**POLICY IMPLICATIONS**

**(subsections inspired by Behavioral Industrial Organization, Handbook of Behavioral Economics, and adding further literature for policies and regulatory concerns)**

**Inadequacy of market solutions**

* Competition and other market-based solutions do not solve the welfare problems created by naiveté-based discrimination. We do not live in a world where everyone is fully rational.
* Advice from intermediaries

? (Not sure about this.)

**Soft Paternalism**

* **Libertarian paternalism**: It induces naïve consumers to make better decisions without interfering with their choices. They are free to choose as they would without the policy
* **Asymmetric paternalism**: it helps consumers who make mistakes without hurting others who are choosing optimally
* **Problems:** When the behavior of consumers changes, supply decisions change, so no possibility of *libertarian paternalism*. *Asymmetric paternalism* cannot be achieved because sophisticated consumers are worse off. (Corollary 1.ii. “Sophisticated consumers are worse off in the more sophisticated pool when there is a discrimination.”). Here taking homogeneous distortion in imperfect competition as an example, we can try to compare the welfare of naïve-sophisticated consumers after (perfect) discrimination for different values of alpha.
* **Using “defaults” as a libertarian paternalist tool to nudge consumers**

The idea is that consumers are steered into a default option, hoping to change their behavior without taking the freedom to choose something else. To understand welfare implications, we need to see how these defaults affect consumer decisions or firms’ responses. (Spiegler, 2015; Allcott and Judd, 2019). **[welfare effects of nudging are important here]**

So, the welfare effect depends on the market environment.

As mentioned in the Handbook of Behavioral Economics: “*A second, interrelated, question is why a policymaker would want to restrict herself to libertarian or asymmetric paternalism and refrain from other interventions. In most classical industrial-organization papers, policies are analysed from a total-welfare or perhaps consumer-welfare perspective, implicitly relying on potential Pareto improvements.*

*It is unclear to us why we should shy away from a regulatory intervention in the banking market that would help naive consumers avoid overdraft fees, simply because it reduces the cross-subsidy to more sophisticated consumers (especially in reverse-Robin-Hoodlike equilibria in which the poor cross-subsidize the rich). At least conceptually, a more promising approach to us would specify a welfare function to be maximized, and then look at the optimal regulation that achieves such a goal.*”

This passage makes it clear that if the total welfare does not increase or change by naiveté-based discrimination, there is no reason to ignore regulations that hurt sophisticated consumers but benefit naïve consumers.

**Disclosure and consumer education**

***Effectiveness of education***

It is soft-paternalistic and easily accepted by firms. Disclosure and education may not be effective and change consumer behavior (some citations xxxxx). As mentioned in the book: “*Unfortunately, there is very little academic research on what kinds of education might be helpful to consumers, and we view this as the greatest gap in the literature*

*on the topic. A notable exception is Bar-Gill and Ferrari (2010). They point out that existing disclosure requirements in the US and the EU almost exclusively focus on*

*attributes of the product or contract offered. This kind of disclosure is not helpful for*

*consumers who mispredict their own product use, a frequent mistake in the applications*

*discussed in Sections 2 through 4. For this reason, Bar-Gill and Ferrari (2010) propose*

*extending disclosure requirements to “product-use” information, such as the average*

*monthly payment consumers make for mortgages or the average amount consumers*

*pay in late fees for credit cards. Even better, they argue, is to require firms to disclose*

*individual-level usage information to consumers in markets in which this information*

*is collected anyhow. For example, a credit-card company may be required to disclose*

*how often the individual consumer has paid late, which hopefully helps overcoming*

*“better-than-average” effects.”*

Kiss (2014) shows that advertisement may help overcoming inertia of consumers in auto liability insurance. This may be relevant also for mobile phone charges and benefits. For a new customer, or a customer at the end of their subscription, there are campaigns to reattract them and you don’t get a new deal, when you’re already “gained” by the company. A regulation that forces a shorter-term contract or eases the switch between companies would increase the competition and the lower prices for new deals.

***Negative side-effects of education***

Education has negative side-effects.

1. Kosfeld and Schüwer (2017) shows how financial education that does not lead to unshrouded prices for all consumers may lead to decreased economic welfare.

“Suppose that we are in a market with a sophisticated-side distortion, and a

regulator concerned with consumer naivete implements a successful education campaign that decreases the share α of naive consumers. Holding firms’ offers fixed, this is clearly Pareto-improving (and hence asymmetrically paternalistic) and libertarian: educated naive consumers are strictly better off, while formerly sophisticated consumers and uneducated naive consumers are equally well off.”

So “holding firms’ offer fixed” combined with education is Pareto-improving.

But it is also clear that in equilibrium the intervention cannot always be Pareto-improving simply because it may lower total welfare (see III.C in our paper). With more consumers being sophisticated, more consumers engage in inefficient avoidance behaviour, so if the effect on the additional price is sufficiently small, lower total welfare results. The intuition is easiest to see in a competitive market: given that fewer consumers now pay the additional price, firms must raise prices to break even, making formerly sophisticated consumers as well as uneducated naive consumers worse off. (The authors mention that “with naive-side or homogenous distortions the same concern does not arise.” WHAT HAPPENS WHEN WE EDUCATE NAIVES OR CHANGE ALPHA?)

1. A host of more subtle reactions by firms can also have negative effects. Suppose disclosure regulation facilitates comparing products for sophisticated consumers and hence makes this market segment more competitive. Firms respond by refocusing their business model on earning money from naive consumers’ mistakes (Murooka and Schwarz,2018), potentially increasing exploitation distortions and decreasing consumer utility.
2. There’s also a concern where education by the regulator leads to “less education” that is obfuscation. (example: regulation that reduces amax). I do not know if this part is relevant to our model.
3. Consumers mistakes may mitigate other distortions. “This is not a mere theoretical possibility: Handel (2013) estimates that if consumers chose optimally, the welfare loss from adverse selection in the US health insurance market would double.” WHAT THE HELL (probably not related to third-degree discrimination)
4. Recall that Grubb (2015a) analyzes services (such as mobile-phone calls

or bank-account transactions) whose marginal price depends on consumers’ past behavior, and because consumers may not recall their past behavior, they may not know their marginal price. One is then tempted to argue that consumers would be better off being notified when they approach or exceed their included allowance. Based on a dynamic structural model of the US mobile-phone industry between 2002 and 2004, Grubb and Osborne (2015) estimate that holding firms’ offers fixed, consumers benefit substantially from such notifications. But once the equilibrium response from firms is taken into account, notifications lower welfare by $26 and consumer surplus by $33 per person per year. The reason is simple: because consumer inattention facilitates efficient screening by firms, disclosing marginal prices lowers welfare. [NOT RELATED BECAUSE NOT THIRD-DEGREE NAIVETE BASED DISCRIMINATION]Importantly, however, this point is limited to rationally inattentive consumers—consumers who may not remember their past usage, but have rational expectations regarding their probability of running into a high fee. If consumers instead underestimate this probability, then (as also in Armstrong and Vickers, 2012) notifications can easily increase consumer and total welfare. [THIS IS RELATED TO NAIVETE IN OUR PAPER.]

This is also important to see how “rationally inattentive” is also included under naiveté and how different kind of naivetés have different welfare implications.

**Regulation contracts or firm conduct**

***Regulating exploitative features***

***Changing sellers’ incentives***

***Political economy of regulation***

**Modifying classical policy approaches and recommendations**

***Questioning inferences about anti-competitive practices***

***Insurance***

***Privacy***

***Benefits from product variety***

**References**

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