Economic Analysis of Law in European Legal Scholarship 9

Klaus Mathis
Avishalom Tor *Editors*

Consumer Law and Economics

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Economic Analysis of Law in European Legal Scholarship

Volume 9

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Klaus Mathis • Avishalom Tor
Editors

Consumer Law and Economics

Springer

Editors
Klaus Mathis
Faculty of Law
University of Lucerne
Lucerne, Switzerland

Avishalom Tor
The School of Law
University of Notre Dame
Notre Dame, IN, USA

Faculty of Law
University of Haifa
Haifa, Israel

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Preface

This volume, Consumer Law and Economics, is the result of the 8th Law and Economics Conference held at the University of Lucerne on the 29th and 30th March 2019. The conference was organized in partnership with the Notre Dame Program on Law and Market Behavior (ND LAMB). The main focus of the conference was on European legal questions as presented by European legal scholars. These were complemented by insights from distinguished scholars from the USA, Asia, and New Zealand, to foster the dialogue between the different legal cultures. Thematically this volume spans both theoretical and practical developments in Consumer Law.

We take this opportunity to thank all those who have contributed to the organization of the conference and to the successful completion of this volume. First of all, we would like to thank Moritz Pachmann, MLaw, for his flawless coordination and organization of the conference. Furthermore, we wish to thank Laura Garbani, Blaw, Lynn Gummow, MLaw, and Roger Moser, Blaw for their reviewing and diligent proofreading. A special thanks goes to the Swiss National Science Foundation (SNSF), the Research Commission (FoKo) of the University of Lucerne, and the Institute Lucernaiuris, for supporting the conference. Finally, we are grateful to Kay Stoll and Anja Trautmann at Springer Publishers for overseeing the publishing process.

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Klaus Mathis
Avishalom Tor

Introduction

This edited volume "Consumer Law and Economics" is the result of the 8th Law and Economics Conference held in Lucerne on the 29th–30th of March 2019. The volume covers many challenges consumer law faces in both Europe and the United States of America. From fundamental theoretical questions, such as what goals consumer law should pursue, to practical questions raised by disclosure requirements, the GDPR, and technology advancements.

Part I, Behavioural Insights to Consumer Law, begins with Avishalom Tor's discussion of the opportunity costs of successful behavioural change resulting from the implementation of nudges. He shows that these opportunity costs are often neglected in the analysis of behavioural policies. This means the full welfare effects of nudges are not accounted for, so at times they are mistakenly employed when it would have been more efficient to use traditional policy tools instead or avoiding intervening altogether.

The chapter "Complex Mortgage Loans as a Case Study for Consumer Law and Economics" by Mariusz Golecki and Piotr Tereskiewicz analyses the challenges the foreign currency mortgage loans present to courts. These types of mortgage loans were heavily marketed in Central and Eastern Europe, particularly in Poland and Hungary. With interest rates being much lower in Switzerland than in Poland, the Swiss franc became an attractive currency for mortgage loans. By 2010, 64% of mortgage loans were indexed in foreign currency and mostly in Swiss francs. The rise of litigation in this area resulted in CJEU applying the Unfair Contract Terms Directive. The authors use behavioural economic analyses to explain why consumers may have opted for such high-risk mortgage products.

Rainer Baisch, in his chapter "The PRIIPs Regulation in View of Behavioural Research: an Example of Hyperbolized Mandated Disclosure", illuminates the traditional disclosure-paradigm based on the assumption that mandated disclosures will lead to well-founded investment decisions. Using the European PRIIPs regulations, along with other systems aimed at improving investor decisions, the author describes how these attempts to provide smarter information to the investors should improve decision-making and yet may still lead to poor investment choices.

Furthermore, developments in technology such as “robo-advice” are described to highlight the potential pitfalls in decision-making these systems will present.

Part II, Mandated Disclosure begins with the chapter “From Disclosure to Transparency in Consumer Law” by Rolf H. Weber. In his chapter, the author describes the failings of the current regulations requiring mandated disclosures in favour of consumers. However, he argues that the core idea of transparency based on the right holders’ approach should not be discounted, simply because of the flaws mandated disclosures present. Using this as a basis, the author argues that consumer law should move away from the detailed rulemaking and the use of mandated disclosure and instead shift the focus to transparency. By transparency, the author does not mean to flood the consumer with all possible information, but to provide tailor-made and appropriate information to allow the consumer to make a reflected decision.

“No Need to Read ‘Self-enforcing’ Pre-contractual Consumer Information in European and German Law”, by Sören Segger-Piening, take a detailed look at the regulations in Germany and the EU regarding pre-contractual consumer information in light of the criticism levelled at mandated disclosures by Ben-Shahar, Schneider, Bar-Gill et al. In particular, he discusses the ex post effect of pre-contractual information. While he agrees that the disclosures therein are often not fully understood or applied prior to signing a contract by the consumer, he argues that they provide the consumer with contractual remedies by informing the consumer of these remedies, as well as providing a tool to apply pressure on traders to offer the actually desired products.

The next chapter by Ann-Sophie Vandenberghe investigates unfair terms in standard contract forms by means of a comparative law and economics approach to understand whether or not the use of them is efficient. In particular, the four legal solutions to the “signing-without-reading” problem are described. Subsequently, the developments in Dutch law regarding unfair terms are discussed to see whether or not these developments are moving towards an efficient solution.

Fernando Gómez and Mireia Artigot describe the wave of litigation in Spanish Courts that resulted due to the ex post unfairness controls of the EU Directive 93/13. Spanish Courts and the Court of Justice of the European Union (CJEU) have held many standard terms regarding the allocation of risk, the division of mandatory taxes, and fees associated with mortgages as unfair and hence, non-binding on consumers. Against this background, the authors illuminate the impacts the court rulings have had on the contract design of Spanish mortgage loans.

The chapter “Correcting Information Asymmetry via Deep Consumer Information; Compelling Companies to Let the Sunshine In” by Danny Friedmann, builds on the challenges described by Ben-Shahar and Schneider regarding the mandated disclosure system and explores the idea of a disclosure system not based on mandates but on companies being compelled to disclose information pertaining to the ethicality of their products based solely on market forces. This system, Deep Consumer Information, attempts to correct the asymmetry between company and consumer, on the one hand, the company and government on the other.

Part III Data Protection Regulation begins with the chapter by Shmuel I. Becher and Uri Benoliel discussing the EU General Data Protection Regulation (GDPR) and its impacts six months after its implementation. The GDPR requirement that privacy terms must be communicated using “clear and plain language”. Based on this requirement, the authors conduct an empirical study examining the readability of the privacy policies of 300 popular websites. Their results indicate that most of the privacy policies analysed are largely unreadable and therefore not in compliance with the GDPR’s requirement. While the authors agree with the principle of improving readability in order for consumers to be better equipped in their decision-making process regarding privacy, simply having a legal requirement to do so does not necessarily lead to the desired result.

Miriam C. Buiten further illuminates the GDPR’s failings by means of the example of Direct-to-Consumer Genetic Testing. In “Your DNA is One Click Away: The GDPR and Direct-to-Consumer Genetic Testing” she delves into the problems presented by the readily sacrificed privacy that consumers are willing to hand-over regarding their own genetic fingerprint. In the last decade, direct-to-consumer genetic testing has become readily available allowing consumers to find out about their ancestry, genetic traits, and propensity to genetic diseases. Testing companies operate a two-sided model by generating revenue through selling genetic data to pharmaceutical and research industries. In her chapter, she describes the market-failings associated with this two-sided market and discusses to what extent the GDPR is able to mitigate these failures. The author concludes that the broad research exemption in the GDPR leaves a regulatory vacuum for DTC genetic testing companies and biobanks alike leaving consumers insufficiently protected.

This volume closes with Part IV, Further Applications. In their chapter “The Poisonous Fruit of Foreign Currency Loans for Consumers in Selected Central European States—the Dilemma for Macroeconomic Policy”, Jarosław Bełdowski and Wiktor Wojciechowski describe the impact of the determinants that shape public intervention in three CEE countries (Hungary, Croatia, and Poland) regarding the foreign currency loan market. The public authorities in these countries were faced with the dilemma of whether or not to raise requirements of private contracts regarding foreign currency loans to reduce the consumers’ burden or to act in order to stabilise the domestic banking sector. Their chapter illuminates the different types of public interventions implemented and showed that the choice of which type of intervention was guided greatly, whether or not the intervention was targeting the financial sector or the macroeconomic stability of the country. They conclude that there was less need for intervention after the crisis in countries which had focused on macroeconomic stability.

Fabrizio Esposito and Anne-Lise Sibony delve into the EU Consumer Law “Fitness Check” or REFIT to see if explicit goals of EU Consumer Law are defined. They concluded that a stronger conceptualisation of what harms the law seeks to protect consumers against, is required. Against this background, they establish a theory of harm, which is mostly missing within the REFIT documentation. Instead, they found that the REFIT has adopted a rather circular approach by defining consumer harm as instances of under-enforcement of the law. This presupposes that all possible harms are already accounted for in the law and only occur when the law is not properly enforced. What the REFIT does delineate is a normative space in which to develop a theory of harm for the future. It consists of a virtuous triangle of empowerment, trust, and a well-functioning internal market. The REFIT also suggests that an economic-based theory of harm would need to interact with several legal elements. Consumer weakness, empowerment, and legitimate expectations constitute ingredients for an economically grounded, behaviourally sensible, and legally workable theory of harm.

The final chapter by Felix Ekardt and Jutta Wieding turns its attention on whether or not consumer law could be a policy instrument for the pursuit of ecological goals. The discussion on environmental protection through consumer law is part of a broader discussion on whether private law can serve for environmental protection purposes. To discuss the environmental protection potential of consumer law, the type of environmental problems that could be covered need to be defined. For this, the authors propose that immediate health hazards could be more readily accessed by consumer law. To help illustrate this, the authors use two projects conducted by the German Federal Government and a study by the German Federal Parliament on environmental protection through civil law.

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Contributors

Mireia Artigot Faculty of Law, Universitat Pompeu Fabra, Barcelona, Spain

Rainer Baisch University Research Priority Program Financial Market Regulation, University of Zurich, Zurich, Switzerland

Samuel I. Becher School of Accounting and Commercial Law, Victoria University of Wellington, Kelburn, New Zealand

Jarosław Bełdowski Department of International Comparative Studies, Warsaw School of Economics, Warsaw, Poland

Uri Benoliel School of Law, College of Law and Business, Tel Aviv, Israel

Miriam C. Buiten Law School, University of St. Gallen, St. Gallen, Switzerland

Felix Ekardt Research Unit Sustainability and Climate Policy, Leipzig, Germany

Fabrizio Esposito Faculty of Law, University of Louvain, Louvain-La-Neuve, Belgium

Danny Friedmann School of Transnational Law, Peking University Shenzhen, Shenzhen, Hong Kong

Mariusz J. Golecki Department of Legal Theory and Philosophy of Law, Faculty of Law and Administration, University of Łódź, Łódź, Poland

Fernando Gómez Faculty of Law, Universitat Pompeu Fabra, Barcelona, Spain

Kai Purnhagen Faculty of Law, Wageningen University & Research, Wageningen, The Netherlands

Hannah Schebesta Faculty of Law, Wageningen University and Research, Wageningen, The Netherlands

Sören Segger-Piening Faculty of Law University of Würzburg, Würzburg, Germany

Anne-Lise Sibony Faculty of Law, University of Louvain, Louvain-La-Neuve, Belgium

Piotr Tereszkiewicz Faculty of Law and Administration, Jagiellonian University of Cracow, Cracow, Poland

Avishalom Tor The School of Law, University of Notre Dame, Notre Dame, IN, USA
Faculty of Law, University of Haifa, Haifa, Israel

Ann-Sophie Vandenberghe Rotterdam Institute of Law and Economics (RILE), Erasmus School of Law, Rotterdam, The Netherlands

Rolf H. Weber Faculty of Law, University of Zurich, Zurich, Switzerland

Jutta Wieding Research Unit Sustainability and Climate Policy, Leipzig, Germany

Wiktor Wojciechowski Department of International Comparative Studies, Warsaw School of Economics, Warsaw, Poland

Part I
Behavioural Insights to Consumer Law

The Target Opportunity Costs of Successful Nudges

Avishalom Tor

Abstract Nudges are increasingly popular, in large part due to the typically low costs required to implement them. Yet most often the main cost of nudging is due not to their implementation, but rather to the opportunity costs of its successful change of the behavior of its targets. Accounting for these target opportunity costs is essential for the appropriate assessment of the welfare effects of nudges. Nonetheless, the extant literature on behavioral policies largely ignores these costs or underestimates their magnitude and, consequently, overestimates the net benefits of nudges. At times, nudges remain the most attractive policy alternative even after their opportunity costs are accounted for. On other occasions, however, traditional instruments or a no-intervention approach turn out to make more efficient policy alternatives.

1 Introduction

Nudging—shorthand for behavioral policy making—is increasingly popular around the globe.[1] Recently, for instance, the U.K.-based Behavioral Insights Team (BIT) reported having run more than 780 projects in dozens of countries since 2010.[2] Behavioral policy making focuses on the novel policy prescriptions suggested by evidence regarding the behavioral patterns exhibited by real, boundedly rational individuals.[3]

[1]European Commission (2016) and OECD (2017).

[2]BIT (2018).

[3]Sibony and Alemanno (2016), Thaler and Sunstein (2008) and Tor (2019).

A. Tor (✉)
The School of Law, University of Notre Dame, Notre Dame, IN, USA

Faculty of Law, University of Haifa, Haifa, Israel
e-mail: Avishalom.Tor.3@nd.edu

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Nudges employ various formats of information presentation, frame alternatives, select desirable default options, shape or convey social norms, and more.[4] Unlike many traditional instruments, these non-coercive policies only encourage people to engage in desired behaviors, while leaving them free to go their own contrary way. For this reason, nudges usually require no costly investment in enforcement on the part of the government. By preserving freedom of choice, moreover, nudges also appear less costly for the people they target than hard policies that require their compliance regardless of personal costs. Some scholars even argue that individuals who submit to non-coercive interventions reveal through their conduct that they benefit from these policies, even while their nudge-resisting peers remain unharmed thanks to their freedom to pursue the alternative choices they find more personally beneficial.[5]

The perception that nudges are low-cost policies, both for the government and for the individuals they target, is a major source of their appeal as regulatory instruments.[6] This becomes apparent once we consider nudges through the lens of cost-benefit analysis (CBA)—the dominant framework for evaluating U.S. regulation[7] and an increasingly important factor in policy assessment in Europe.[8] CBA supports the adoption of interventions that generate "net benefits" and calls for selecting from the available options the most efficient policy, which is the one that offers the greatest net benefits.[9] Hence, an intervention that promises modest benefits but entails low costs may offer greater net benefits than—and is consequently preferable to—a competing policy whose high benefits are accompanied by high costs.

Although the low implementation costs of nudges make them appealing under CBA, a closer look reveals that they entail pervasive, often substantial, target opportunity costs (OCs), because of the forgone benefits that the successfully nudged previously enjoyed from their former course of action. Nudges entail opportunity costs even when they improve the welfare of the individuals whose behavior they modify, but they can generate even greater, enhanced opportunity costs when they diminish their targets' welfare by encouraging them to change their conduct to their personal detriment.

Contrary to the view of many behavioral policy making scholars, moreover, non-coercive policies are capable of generating enhanced OCs.[10] This is a typical result, for instance, of nudges that shape behavior by using social norms, which can impose psychological, social, and even economic costs on their targets if they are seen to violate these norms.[11] On other occasions, behavioral policies that distort

[4]Sunstein (2016).

[5]Sunstein (2018a).

[6]European Commission (2016).

[7]Sunstein (2018b).

[8]European Commission (2017).

[9]Boardman et al. (2018).

[10]Tor (2019).

[11]cf. Aviram and Tor (2004).

their targets' beliefs may lead people to make costly changes in their behavior that make them worse off.

Through these and similar processes, nudges can generate enhanced opportunity costs that further diminish their net benefits. Such policies may still be efficient and superior to alternative interventions, but when a nudge leads a significant portion of its targets to make personally costly changes in their behavior, the outcome may be inefficient as compared to alternatives.

In general, opportunity costs tend to diminish the net benefits of most nudges compared to the conclusions of analyses that ignore or underestimate these costs. Accounting for OCs might reveal certain nudges to be less attractive than traditional instruments, while on other occasions it could show that both nudges and traditional policies generate net costs that render them inferior to a no-intervention approach.

2 The Seemingly Low Costs of Nudges

Cost-benefit analysis is the dominant approach to policy assessment in most regulatory areas. Its use is mandated for U.S. federal regulation and is increasingly considered in legislative reforms and regulation at the state level.[12] CBA also plays an important role in the regulatory impact assessment process in numerous jurisdictions globally, including the European Union[13] and many OECD member countries.[14]

As its name indicates, cost-benefit analysis is a method for quantifying in monetary terms the social consequences of any given intervention. The conceptual framework is straightforward: From the perspective of efficiency, the value of a policy to society is measured by its net benefits—that is, its aggregate social benefits minus its aggregate social costs.[15]

The assessment of policies based on their net benefits has clear implications. Most obviously, a policy that fails to offer any net benefits vis-à-vis status quo is clearly inefficient and thus undesirable. When comparing alternative interventions, moreover, CBA directs policy makers to select the option that offers the highest net benefits. Consequently, this approach can mandate the selection of a nudge that offers lower absolute benefits than its alternative, if these lower benefits are accompanied by even lower costs that render the former the higher net-benefit option of the two. The net-benefits metric therefore directs attention to the costs of policies,[16]

[12] Sunstein (2018b).

[13] European Commission (2017).

[14] OECD (2014).

[15] Boardman et al. (2018).

[16] Sunstein (2018b).

rendering low-cost interventions particularly attractive candidates for policy selection.[17]

Nudge proponents thus point to the typically low costs required for their implementation by the government as an important advantage they possess over most interventions that aim to change people's behavior through traditional tools, such as mandates or bans with their associated sanctions, taxes, subsidies, or other economic incentives.[18]

Mandates and bans entail substantial government implementation costs because they seek compliance by all of their targets. Some of these costs—particularly those pertaining to legal enforcement—are avoided when policy makers instead encourage their targets to modify their behavior through non-coercive means. However, the implementation of traditional taxes or subsidies can also be quite costly for the government despite being non-coercive (with respect to the targeted behavior), because the financial incentives they employ can carry a significant budgetary price tag.

In contrast, a government that nudges its targets successfully bears dramatically lower implementation costs, as demonstrated by recent research that compared the costs of behavioral policies to those of traditional, mostly financial, interventions.[19] These authors reviewed empirical studies in major areas of behavioral policy making, such as retirement savings and energy consumption. In each area, Benartzi and his colleagues assessed the effectiveness and cost of different interventions (by dividing a measure of policy effectiveness by implementation cost), to determine the relative efficacy of behavioral vs. traditional interventions.

Most importantly for present purposes, Benartzi et al.'s comparisons showed the most effective of the nudges they examined in each policy area held a substantial advantage over the most effective of the interventions that used traditional tools to advance the same goal.[20] A closer look reveals, moreover, that nudges outperformed traditional financial incentive policies due to their dramatically lower implementation costs rather than because they were more effective.

This research demonstrates how the low implementation costs of nudging render it attractive to policy makers. Yet this seeming comparative advantage of nudges over traditional policy instruments could be illusory if the assessment of competing policies ignores or understates important cost categories. If this were the case, accounting more fully for these additional costs might change policy makers' view of the relative attractiveness of nudges as policy tools.

[17]Of course, policy makers who face budgetary constraints are likely to be concerned with their government implementation costs irrespective of the policy assessment method they employ (cf. Levin and Belfield 2015).

[18]Sibony and Alemanno (2016).

[19]Benartzi et al. (2017).

[20]Benartzi et al. (2017).

3 Target Opportunity Costs

The literature on nudging emphasizes the low implementation costs directly borne by the government implementing such policies. A fuller assessment, however, cannot ignore another, particularly significant cost category—namely, the opportunity costs that all successful policies entail for the individuals they target.

Policies that change the behavior of individuals necessarily entail opportunity costs for them. This is obviously the case for coercive policies. People who modify their conduct to comply with a mandate or a ban forgo the benefits they previously obtained from their pre-mandate course of action. Yet non-coercive traditional instruments, such as subsidies or taxes, also entail OCs. In the case of either approach, these costs are borne only by those who change their behavior due to the policy, but not by their counterparts who would have acted as envisioned by the intervention even in its absence or who do not follow the policy.

Hence, the forgone benefits of past behaviors that were changed by an intervention are an unavoidable, pervasive source of opportunity costs. All successful policies, even those that impose no other costs on their targets, entail them. Moreover, OCs are usually of a substantial magnitude compared to policy benefits. Consider, for instance, a program that offers low- to middle-income individuals full matching of all annual retirement savings increases up to \$1000.[21] Assume that the program successfully increases its targets' savings by \$500 annually, which amounts to a 20% increase from their pre-intervention baseline contribution rate. This savings increase may be impressive, but it is inevitably associated with substantial opportunity costs—namely, the benefits of consuming an additional \$250 of income that the policy's targets now divert annually to their retirement savings. The socio-economic status of the targeted individuals also suggests that they sacrifice substantial consumer surplus at present as they increase their retirement savings. Hence, while the program is efficient if it offers net benefits, it likely involves substantial opportunity costs.

Moreover, successful policies can generate even greater ("enhanced") opportunity costs for some, occasionally all, of their targets, thus decreasing their individual welfare instead of increasing it. Some policies intentionally impose enhanced OCs on individuals when they cause them to abandon behaviors that are personally more beneficial in favor of conduct that is less beneficial to them. This is frequently the case with interventions whose primary goal is to advance social goals—such as internalizing negative externalities—that intentionally impose costs on some individuals to generate net social benefits.

Importantly, however, even paternalistic policies that seek to advance the welfare of the individuals they target—rather than only that of society as a whole—can entail enhanced opportunity costs for at least three familiar reasons: Honest error, intentional manipulation, and target heterogeneity.

[21] cf. Duflo et al. (2006).

The problem of honest error by government decision makers who do not possess all relevant information about complex economic processes—also known as the "knowledge problem"[22]—is of particular concern for interventions that aim to improve individual welfare. To name just some of the information policy makers require to make their targets better off, they must identify when, how, and to what extent individual judgments and decisions fall short; determine how different deviations from rationality interact both within individuals and in their interpersonal behaviors; and find the most effective means to address these failings.[23] Hence, the complex nature and scope of the necessary information increases the likelihood of error in the choice and implementation of nudges that aim to advance the individual welfare of their targets.

In addition, the limits of human rationality revealed by behavioral research apply to policy makers as well and exacerbate the knowledge problem.[24] Some scholars even argue that such factors militate for opposing all policy making that aims to advance individuals' welfare.[25] At the same time, however, despite their undeniable limitations, policy makers who are removed from the choices they seek to impact and enjoy the benefits of expert advice and deliberation also possess certain advantages over the individuals whose behavior they target.[26]

Intentional manipulations of target behaviors to benefit policy makers or powerful interests they support offers another possible reason for which some interventions may diminish their targets' welfare contrary to their stated purpose.[27] In particular, policy makers could be "captured" by interest groups, such as regulated firms, who have the incentives and the means to invest in promoting regulatory actions that favor them at the expense of the diffuse public.[28] Unlike in the case of the direct industry regulation that public choice scholars usually study, however, those who stand to benefit from paternalistic interventions are often only indirect beneficiaries of the behavioral changes the policies bring about and therefore face somewhat more limited opportunities to benefit from regulatory capture.

Finally, paternalistic policies face a challenge of heterogeneity, because most regulatory tools apply to all of the individuals targeted by them despite their significant differences in circumstances, beliefs, preferences, and more. Yet, due to these differences, the same change in behavior brought about by an successful intervention will make some targets worse off—generating enhanced opportunity costs for them—even while benefiting others.

To illustrate, policy makers may seek to increase the rate at which employees save for retirement because they find that current average savings are too low for

[22]Coase (1960) and Hayek (1945).

[23]cf. Rizzo and Whitman (2009).

[24]Glaeser (2006).

[25]Mannix and Dudley (2015a, b).

[26]Jolls et al. (1998) and Tor (2008).

[27]Mueller (2003).

[28]Peltzman (1976) and Stigler (1971).

projected retirement needs. Because employees are heterogeneous, their optimal contribution level will vary, but if regulators mandate a minimum contribution rate of 6% of salary, all employees will have to make at least that minimum contribution. Those who previously contributed at lower rates will now contribute at least 6% of their salary, which will make many of them of better off on balance despite the opportunity costs they bear. Nonetheless, the same increase will make those employees who would have been better off with a lower contribution (e.g. 4%), such as those who have more pressing and valuable uses for the same income at present, worse off on balance. The latter, in other words, will bear enhanced OCs because the policy mandates a change in behavior to their personal detriment.

All in all, due to these three causes of welfare-diminishing interventions—namely, error, manipulation, and heterogeneity—even paternalistic policies may impose substantial enhanced opportunity costs on some or all of the targets they seek to make better off. Nevertheless, a common view in the literature is that policy makers can avoid such undesirable outcomes by employing nudges instead of traditional policy instruments.

4 The Opportunity Costs of Nudges

Like traditional interventions, successful nudges routinely entail substantial opportunity costs even when they increase the well-being of the individuals whose behavior they modify. But scholars who recognize that opportunity costs inevitably accompany successful interventions still tend to assume that the non-coercive nature of nudges guarantees that these policies will not lead their targets to change their behavior to their personal detriment.[29] This assumption is critical for the assessment of nudges as policy tools, since policies that entail very low implementation costs, never impose enhanced OCs, and produce some benefits are likely to make net-benefit interventions on balance.

The argument that nudges cannot make their targets worse off when changing their behavior seems straightforward: The heavy-handed approach of most traditional regulation can lead its targets to engage in conduct that is personally harmful. In contrast, those who change their behavior in response to a nudge that they were free to ignore reveal by their choice that they have not been harmed.[30]

While intuitively appealing, however, further scrutiny shows this argument is mistaken, since nudges can lead their targets to change their behavior in personally costly ways. Most obviously, social welfare policies successfully employ nudges to change behavior, at the expense of their targets. For example, policy makers seeking to reduce environmental externalities may nudge residential consumers to conserve electricity by sending them reports that compare their consumption to that of their

[29] Thaler and Sunstein (2008).
[30] Sunstein (2014, 2018a).

neighbors and imply the presence of a social norm favoring energy conservation.[31] Naturally, households that are successfully nudged by this intervention bear the opportunity costs of the forgone benefits of their previous, higher electricity usage. Moreover, at least some of these consumers, such as those who reduce their usage only because they wish to avoid violating what they were led to believe is the prevailing social norm, likely bear enhanced OCs that exceed their personal benefits from lower energy consumption.

These and similar findings on the effects of social welfare nudges (e.g., the use of default contribution levels to increase charitable donations)[32] make clear that non-coercive nudges are capable of encouraging behavior changes that make individuals worse off and already have been employed to that end. But perhaps the same nudges cannot exert the same harmful effect when employed paternalistically?

Alas, a closer look at both the circumstances that provide regulators with the opportunity for beneficial paternalistic interventions in the first place and the policy tools commonly used for nudging reveals that paternalistic nudges are capable of leading individuals to change their behavior to their own detriment.

Policies meant to promote individual welfare are needed only when people act in ways that fail to advance their well-being.[33] A paternalistic nudge may modify such conduct, bringing it closer to what policy makers judge is best for their targets. Yet the same failure of individuals' behavior to increase their well-being that motivated the intervention in the first place also means that whether a nudge has in fact increased individual welfare is a question that regulators must answer based on something beyond their mere success in changing behavior.[34]

The situation might be different if nudges were limited to interventions that help their targets correct their deviations from rationality so that individual choices would better align with what people (rationally) judge to be in their own best interests. But most nudges do not even attempt to promote rationality, only to shape behavior through "choice architecture,"[35] designing the environment in which people make their decisions, as well as various features of the choices they face, to activate a variety of psychological processes.[36] These processes, in turn, increase individuals' propensity to act in ways that policy makers consider desirable.[37] The outcome-oriented nature of most nudges thus prevents us from relying on a successful change of behavior as stand-alone proof that their targets are better off following the intervention.

Paternalistic policies that employ nudges are therefore capable of imposing enhanced opportunity costs on their targets. In fact, common choice architecture

[31] cf. Allcott (2011).

[32] Altman et al. (2018).

[33] Thaler and Sunstein (2008) and Tor (2016).

[34] Tor (2019).

[35] Thaler and Sunstein (2008).

[36] Thaler et al. (2013).

[37] Loewenstein et al. (2013) and Munscher et al. (2016).

tools raise the specter of troubling variants of the three familiar challenges of error, manipulation, and heterogeneity that further increase the risk that paternalistic interventions will turn out to diminish individual well-being.

For one, the problem of honest error is amplified when policy makers employ nudges because these behavioral tools are particularly difficult to calibrate. Nudges that seek to change behavior may exert too weak or, which is of greater concern here, too strong an effect on their targets. Consequently, they may lead people to excessively engage in the behavior policy makers try to encourage, to their personal detriment (e.g., increase their retirement savings at the expense of more valuable present consumption).

The challenge of properly calibrating nudges is further reinforced by the propensity of some of the tools of nudging to distort the judgement and decision processes of the individuals they target. For example, nudges may also distort the beliefs of their targets when they trigger their emotions. Behavioral research shows that people often make heuristic judgments based on affective "tags" they associate with the subject of their judgment.[38] In such cases, emotional reactions—rather than cognitive assessments—may drive behavior.[39] Consider the possibility of exposing new employees to vivid images of retirees living in penury because of inadequate savings, to encourage them to choose a higher rate of savings for retirement. Such an intervention could succeed in leading its targets to increase their savings rate, but its success would not be guarantee that the employees' welfare has improved so long as they changed their conduct primarily due to an emotional response to the nudge rather than, say, a more careful and attentive consideration of their retirement needs.

The problem of distortion also applies to nudges that aim to shape their targets' ultimate behavior, but nevertheless impact their judgments incidentally. For instance, researchers have identified a number of distinct psychological processes that underlie the efficacy of setting default arrangements, one of the most common and effective tools of nudging.[40] One of these processes concerns the implicit recommendation embedded in some policy defaults.[41] Some who follow the default may do so to their own detriment because they erroneously view it as a recommendation that applies to their situation (rather than a suggested minimal choice or the optimal behavior for the average person rather than for them individually).

The specific challenges of calibration and distortion that exacerbate policy makers' knowledge problem also create unique opportunities for inconspicuous manipulation through nudging. For instance, the difficulty of properly calibrating behavioral interventions could permit policy makers intentionally to nudge their targets more strongly than a truly paternalistic approach calls for, in a direction they or powerful interests desire (e.g., excessive retirement savings), without appearing to engage in heavy-handed interventions. When nudges distort judgments or decisions,

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38 Slovic et al. (2006).

39 Loewenstein et al. (2001).

40 Dinner et al. (2011).

41 Jachimowicz et al. (2018) and McKenzie et al. (2006).

moreover, they also diminish individuals' ability to determine whether the behaviors they encourage are likely in fact to increase their personal well-being.

Finally, paternalistic nudges can generate enhanced opportunity costs because of individuals' heterogeneity in rationality.[42] Different people exhibit different levels of susceptibility to different nudges. Some are more likely than others to follow default arrangements, for example, while other individuals respond more strongly to interventions that elicit emotions. As a result, some of those who are more strongly affect by a particular nudge may change their behavior to their own detriment and bear enhanced OCs. In fact, certain nudges may be most efficacious in changing the behavior of those whose welfare is more likely to be diminished by a successful nudge (e.g., encouraging those who already save enough to save even more at the expense of present consumption).[43]

5 Nudges' Opportunity Costs Largely Ignored

All successful nudges entail opportunity costs and many nudges are capable of generating further, enhanced opportunity costs, but that is not the impression given by the behavioral policy making literature. Until the last few years, the literature in the field was almost exclusively concerned with the potential benefits and efficacy of behavioral policies rather than with their target costs. More recent scholarship occasionally takes the opportunity costs of nudging into account, but these exceptions both prove that the rule is OC neglect and still tend to underestimate the scope of target opportunity costs.

One recent review of 72 empirical studies of nudging towards pro-environmental behavior notes, for instance, that only a few of the reviewed studies even addressed the costs of the tested interventions.[44] A similar pattern emerges in another review that limited itself to 44 high-quality papers on energy conservation nudges, which finds that only a handful sought to assess any of the costs of their policies.[45]

Moreover, on the occasions that the literature considers some of the costs of nudging, it usually reflects the notion that nudges are low-cost policies, which is cited as one of their key virtues. As Thaler and Sunstein stated: "we believe that . . . . many of those [behavioral] policies cost little or nothing; they impose no burden on taxpayers at all."[46] This early assertion, much like the large body of scholarship and commentary that followed it, emphasizes the low implementation costs of nudges for the government that render them attractive to policy makers.[47]

[42] Tor (2014, 2016).

[43] Thunstrom et al. (2018).

[44] Byerly et al. (2018).

[45] Andor and Fels (2018).

[46] Thaler and Sunstein (2008), p. 13.

[47] European Commission (2017) and Sibony and Alemanno (2016).

The scholarly emphasis on behavioral policies' implementation cost advantage is vividly demonstrated by Benartzi et al. recent publication calling on governments to invest more in nudging.[48] As already noted, these researchers argue that nudges are more cost-effective than traditional interventions (primarily those based on financial incentives). Yet all of the comparisons Benartzi et al. make among the respective costs of traditional and behavioral policies are based exclusively on government implementation costs, thus ignoring the opportunity costs of these interventions.[49]

Furthermore, the prominence of the Benartzi et al. study has already led more recent scholarship to embrace their conclusions without scrutiny. Consequently, the claim that nudges are more cost-effective than traditional policy instruments is now routinely repeated.[50] On occasion, moreover, commentators even make the further erroneous assertion that Benartzi et al. show nudges are sometimes more efficient than traditional policies,[51] despite the fact that the former scholars explicitly acknowledge that their analyses do not address questions of efficiency (which require a cost-benefit analysis).

Only limited scholarly attention has been given, on the other hand, to the target costs of nudges, and the few scholars who explicitly address these costs largely ignore opportunity costs. For instance, Camerer et al., who were among the early advocates of behaviorally-informed policy making, favored policies of "asymmetric paternalism" that substantially benefit the boundedly rational whose behavior they successfully modify while imposing much smaller costs on those who neither require these policies nor are influenced by them.[52] Notably, however, though they explicitly account for some target costs, Camerer et al. did not consider opportunity costs (implicitly assuming the policies they advocate, on balance, must benefit the boundedly rational whose behavior they successfully modify).

Similarly, while Thaler and Sunstein noted in passing that behavioral policies entail some target costs, they identified only two such costs—namely, taxpayers' fractional burden of funding the government's policies and the direct costs borne by those who wish to resist the nudge.[53] However, neither of these costs, which Thaler and Sunstein correctly characterize as "minimal,"[54] concern the opportunity costs borne only by individuals that policy makers successfully nudge.

There are a few exceptions to the common pattern of opportunity cost neglect, instances in which scholars who consider certain target costs of behavioral

[48] Benartzi et al. (2017).

[49] Benartzi et al. (2017).

[50] Brandon et al. (2019) and Tannenbaum et al. (2017).

[51] De Jong et al. (2018).

[52] Camerer et al. (2003).

[53] Thaler and Sunstein (2008).

[54] Thaler and Sunstein (2008), p. 242.

interventions do not completely neglect OCs. *The Cost-Benefit Revolution*,[55] a recent book by Sunstein, who is not only a leading advocate of nudging but also a long-standing champion of cost-benefit analysis, provides such an example. In this book, Sunstein illustrates some challenges facing CBA in the context of mandatory labeling laws, including in assessments of these policies' costs. During his discussion of various target costs, Sunstein notes how mandatory labeling that successfully changes behavior leads its targets to forego some consumer surplus—that is, to bear opportunity costs.[56]

Yet this uncommon acknowledgement of the potential significance of OCs for policy analysis is not only an exception that proves the rule, but also concerns policies that primarily function as traditional, disclosure-based interventions rather than nudges. Sunstein also repeatedly asserts that mandatory labeling probably makes those targets whose behavior it changes better off on balance, though our earlier analysis revealed that the case is far less clear cut.[57] At any rate, the pertinent point is that even scholarship that highlights the role of OCs in the cost-benefit analysis of a (somewhat) behavioral policy understates the likely presence and potential significance of enhanced opportunity costs.

Finally, Allcott evaluates a series of programs run by a company that employs social-information nudges to promote energy conservation on the part of consumers.[58] These popular programs send consumers reports that encourage them to reduce energy usage by providing social comparison information regarding households' energy usage, social norm information that categorizes the households' usage verbally and pictorially vis-à-vis "efficiency standards," as well as various energy conservation tips.

One of the ways in which Allcott assesses the programs is by their cost-effectiveness, with the calculated costs being limited solely to their implementation costs—that is, to the costs of producing and delivering the programs' reports to consumers.[59] However, Allcott notes that while this common measure of costs, which focuses on the costs that are most readily measured and matter most to program administrators, is useful for comparison with existing work, it provides "a highly incomplete account of welfare effects."[60] He then identifies private costs to energy consumers as one important source of welfare effects that are difficult to quantify. In other words, Allcott recognizes that consumers who reduce their energy consumption necessarily lose the benefits they previously obtained from using the forgone energy—namely, that they bear standard opportunity costs.[61]

[55] Sunstein (2018b).

[56] Sunstein (2018b).

[57] Sunstein (2018b).

[58] Allcott (2011).

[59] Allcott (2011).

[60] Allcott (2011), p. 1089.

[61] Allcott (2011).

Allcott further observes that the welfare outcomes of the programs for consumers depend on the specific mechanisms through which they exert their effects.[62] But even this careful analysis understates the prevalence of enhanced OCs, which can accompany the provision of social (and other) information. Some consumers, for instance, may pay too much attention to certain aspects of the information or weigh it too heavily, make biased judgments or decisions due to their emotional reactions to the information, and so on. More generally, the behavioral effects of information provision go well beyond transmitting its content and vary from one person to the next. The information provided by this policy may thus benefit some of those successfully nudged consumers but harm others.

6 Conclusion

The immediate and obvious implication of accounting for opportunity costs is to diminish the net benefits of nudges—and therefore their attractiveness compared to other policy alternatives—under cost-benefit analysis. After all, according to CBA, alternative policies can be ranked in order of their efficiency, such that interventions that are expected to generate higher net benefits are superior to those that generate lower net benefits.[63]

The effects of a full accounting for the opportunity costs of nudges can be significant even when only standard OCs are involved. Thus, a nudge that appears attractive when opportunity costs are neglected will usually turn out to be less appealing when they are considered, and could even prove altogether unattractive if OCs amount to a sufficiently large fraction of its benefits. Of course, further accounting for the full opportunity costs of nudges, including their enhanced OCs, will sometimes have an even more dramatic effect on their attractiveness.

Hence, the analysis in this chapter calls for a more thorough assessment of nudges. Such further scrutiny could still show many nudges to be attractive policy instruments that offer higher net benefits than those generated by traditional policy instruments. On other occasions, however, traditional policies—either coercive or non-coercive—may prove more efficient. And finally, there will be circumstances in which neither nudges nor traditional policies would offer net benefits, once their opportunity costs are fully considered. In the latter cases, even policy makers pursuing desirable goals should avoid intervention altogether.

[62] Allcott (2011).

[63] Boardman et al. (2018).

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