the Auditor General, it was found that the likelihood of selecting traditional insurance increased by 41 percent when the system was changed from unit-linked insurance to active choice (Riksrevisionen, 2014). Furthermore, it was observed that among those who made an active choice of placement and then kept unit-linked insurance, the proportion of inactive investors was very large; around 90 percent of them did not make a fund change during 2011-2013.

8.2. Active choice

The opposite of passive choice is demanding an active choice, that is, if there is no answer there is neither automatic participation nor absence of participation. The advantage of an active choice is that the negative effect of wrong pre-selections disappears for the individual. The disadvantage is that individuals must take a decision, even if they would prefer someone else to make it. By mistake, a company imposed a requirement of active choice when participating in a 401(k) plan². Compared to earlier, when the passive choice was not to participate, the proportion of employees who participated increased by 28 percentage points. The average saving also increased (Carroll et al., 2009).

In the study above, and in many others, it has been investigated the direct effect on a specific type of savings. However, it is also possible that other forms of saving also increase or decrease. The most obvious scenario is that people move their savings from one type of savings to another. An interesting question is whether different types of nudge have different effects on other savings. In a study comparing passive and active choices, it was found that a change in conditions related to an active choice (subsidies for retirement savings) had largely led to increased pension savings at the expense of other savings. A change of the conditions related to a passive choice (employer's contribution to retirement savings) had instead led to higher net savings (Chetty et al., 2014). To people, passive choice is probably less clear than active choice. Therefore, it is not unreasonable that different effects on other types of savings arise when similar changes in the pre-conditions of an active or passive choice occur.

8.2.1. *Commitment to save*

One way for dealing with self-control problems and saving is to form some kind of commitment. In terms of savings, the easiest way to commit oneself is to make the access to savings at any time impossible or costly. This type of connection is rational only if those who are saving know that they could be tempted to use the money saved despite it would be of no good. Otherwise, it is not rational to want to tie up savings without any benefit³.

² In reality there was no requirement for active participation. If you did not answer you did participate.

³ In some forms of saving, the saver is compensated with a higher return if s/he ties up the savings for a longer period of time. Choosing such form of saving can of course be completely rational even if the person does not have problems with self-control.

As early as 1978, THOMAS SCHELLING discussed the existence of accounts specifically designed for Christmas savings, that is, an account to which money was automatically transferred during the year and became available only during Christmas. He pointed out that these exist because people have self-control problems (Schelling, 1978). An economic experiment with bank customers in the Philippines found that the group of savers who was more likely to want to tie up savings was composed of women with hyperbolic discounting. It was also found that the savings were higher in that group compared to a control group (Ashraf, Karlan & Yin, 2006). As previously discussed, people with self-control problems are the only ones who may need mechanisms that restrict their choices and room for action.

8.2.2. Commitment to save more and more

One of the most famous examples of a successful nudge is the “save more tomorrow” program that was investigated within the framework of retirement savings for employees in the United States. The nudge that had been used was mainly focused on people having self-control problems (Thaler & Benartzi, 2004). The starting point was that many people want to save more than they actually do. The basic design was simple: you have to commit yourself in advance to save some of your future pay rise. The program had four key features:

1. Participants were asked about their future form of saving before a pay rise could be expected. This is important since it wants to create a feeling that the decision concerns the future and not the near future;
2. The increase in savings will occur only when the new salary has actually been paid out;
3. The amount set aside for saving increases for each pay rise, until the amount reaches a certain predetermined level;
4. Participants can always choose to skip the program.

The effects of the program were relatively great. Approximately 78 percent chose to participate, and most people chose to participate for the entire time (total of four salary increases). The average savings ratio increased from 3.5 to 13.6 percent. However, one should be aware that, like in many other studies, we do not know if participants changed to other forms of saving.

8.2.3. *Social norms and comparisons*

Informing about what others do, especially those with whom one compares her/himself (peers), has shown to affect people's actions. In terms of savings, it has been found that colleagues' choices affect how people decide to save (Duflo & Saez, 2002). It is indeed difficult to empirically investigate the effect of what other people do, because there would be major statistical problems. One way of handling this is by implementing instead some experimental studies.

In one study, a group of potential savers were given information about what a typical saving behavior is for a comparable group, while such information was not given to the control group (Beshears et al., 2015). The information regarded how many people participated and who saved at least 6 percent (in one 401(k) plan). Interestingly, it was found that information about what others do had an unexpected opposite effect. The likelihood of saving and the size of savings decreased in the group of those who received the information that other people were saving. This negative effect, however, only took place among low income savers, who are also those who save just a small amount.

The explanation, according to the researchers, was that low-income people were reminded of their low income when they received information about what other people were doing. In turn, this would lead to a reduction in savings.

8.2.4. *Framework*

There are also some studies on framework and savings that concern the so-called contribution pension system of the United States.

A common framework of such a system is that both the wage earner and the employer contribute. Furthermore, the wage earner can make an additional tax-free deposit. A study found that the size of this voluntary additional deposit is more sensitive to the wage earners' contribution than to the employer's one. That is, for a certain total deposit an employee makes a larger voluntary deposit if most of it is presented as a deduction from the salary (Card & Ransom, 2011).

Another framing effect is that a large freedom of choice may have the unexpected effect that fewer people choose to save. Again, in the saving context of a 401(k) plan in the United States, it has been found that if there are many investment options, the likelihood that an employee chooses to participate will decrease (Sethi-Iyengar, Huberman & Jiang, 2004).

Fewer options could therefore increase participation. This can depend on several factors, for example, making decisions is costlier if there are many options with which one has to familiarize, and the fear of making wrong decisions increases if there are many options (Scheibehenne et al., 2010). Decreasing the number of options is not a nudge, since this implies changing the number of possible options. However, it is relatively easy to design a choice situation in which, although all options are available in a relatively simple way, fewer options are presented in first instance.

8.2.5. Reminders

In one study researchers show that reminders to bank customers about saving with a commitment to save, such as “save more tomorrow” increases the likelihood that the customer achieves her/his goal (Karlan et al., 2016). In this study, it is argued that the main reason for low savings and for not achieving the goals is not about self-control problems. Reminders are more about making it clearer to customers that increasingly often they will have unexpected costs and that it is important to have a savings buffer.

9. NUDGE LESSONS IN THE SWEDISH PENSION SYSTEM

As shown, most of the research on nudge and savings is about getting Americans to save by participating in retirement savings programs and making them save more than what they are already doing. The overall and simple lesson is that even in important decisions like those regarding the savings for retirement, in certain circumstances people are sensitive to the way in which the form of choosing is made. In other words, there is no doubt that nudge can affect the savings. The design of passive choices and commitment to save more in the future are the two factors that have had a relatively large effect on whether and how much people save in a certain form of saving. At the same time, we know almost nothing about the effect on total savings. The vast majority of the surveys has looked only at one type of saving. One of the few exceptions also shows that different designs of the system can play a major role in the total amount of savings.

The effect on total savings also depends on who is affected by a nudge. For example, if a passive choice affects more low-income people, they do not have other savings to change from to the same extent. On the other hand, they can have high interest rates, hence it would

be better to get rid of these instead of increasing pension savings (Crossley, Emmerson, & Leicester, 2012).

For other areas such as environment and health, social norms have been shown to have a relatively high impact on our behavior. The only experimental study on social norms regarding savings shows that they have no -or even the opposite- effect. An important objection to that study, however, is that it focused only on the descriptive norm (what people do) and not on the regulatory one (what people should do). In the ambit of savings, the regulatory norm is not that obvious nonetheless: how much saving is actually good? In terms of environment and health it is easier to decide, within reasonable limits. At the same time, there may be effects from signals regarding what is the expected behavior or the current norm, but they are difficult to study. An interesting case is the change in the right to deduct private pension savings that occurred in 2016. It is quite possible that the elimination of the right to deduct was a signal that the society does not consider that personal retirement savings are important, and that this alone could affect people's savings for retirement.

At first glance, the focus on “Libertarian paternalism” may be seen as something odd in a Swedish context. Paternalism is an important factor even in the Swedish context, but traditionally politics have been more restrictive in cases like this, and it has been considered important to limit freedom of choice. At the same time, freedom of choice has increased in many other areas in Sweden. An individual must basically make four choices when retiring: 1) When should the pension begin to pay out, and when should you stop working; 2) How the pension payout profile will look like; 3) How to manage the pension capital; 4) How to protect possible survivors.

A report of the Swedish National Audit Office studied the four decisions in detail, which problems exist and how these problems can be reduced (Swedish National Audit Office, 2014). Accordingly, there was no doubt that in some cases the decisions result complicated. Additionally, the information is usually extensive and sometimes complex. Moreover, it was highlighted that good decisions depend to a large extent on individual circumstances, such as income, personal pension savings and family relationships. The report of the National Audit Office also proposes a number of improvements. Much of these relates to the complex information and to the absence of information regarding the economic consequences of the choices. Others concern regulatory simplification and the reduction of the differences between the general pension and occupational pension.

In addition, the Association Insurance Sweden proposed changes and improvements of the information to the consumer, not least an individualization of the information (Insurance Sweden, 2013). Many of these changes will probably lead to better decisions, but a rigorous evaluation of major changes would be desirable (for example regarding individualized information). The proposed changes do not apply to the issue of nudge. Nevertheless, the report emphasizes how important is the shaping of pre-decisions for the individual's decision.

There are also interesting examples of accidental nudge. The best example is the design of a withdrawal of the occupational pension, according to which the payment is automatic from 65 years unless something else is actively notified. This may potentially be a powerful nudge to retire at the age of 65. It is quite possible that this is an explanation of why the age for pensions' payout has not increased.

I will finally touch upon three different parts of the pension system and briefly discuss the possibilities of designing every kind of nudge. The discussion will be very general since it is not at all obvious that people's behavior will change. As discussed, the starting point for nudging is to influence people in a certain direction. Determining a design and the direction in which one wants to change requires deep knowledge and analysis of people's current choices and reasons for their choices. The goal of a nudge should therefore be established by the person in charge (the choice architect/system designer) in a transparent way and by taking the research into account. Since the pension system is complex and consists of many different parts, there are also grounds for simplifying and making the system more uniform. However, again, this does not necessarily have so much to do with nudging.

9.1. The premium pension system

In the premium pension system there are passive choices, even though, at least initially, they have encouraged active choices. At present, the passive choice is also adapted to the age of the saver. Saving is riskier for a young person than for an elderly one. This is basically a good design. The question if and how the system will change basically depends on whether it is considered that the savers current choice is good or bad. Are there too many or too few people who make a passive choice? Are the passive choices good? Furthermore, it is interesting to look at those who have chosen another option, that is, those who have chosen their own active administration. It is quite possible that these are not as active as they predicted. Based on

previous experiences, there are essentially three changes that can be considered: 1) changed design of pre-selection; 2) transition to active choice; 3) reminders.

An altered form of pre-selection would probably have a big effect, but, as mentioned, the question is whether it is desirable in combination with a major change in the current placement behavior of those who are passive. A requirement for an active choice could mean an overall more active behavior of the savers. The concern regarding an active choice is that people who are relatively uninformed make active bad choices. This can of course be reduced with the help of information, among other things. Another option is to proceed from the current system of pre-selection, but with the help of targeted reminders to savers, which encourage to look through their savings and possibly make changes. Such a reminder can be designed in different ways depending on who receives it -pre-selection vs. active choice at first- and what the purpose of the reminder is. Here not least the reminders to those who choose their own portfolio can be of interest.

When this study was about to be finished, the Swedish Government released the report “Focus premium pension” (Official reports of the Swedish Government, 2016). One of the main proposals of the investigation was making that active savers confirm their fund selections every seven year. For those who do not confirm, the saving will be transferred to the default option. It is also suggested that those who opted for the pre-selected option were reminded continuously about their option to choose another management model.

This proposal is certainly stronger than a reminder, not least the automatic change if the person does not respond. This is an interesting proposal, but the effects on the fund market, for example, are unclear and active investments can also be relatively broad -given that these do not require a high level of activity from the saver.

9.2. Withdrawal of occupational pension

Occupational pension has become an increasingly important part of people’s pension. The saver can decide when and how long it will be withdrawn. In most cases, the pre-selection is the lifetime payout period. However, it is possible to choose a shorter, fixed payout period. It is once again clear that a pre-selection plays a role: in a large study of Swedish savers, it was found that 76 percent had a lifelong payout period (Hagen, 2016). Nevertheless, the proportion of people who choose another payout period over time increases. Again, if another distribution of the withdrawal is desirable, there is reason to consider another design of the

system; either another pre-selection or active choice. Based on experience from previous studies, it is likely that alternative designs influence the behavior.

As discussed above, payment of occupational pension is automatically done at the age of 65. If it were considered desirable to raise the retirement age, it would be desirable to remove the automatic payout. In addition, concerning the occupational pension, it would be fully possible to carry out an evaluation on the effect of another pre-selection or of the elimination of automatic payment by comparing the behavior related to different pension insurances. By changing the form of one or two pension insurances, the other pension insurances can serve as a control group.

9.3. Salary exchange

Wage exchange means that an employee exchange part of his salary for a future benefit that is financed by the employer. Such a benefit is pension savings. For people with a pay greater than around 40,000 crowns per month, such salary exchange can be rational. Below that limit, the reduction in wages affects the general pension, sickness benefit, parental benefit, etc. (Insurance Sweden, 2016). This is consequently something that only affects people with relatively high incomes. Within the salary exchange system, there are great opportunities to introduce different forms of nudge. The most obvious is to offer a system like the “save more tomorrow”, where people commit to making salary exchanges on future income increases.

10. CONCLUSIONS

Nudge has been used to affect people’s savings and the impact has sometimes been quite large. Influencing Swedish savers in one direction or another using nudge is clearly possible. In fact, different forms of nudge have already affected Swedish savers, although these have not always been conscious nudges. However, unfortunately, we know very little about the effect on total savings and this is a big shortcoming. When forming a nudge, it is important to provide it with a clear goal, hence establishing in which way people’s choices have to be influenced and why. If possible, it is also useful carrying out rigorous evaluations of the nudge, at least when they are more extensive.

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REFERENCES

- AGUIAR, M., HURST, E., “Life-cycle prices and production”, *American Economic Review*, vol. 97, n. 5, 2007, pp. 1533–59.
- AKERLOF, G., KRANTON, R., “Economics and identity”, *Quarterly Journal of Economics*, vol. 115, n. 3, 2000, pp. 715–53.
- ALESSIE, R., VAN ROOIJ, M., LUSARDI, A., “Financial literacy and retirement preparation in the Netherlands”, *Journal of Pension Economics and Finance*, vol. 10, n. 4, 2011, pp. 527–45.
- ALLCOTT, H., “Social norms and energy conservation”, *Journal of Public Economics*, vol. 95, n. 9, 2011, pp. 1082–95.
- ALMENBERG, J., WIDMARK, O., “Räknefärdighet och finansiella förmåga”, *Finansinspektionen*, vol. 39, n. 5, 2011, pp. 17–32.
- ALTMANN, S., TRAXLER, C., “Nudge at the dentist”, *European Economic Review*, vol. 72-C, 2014, pp. 19–38.
- ASHRAF, N., KARLAN, D., YIN, W., “Tying Odysseus to the mast: Evidence from a commitment savings product in the Philippines”, *Quarterly Journal of Economics*, vol. 121, n. 2, 2006, pp. 635–72.
- BERNHEIM, D. ET AL., “How much should Americans be saving for retirement”, *American Economic Review*, vol. 90, n. 2, 2000, pp. 288–92.
- BERNHEIM, D., GARRETT, D., “The effect of financial education in the workplace: evidence from a survey of households”, *Journal of Public Economics*, vol. 87, n. 7–8, 2003, pp. 1487–1519.
- BESHEARS, J. ET AL., “The importance of default options for retirement savings outcome: evidence from the United States”, in BROWN, J., J. LIEBMAN, D. WISE (Eds.), *Social security policy in a changing environment*, Chicago, Chicago University Press, 2009, pp. 167–200.
- BESHEARS, J. ET AL., “The effect of providing peer information on retirement savings decisions”, *Journal of Finance*, vol. 70, n. 2, 2015, pp. 1161–1201.
- BROWNING, M., LUSARDI, A., “Household saving: micro theories and micro facts”, *Journal of Economic Literature*, vol. 34, n. 4, 1996, pp. 1797–1855.
- CAMERER, C. F. ET AL., “Evaluating replicability of laboratory experiments in economics”, *Science*, vol. 351, n. 6280, 2016, pp. 1433–35.
- CARD, D., RANSOM, M., “Pension plan characteristics and framing effects in employee savings behaviour”, *Review of Economics and Statistics*, vol. 93, n. 1, 2011, pp. 228–43.
- CARROLL, G. ET AL., “Optimal defaults and active decisions”, *Quarterly Journal of Economics*, vol. 124, n. 4, 2009, pp. 1639–74.
- CHETTY, R. ET AL., “Active vs. passive decisions and crowd-out in retirement savings accounts: Evidence from Denmark”, *Quarterly Journal of Economics*, vol. 129, n. 3, 2014, pp. 1141–1219.

- CHOI, J. J. ET AL., “Defined contribution pensions: plan rules, participant decisions, and the path of least resistance”, *Tax Policy and the Economy*, vol. 16, 2002, pp. 67–113.
- CHOI, J. J. ET AL., “For better or for worse: default effects and 401(k) savings behaviour”, in WISE, D. (Ed.), *Perspectives on the economics of aging*, Chicago, University of Chicago Press, 2004, pp. 81–126.
- CLARK, R., MAKI, J., MORRILL, M., “Can simple informational nudges increase employee participation in a 401(k) plan?”, *Southern Economic Journal*, vol. 80, n. 3, 2014, pp. 677–701.
- CRONQVIST, C., THALER, R., “Design choices in privatized social-security systems: learning from the Swedish experience”, *American Economic Review*, vol. 94, n. 12, 2004, pp. 424–28.
- CROSSLEY, T. F., EMMERSON, C., LEICESTER, A., *Raising Household Saving*, London, The British Academy, 2012.
- DAYAN, E., BAR-HILLEL, M., “Nudge to nobesity II: menu positions influence food orders”, *Judgment and Decision Making*, vol. 6, n. 4, 2011, pp. 333–42.
- DEATON, A., “Instruments, randomization, and learning about development”, *Journal of Economic Literature*, vol. 48, n. 2, 2010, pp. 424–55.
- DUFLO, E., SAEZ, E., “Participation and investment decisions in a retirement plan: The influence of colleagues’ choices”, *Journal of Public Economics*, vol. 85, n. 1, 2002, pp. 121–48.
- EGEBARK, J., EKSTRÖM, M., “Can indifference make the world greener?”, *Journal of Environmental Economics and Management*, vol. 76, 2016, pp. 1–13.
- FALK, A., HECKMAN, J., “Lab experiments are a major source of knowledge in the social sciences”, *Science*, vol. 326, n. 5952, 2009, pp. 535–38.
- FERRARO, P., PRICE, M., “Using non-pecuniary strategies to influence behavior: evidence from a large-scale field experiment”, *Review of Economics and Statistics*, vol. 95, n. 1, 2013, pp. 64–73.
- HAGEN, J. (2016). *Essays on Pensions, Retirement and Tax Evasion. (Doctoral dissertation)*. Retrieved on 15/10/18 from <https://www.ifau.se/globalassets/pdf/se/2016/dis2016-01-essays-on-pensions-retirement-and-tax-evasion.pdf>.
- HALPERN, S. D. ET AL., “Randomized trial of four financial-incentive programs for smoking cessation”, *The New England Journal of Medicine*, vol. 372, n. 22, 2015, pp. 2108–117.
- HEDESSTRÖM, T. M., SVEDSÄTER, H., GÄRLING, T., “Determinants of the use of heuristic choice rules in the Swedish Premium Pension Scheme: an internetbased survey”, *Journal of Economic Psychology*, vol. 28, n. 1, 2007, pp. 113–26.
- KAHNEMAN, D., *Tänka. Snabbt och långsamt*, Stockholm, Månocket, 2016.
- KAHNEMAN, D., TVERSKY, A., “Choices, values, and frames”, *American Psychologist*, vol. 39, n. 4, 1984, pp. 341–50.
- KARLAN, D. ET AL., “Getting to the top of mind: How reminders increase saving”, *Management Science*, vol. 62, n. 2, 2016, pp. 3393–3672.
- LAIBSON, D., “Golden eggs and hyperbolic discounting”, *Quarterly Journal of Economics*, vol. 112, n. 2, 1997, pp. 443–77.

- LEVITT, S., LIST, J., “What do laboratory experiments measuring social preferences reveal about the real world?”, *Journal of Economic Perspectives*, vol. 21, n. 2, 2007, pp. 153–74.
- LUSARDI, A., MITCHELL, O.S., “Financial literacy and retirement preparedness: evidence and implications for financial education”, *Business Economics*, vol. 42, n. 1, 2007, pp. 35–44.
- LUSARDI, A., MITCHELL, O.S., “Financial literacy and planning: implications for retirement well-being”, in MITCHELL, O. S., LUSARDI, A., (Eds.), *Financial literacy: Implications for retirement security and the financial marketplace*, Oxford, Oxford University Press, 2011, pp. 17–39.
- LUSARDI, A., MITCHELL, O.S., “The economic importance of financial literacy: theory and evidence”, *Journal of Economic Literature*, vol. 52, n. 1, 2014, pp. 5–44.
- MADRIAN, B. C., SHEA, D.F., “The power of suggestion: inertia in 401(k) participation and savings behaviour”, *Quarterly Journal of Economics*, vol. 116, n. 4, 2001, pp. 1149–87.
- MILKMAN, K. ET AL., “Using implementation intentions prompts to enhance influenza vaccination rates”, *Proceedings of the National Academy of Sciences*, vol. 108, n. 26, 2011, pp. 10415–420.
- NICKERSON, D., ROGERS, T., “Do you have a voting plan? Implementation intentions, voter turnout, and organic plan making”, *Psychological Science*, vol. 21, n. 2, 2010, pp. 194–99.
- O’DONOGHUE, T., RABIN, M., “Doing it now or later”, *American Economic Review*, vol. 89, n. 1, 1999, pp. 103–24.
- OPEN SCIENCE COLLABORATION, “Estimating the reproducibility of psychological science”, *Science*, vol. 349, n. 6251, 2015, p. 943.
- RIKSREVISIONEN, *Att gå i pension – varför så krångligt?*, (Report N° 13), Stockholm, Sweden, Riksrevisionen (Swedish National Audit Office), 2014.
- SCHEIBEHENNE, B., GREIFENEDER, R., TODD, P., “Can there ever be too many options? A meta-analytic review of choice overload”, *Journal of Consumer Research*, vol. 37, n. 3, 2010, pp. 409– 425.
- SCHELLING, T., “Economics, or the art of self-management”, *American Economic Review*, vol. 68, n. 2, 1978, pp. 290–94.
- SCHOLZ, J. K., SESHADRI, A., KHITATRAKUN, S., “Are Americans saving ‘optimally’ for retirement?”, *Journal of Political Economy*, vol. 114, n. 4, 2006, pp. 607–43.
- SETHI-IYENGAR, S., HUBERMAN, G., JIANG, W., “How much choice is too much: Contributions to 401(k) retirement plans”, in MITCHELL, O. S., UTKUS, S. P. (Eds.). *Pension design and structure: new lessons from behavioral finance*, Oxford, Oxford University Press, 2004, pp. 83–96.
- SKINNER, J., “Are you sure you’re saving enough for retirement?”, *American Economic Review*, vol. 21, n. 3, 2007, pp. 59–80.
- SLIFKA, D., “Improving investment behavior with pre-commitment”, *The Journal of Investing*, vol. 22, n. 11, 2013, pp. 83–87.
- SONG, C., *Financial illiteracy and pension contributions: a field experiment on compound interest in China*. Department of Economics, National University of Singapore, 2015, pp. 1–53.

- STATENS OFFENTLIGA UTREDNINGAR. (2016). *Fokus premiepension*. (Report N° 61). Retrieved on 15/10/2018, from <https://www.regeringen.se/4a7c02/contentassets/3494754d64414dccbe95569f2c8e8722/fokus-premiepension-hela-dokumentet-sou-201661pdf>.
- SUGDEN, R., “Commentary: Robert Sugden”, en CROSSLEY, T. F., EMMERSON, C., Y LEICESTER, A. (Eds.) *Raising household saving*, London, The British Academy, 2014, p. 100.
- SUNSTEIN, C. R., “Nudging: a very short guide”, *Journal of Consumer Policy*, vol. 37, n. 4, 2014, pp. 583–88.
- SVENSK FÖRSÄKRING. (2013). *Nöjda och trygga kunder-konsumentinformation inom försäkring*. (Report N° 2). Retrieved on 15/10/18, from https://www.svenskforsakring.se/globalassets/rapporter/konsumentinformation/sf_rapport_konsument_samman_webb.pdf
- SVENSK FÖRSÄKRING. (2016). *Långsiktigt försäkringssparande - ett ekonomiskt skydd för trygg ålderdom*”. (Report N° 1). Retrieved on 15/10/18, from https://www.svenskforsakring.se/globalassets/rapporter/pensioner/sf_rapport_a5_pension_webb.pdf
- THALER, R. H., BENARTZI, S., “Save more tomorrow TM: using behavioral economics to increase employee saving”, *Journal of Political Economy*, vol. 112-S1, 2004, pp. 164–87.
- THALER, R. H., SUNSTEIN, C.R., “Libertarian paternalism”, *American Economic Review*, vol. 93, n. 2, 2003, pp. 175–79.
- THALER, R. H., SUNSTEIN, C.R., *Nudge: improving decisions about health, wealth, and happiness*, Yale, Yale University Press, 2008.