

# Nudging VS Policy Interventions

## A Singapore Perspective



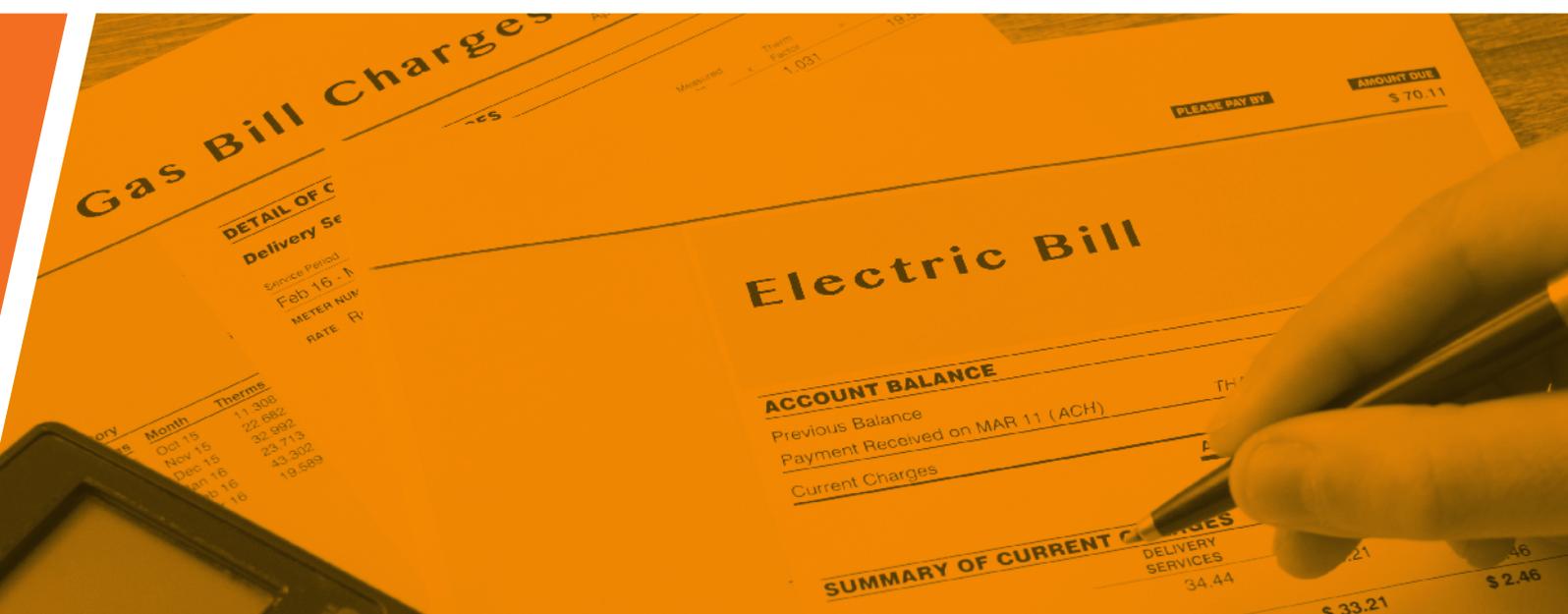
**A**s an educator in A-Level Economics, Melvin tries to nudge his students into producing better results. However, he also believes that occasional setbacks are life's way of letting students know that they have steered off the right course. Hence, students should not be afraid to try out new approaches. Failure is part of the learning process.

### My First Nudge

I remember the first time I opened my bill statement from Singapore Power (SP). Having received the keys to my flat only a few months prior, I treated every aspect of household management with an exaggerated sense of pomposity. By the time I closed the envelope, I was feeling a tad disappointed with myself. Specifically, my SP bill came with a big red tag that read "Keep Trying". Beneath the

by **Mr Melvin Koh**





tab was a comparison of my household's monthly electricity consumption with those of other HDB four room flats within my block. In short, I had over-consumed electricity by a whopping 50% compared to most of my neighbours.

It was only after US economist Richard Thaler won the Nobel Prize for his contributions towards behavioural economics did I realise what had precipitated my original reaction, and subsequent actions - such as mothballing the clothes dryer and adapting to the use of a fan.

A tiny prompt embedded in my bill summary had altered my behaviour. In short, I had been a successful product of a nudging exercise.

### What Makes a Nudge?

Traditional economic theory posits that we are all rational decision-makers seeking to maximise self-interest. Given that higher electricity consumption burns a bigger hole in my pocket, it would be in my interest to cut down on energy use within the house. In reality, that did not happen. It

would be instructive to consider what could be impeding me from achieving an optimal outcome here. By extension, what is the role of a nudge?

Professor Thaler's key contribution to behavioural economics is based on a simple contrarian view — that we are often not rational in making decisions. Guided by habitual behaviour and cajoled by limited time to make decisions in this fast-paced society, we are more likely to end up picking the most intuitive option — one that often makes ourselves less well-off. This means that even





on chilly nights (rare as they are in Singapore), we are still likely to reach for the air-conditioner remote before bedtime only to lose our cool when presented with a large power bill. Even when equipped with the knowledge that a clothes dryer consumes about 3,000 watts of energy while sunning clothes costs nothing, we are still likely to toss our clothes into the dryer to save time and effort.

As such, nudging taps on a variety of subtle policy interventions that aim to steer decision-makers in a desired direction. However, unlike rules and regulation, consumer sovereignty is preserved. This means that elements of

coercion and enforcement are absent in nudging. Despite the nudge in my SP bill, I remained free to indulge in as much electricity consumption as I wished. Furthermore, unlike other traditional policy tools like rebates and subsidies, I gained nothing extra from cutting down on electricity usage (aside from my own bill savings), which makes nudging a cost-effective tool for the government.

### Why Do We React When Nudged?

Understanding how nudging works starts with an understanding of how we think as human beings.

### Social Norming

Professor Cialdini, an emeritus professor of psychology and marketing at Arizona State University, and author of the book “Influence: The Psychology of Persuasion” discovered that people are more likely to comply with a social norm if they know that most of the other people are in compliance. This can be compared to the Fear Of Missing Out (FOMO) phenomenon, which similarly strikes at our pervasive sense of apprehension that we are out of touch with a certain social interaction or experience. Our inclination towards social norming explains why comparing my energy consumption with those of my neighbours triggered me, probably more effectively than a stern letter or one threatening punitive actions. Throw in another injunctive norm such as a disapproving or sad emoticon to indicate a household’s subpar energy performance, and this will likely give household members even greater impetus to cut down on power usage. Gaining this insight also helped me pick up a subtle but formidable line in my recent tax document from

the Inland Revenue Authority of Singapore (IRAS).

The letter reminded me that a majority of Singaporeans pay their taxes on time. This is yet another powerful example of the nudging process at work.

### **Mental Accounting**

Looking at decision-makers in the absence of a social setting, Professor Thaler also developed models to explain how we behave irrationally. For example, using a model of mental accounting, Professor Thaler believes that people regard similar transactions in different ways, depending on whether the transaction affects current or future wealth. Specifically, consumers are more willing to pay for an item using a credit card than cash, since the delayed and cumulative nature of the payment (i.e. buying that additional item adds a little bit

to an already substantial credit card bill) leads consumers to regard the money spent as less “valuable”. Applying this mental accounting bias to modern sales techniques, it is also not surprising to see merchants rolling out advertisements to nudge consumers to spend more during the year-end period. This is because consumers who regard their year-end bonus as “found” money are likely to have a higher propensity to spend compared to spending out of their usual paychecks.

Interestingly, measures to counter mental accounting bias can also be found in Singapore’s CPF (Central Provident Fund) scheme. When my parents sold their HDB flat recently, my father was shocked to find out that he had to refund the total amount taken from his CPF account to fund the previous flat, including accrued interest earned. This measure

recognises a mental accounting flaw among many Singaporeans — that they regard their CPF savings as locked-up funds which are less valuable than money in other liquid accounts. Consequently, Singaporeans negate the value of interest earned on their CPF monies and are prone to dip liberally into their CPF accounts to fund property purchases. In comparison, a rational consumer, free from mental accounting bias, should dip into the savings pot which earns the lowest interest to pay for their property, hence incurring the lowest opportunity cost (most likely monies in normal bank accounts earning much lower returns).

### **Spare the Rod, Nudge the Child**

In short, nudge theory recognises that, as creatures of habit, our behaviour would

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not change without alteration to the environmental cues that encourage such behaviour. Once the cues are changed and behaviour is regulated, there is hope that the root cause of the problem can be eliminated, thus solving the problem for good.

In light of the above, it is instructive to consider the instances where nudging can be used to replace specific policy interventions. Indeed, policymakers have been paying attention to the use of behavioral economics in guiding policy decisions, even before Professor Thaler's Nobel Prize win. For instance, the UK has an organisation known as the Behavioural Insights Team (BIT) which is dedicated to applying nudge theory to improve policy outcomes in a cost-effective way. In 2016, BIT officially launched its office in Singapore to work in partnership with the government to study nudging initiatives relating to retirement, housing and public health, among others.

Given the promise of nudge theory, we will consider whether nudges can be used to replace two existing policy measures in Singapore in the following paragraphs.

### **Ban on Chewing Gum**

Singapore received worldwide fame (or infamy) when it banned chewing gum in 1992. Specifically, it was made illegal to sell chewing gum in Singapore unless the intent was for medical reasons such as the prescription of nicotine gum. Given that more than 25 years have passed since the rule was enacted, one would be tempted to wonder whether Singaporeans are still inclined to stick their chewed gums into mailboxes or MRT train doors, with a lifting of the ban. After all, growing population density over the years has led to Singaporeans living in closer quarters to one another. In

the process of intermixing, Singaporeans would surely have learnt to be more civic-minded and forbearing towards one another.

As such, instead of an outright ban on gum, are Singaporeans ready to be steered towards the right behaviour with a mere nudge? Nudges can come in many forms. A good way to think of nudge ideas is to ensure that gum lovers are not left rooting around for materials to wrap their chewed gum. For example, dedicated gum bins which dispense recycled wrappers can be placed near bus stops or MRT stations to help people to get rid of



their used gum. Reference to how human behaviour can be altered can also be taken from Glasgow University's pilot scheme. Under this scheme, 'Gumdrop on the Go' keyrings were given to students, who were then encouraged to upload pictures of themselves disposing gum responsibly on social media, thus casting them as ambassadors of the movement.

There is reason for optimism in recommending such nudges to Singapore. As mentioned earlier, instead of behaving rationally, consumers tend to fall back on options which are the most intuitive or familiar, even when these options are not in their best interests. Very often, people find these second- or third-best options acceptable (known as satisficing behaviour) due to prevailing social norms e.g. not regarding gum as typical litter. As such, the 20-odd year gum hiatus in Singapore gives us a good opportunity to 'reset' what is viewed as socially acceptable behaviour. If gum is reintroduced to Singapore society, the government should capitalise on this window to educate the public on best practices in gum disposal

and establish new social norms. Another reason why nudges would work is because traditional policy tools, such as punitive actions against littering, have established generations of law-abiding citizens and conditioned a general culture of compliance among Singaporeans. This makes behavioural intervention through nudging more likely to succeed.

However, we are also reminded of Singaporeans' attitude towards new experiences where social norms are yet to be established. For example, ever since bike-sharing was introduced to Singapore, ugly images of bikes tossed into canals or strewn all over open spaces made their way on to social media. The extremely modest progress that Singaporeans have made on the "tray return" policy in foodcourts further casts doubts on the willingness and ability of Singaporeans to adopt a more civic-minded approach to areas where there is no legalistic right or wrong. The government's move to introduce mandatory registration for personal mobility devices is further proof of how responsibility needs to be clearly delineated

and clear-cut rules need to be established, for the arm of the law to take over and stamp out improper behaviour. This culture of apathy among Singaporeans could be an unintended consequence of the paternalistic approach adopted by the government in its early nation-building years.

As such, if gum chewing was to be legalised in Singapore, it is likely that social-norming interventions through the above nudges need to be backed up with sanctions for violating such norms, notably in the form of fines for improper gum disposal. This clear divide between right and wrong can amplify the effectiveness of nudges by allowing Singaporeans to recognise and act upon their cognitive biases.

### ***Mandatory CPF Scheme***

When the British colonial government created the Central Provident Fund (CPF) in Singapore in 1955 to assist workers in saving for their retirement, they were probably not expecting Singapore to retain this legacy scheme until today. In addition, the Singapore government rolled

out various add-ons to expand and modify the mandate of the scheme. For example, in 1984, the CPF scheme was expanded to cover medical expenses, while in 1986, it was augmented with an investment option. However, the scheme is not without controversy. Notwithstanding the attractive returns offered under the CPF scheme, it is not uncommon to hear Singaporeans lamenting about being subjected to a compulsory savings scheme and not being able to manage their own funds.

Given the perceived loss of consumer sovereignty under the CPF scheme, it is worthy to consider alternatives that help Singaporeans summon the willpower to save. For example, the “Save More Tomorrow” or SMarT pension program created by Professor Thaler and fellow behavioural economist Shlomo Benartzi enabled employees to be automatically registered to pay into a pension. It allowed employees to start with a small contribution and to increase the contribution size with each pay-raise. Take-up of the SMarT scheme had been widespread, with 60% of US companies estimated to have signed on to it by 2012.

A key strength of the SMarT scheme is its opt-out feature, which means that consent to join the scheme was presumed and objectors can opt out on their own accord. It is also this element of freedom of choice that allows SMarT to qualify as a nudge policy. In fact, studies have shown that framing the decision as an opt-out one leads to higher enrollment in the scheme (another classic application of social norming), compared to an alternative which requires employees to actively sign up for the scheme.

In the local context, Singapore is not a stranger to opt-out schemes. For example, under the Human Organ Transplant Act (HOTA), Singaporeans turning 21 years of age are automatically enrolled in the Act, which grants approval for their main organs to be recovered in the event of death for transplantation purposes. HOTA members are also given higher priority in receiving an organ if they need a transplant in future. Nonetheless, the opt-out option is also available for Singaporeans who object to donation of their organs upon death.

As such, it is interesting to consider whether an

opt-out alternative to the mandatory CPF scheme (akin to SMarT) can be introduced. Specifically, Singaporeans could be automatically enrolled into the CPF scheme upon receipt of their own paycheck, with objectors given the option to opt out of the scheme and to manage their own savings independently. For this alternative to work properly and for people to interpret the nudge correctly, communication is important. For example, objectors who decide to opt out need to be informed that they are giving up 5% interest earnings on their Special and Medisave accounts, which other CPF members stand to receive.

While giving Singaporeans more autonomy to manage their own finances is an attractive proposal, the unintended consequences need to be considered. Unlike the case of HOTA where the government is not morally obliged to help people who have opted out should they face a need for donated organs in future, the government cannot turn a blind eye to CPF objectors who lose all their savings due to financial mismanagement. Specifically, tasked with

ensuring a more equitable distribution of resources in society, the government needs to stand ready with a safety net to catch those who are unable to fend for themselves, whether this is due to their own folly in financial management or not. The additional financial strain on the government may make tax hikes necessary, which would further incur social discontent. Furthermore, the problem of moral hazards cannot be ignored. If people who have opted out of the savings scheme are 'bailed out' by the government, there would not be many left who would sign in to such a scheme.

### A Nudge is Still a Gentle Prod

The two case studies above bring us to a clearer understanding of what nudges can do and what they cannot do. As highlighted in a 2017 opinion piece by Professor Euston Quah in the *Straits Times*<sup>1</sup>, policymakers need to consider the stakes of non-compliance against the cost-effectiveness of each policy tool. Where stakes are

low and nudges are more cost-effective, nudges should be the preferred tool. Conversely, where the fallout from non-compliance is high such as the opt-out version of CPF discussed above, nudges may not be superior to conventional policy tools.

Even in cases where nudges are the preferred approach due to their cost-effectiveness, holding a stick in the other hand in the form of punitive measures enforced by law can help to intensify the seriousness with which people interpret and internalise the nudges. This is the most likely model that Singapore can pursue. On one hand, nudges can be utilised to reduce instances of non-compliance and hence, alleviate the strain on enforcement agencies; while on the other hand, punitive sanctions can be retained to ensure that people who step out of line are properly dealt with.

Overall, notwithstanding the huge promise behavioural economics brings to the

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domain of policy-making, one must be cognisant that our endeavour to search for alternatives to augment or replace existing policy tools has not come to an end with the development of nudge theory. For example, there is still a lot that the sciences, technology and innovation can bring to the government's arsenal of policy tools. We have already seen how power consumption can be reduced significantly with the mere development of more energy efficient appliances. It also does not require a stretch of our imagination to envisage that the day gum makers develop gum which can be chewed and swallowed, that will very likely spell the end of Singapore's ban on gum.

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<sup>1</sup> "Why Thaler matters: A rational look at behavioural economics" by Euston Quah, Christabelle Soh and Jonathan Tan. 25 Nov 2017, The Straits Times.

# Interplay between Economics and Law

by Ms Shen Xiaoyin

## Introduction — a youthful fascination

My fascination with Economics and Law started in my days in NUS, pursuing a double degree in these two subjects. Economics and Law are by themselves omnipresent forces in our lives and societies. As frameworks of thought and social contract, they shape our behaviour individually, and collectively, influencing our decisions from money to culture.

The less obvious but equally fascinating dimension lies in the interplay between Economics and Law, which is an invisible but powerful hand (pardon the reference) that affects the outcomes of policies and regulations in many indirect ways. To be aware of and leverage on this interplay and its effects on society could be extremely useful for policy makers, to be effective in designing, implementing and managing both new and existing policies and regulations.





In this article, I would like to share this simple idea of interplay in policy making, by showing how Economics and Law are, in the first place, strongly interlinked disciplines and how they already have a strong nexus when designing policies and regulations. This is followed by exploring the dimension of interplay, where these forces interact through effects, responses and repercussions.

### **Economics and Law — a strong nexus**

It is difficult to find a single comprehensive definition that reflects the scope, complexity, and depth of each of these subjects. For simplicity, let us begin with some common definitions as a starting point: Economics is generally a social science about choices and behaviour; while Law, is a system of rules usually made by the government that is used to order the way the society behaves.

Beyond the underlying commonality on society and behaviour, the key complementary connection

between Economics and Law is that while the study of Economics makes observations, the practice of Law creates order. Economic theories seek to explain societal behaviours through certain logical frameworks. They include ways of thinking about behaviours, such as the laws of supply and demand, opportunity costs, moral hazard, game theory, etc. Through these theories, we are able to hypothesise about how people or society would behave. This may form the basis for understanding how laws and regulations are required to alter behaviours, to achieve more desirable social outcomes.

Economic theories are useful tools in the formulation and analysis of Law. A system of law is multifaceted and made of a balance of considerations and purposes to deter undesirable behaviours and to encourage desirable behaviours. What is desirable and what is not may often become a question of Economics. Furthermore, depending on specific types of law, some laws and regulations are purely driven by economic functions, e.g. tax law and financial regulations. In the

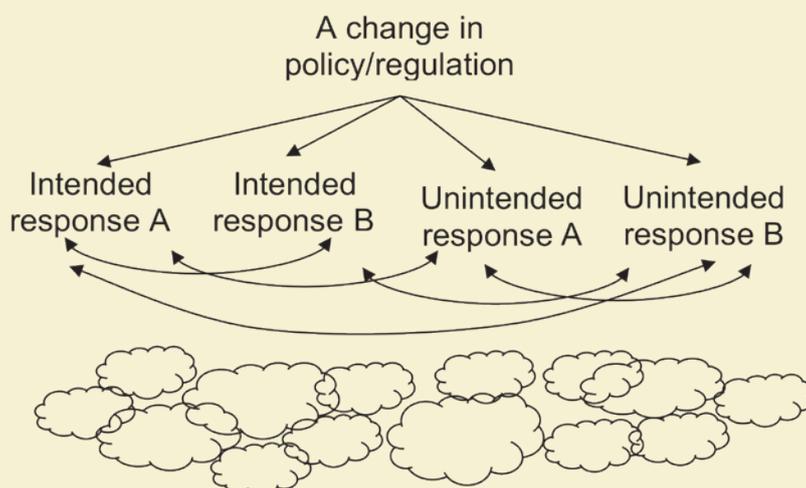
analysis of law, empirical economists make observations about the effectiveness of law, but more than that, they could probe deeper into the interplay and leverage as discussed below and even create appropriate predictive models that could include interplay and leverage considerations in designing more forward-looking policies and regulations.

### The Interplay – effects, responses and repercussions

The strong nexus between Economics and Law is generally obvious and hard to ignore in the design of policies and regulations. Law is the tool to implement decisions made with strong Economics considerations.

The reality is, however, more complex than a straightforward implementation of a well-considered decision. There is a secondary dimension in the interplay that is indirect and may be harder to observe and consider.

The interplay can be explained in a simple flow as follows: once a piece of legislation or regulation is effected, it will, to some extent, directly change behaviour in ways that is intended by policymakers. However, due to the interaction of its effects with other behaviours which are not intended to be changed, there are often unintended responses to the effects of the new law. When the responses interact with each other, they become repercussions.

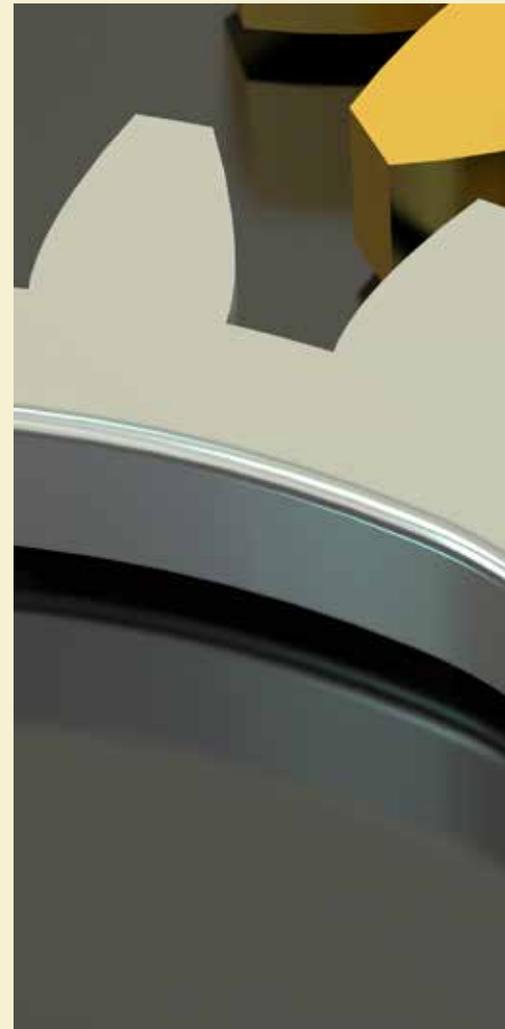


Effects

Responses

Interplay

Repercussions





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of strong academic interest and a substantial thesis in itself.

We can nevertheless examine a recent example we see in Singapore that shows the interplay dimension at work. The most interesting and illustrative example is the story of Singapore's ride-sharing platforms.

### **Interplay at Work — Competition & Comfort, Grab, Uber, Go-Jek**

The story began when Grab and Uber, two ride-sharing mobile applications launched in Singapore around the same time (late 2013) and led to a major disruption in the traditional taxi market (serviced by Comfortdelgro group, almost like a monopoly). The economic considerations suggest that the apps brought more benefits to the consumers. Taxi companies, on the other hand

Interplay is essentially this level of interaction between responses and may be synonymous with “socio-economic impact”. At this level, numerous direct and indirect social and economic objectives interact between individuals and society. This is where both theories from Law

and Economics can be applied in appropriate frameworks and analysed to consider the ensuing repercussions of the interplay. While it is tempting to discuss at length the possible theories that could be used and the possible interplay scenarios, this may be beyond the scope of this article and could be a topic

lobbied intensely against the apps. Taking into consideration the economic benefits from increasing competition, the Competition and Consumer Commission of Singapore and the Land Transport Authority that licenses and regulates taxi companies worked together to provide space for competition while safeguarding consumers.

The regulators achieved the effect of increasing competition and consumer benefits from allowing the apps to quickly gain entry into the market. But the effects did not stop there. Competition heated up as Grab and Uber were effectively in a price war, in lowering prices through attractive rebates and

discounts, to win over market share. While the consumers benefited in the short term, the economics of a price war soon caught up. Indeed, Grab eventually managed to drive Uber out (pardon the pun) of the Singapore market in early 2018. Prices for rides soon went up to the dismay of consumers. More exorbitant surge pricings were reported on Grab.

In response to rising market dominance by Grab, which was against the grain of the regulators' principles and intention, the Competition and Consumer Commission of Singapore imposed a fine of S\$13 million, amongst other measures. This reaction could

not reverse the dominance of Grab in the Singapore market, but plausibly paved the way for the entry of Go-Jek, another similar ride-sharing app, end of 2018, which was welcomed by the consumers as well. To catch up on market share, Go-Jek employed similar price incentives to quickly win over the consumers. The story continues to unfold as I write this article. What can be observed is that the interplay of responses and the repercussions are much more complex than expected.

To consider and analyse possible interplay in advance may not be an easy task as some factors might be unforeseen.



To predict the overall effects of the interplay may be even harder given the many possible scenarios and likely outcomes. Perhaps for now, the interplay may be only observable retrospectively through the repercussions that were actualised. Nevertheless, this post-mortem analysis would be very useful for the constant refining and updating of laws and policies, which Singapore is already doing.

In Singapore, parliamentary debates, industry consultations, and public feedback are some practices we already see, that could be the forum for considering the interplay and leverage through gathering views and feedback. The variety of views gathered from different bodies and representations are a good reflection of possible responses arising from a new change — What do these voices have in common, what could be potential areas of conflicts, how these responses interact with each other and what could be the resulting repercussions? This is a good starting point to apply a system of analysis to derive more insights that could work to the advantage of the policy making.

To consider and analyse possible interplay in advance may not be an easy task as some factors might be unforeseen. To predict the overall effects of the interplay may be even harder given the many possible scenarios and likely outcomes.

One of economists' favorite phrases is "Ceteris Paribus", i.e. all things remain constant. However, this is not always true in the real world. In the design

of policies and regulations, it is instrumental for us to consider the dynamic interaction between Economics and Law.

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