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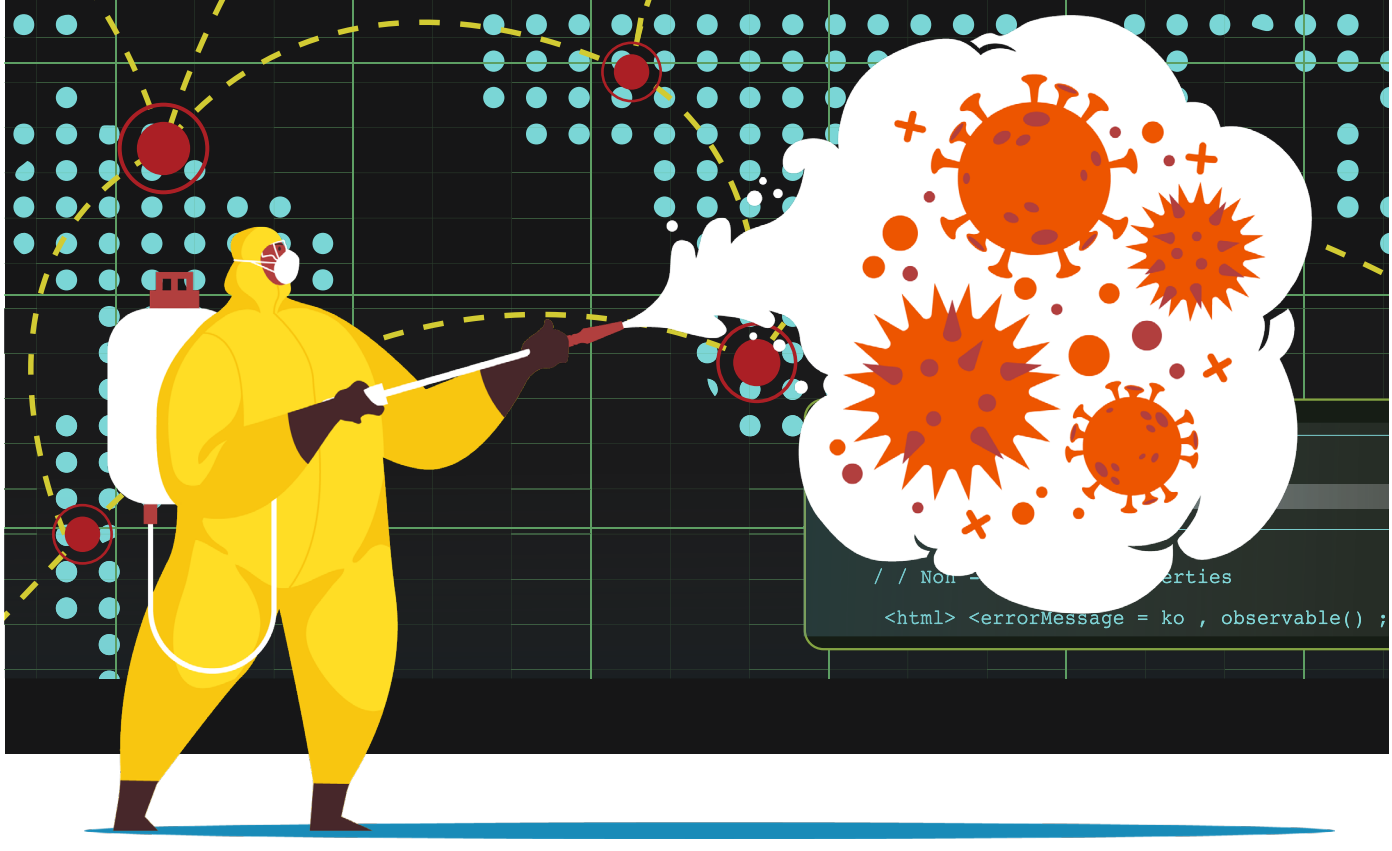
Debugging 2021



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Dear Reader

We are now coming to an end of a rather unique academic year, one laden with its own challenges and opportunities. We started off by 'Uploading 2020…' and then 'Hit Refresh' once pressure kicked in at the end of last year. The virus affecting us right now doesn't seem to be leaving though, and the damage it has done to our socio-economic systems will have to be mended for years to come. After this turbulent year, what macroeconomic policies will mark the next decade? How will we regulate financial markets? What will we be doing about political conflicts growing across the world? In an attempt to explore the fixes to such diverse issues, our correspondents embark on the journey of 'Debugging 2021'.

Before we start the process of debugging, let's put the spotlight on the upcoming reasons behind sleepless nights: Summer Assessments. It is usual to lack motivation and strength while dealing with prolonged schedules, coursework and the new '24-hour' styled exams. But don't worry! This issue kicks off with Yash and Daniel presenting to you 'Burn-Out Vs Bore-Out', helping all students get on track with some key things to keep in mind while preparing for the assessment period. To further ease the process, the 'Wise Senior' is back with senior students giving advice on some key methodologies they adopted to have an efficient examination period.

After getting enough motivation for the assessments, our Economics section kicks off by 'Debugging the virus'. The impact of the pandemic on the airlines has been very evident and Yushra has an interesting take on it, questioning when we can look to a future of catching flights and not COVID-19. Then, Daniel shifts the 'virus' in discussion to the 'Dutch Disease' and details Currency appreciation and tariff measures as two ways to tackle the economic issues brought about by it. While we tackled the pandemic headfirst, apps such as Deliveroo and Uber Eats have been our cornerstones during lockdowns. Considering this, Vaishnavi explores the world of food delivery, laying emphasis on the change in consumer expectations and the ways the pandemic is shaping the future of the delivery industry. Sharia ends this section by discussing the potential for post pandemic monetary policy and how it could be used to debug the effects of the coronavirus. After talking about these different 'Economic Debugs', we lay emphasis on one of the big shifts in thinking we have seen recently. In her article, Niharika lays emphasis on the FIRE (Financial Independence, Retire Early) movement and pushes us to think whether we're making the right choices with regards to our demand for our time versus money.

Our much-loved 'Letter to an Economist' makes a return yet again as Gaurav writes a letter to Prasanta Chandra Mahalanobis, one of the founding members of the Indian Planning commission. In his letter, he highlights his contributions to the economic history of India and signifies the need for reviewing policy timely. With this, we enter the next section which engages with a broad discussion on the Economics and Politics of Regulation. Jordi begins this special section by exploring how political shocks like Brexit impact the stream of financial services in the UK and Europe. This issue would be incomplete without talking about the Gamestop saga. Therefore, Rumeysa and Matias take on the task of explaining the faults and issues behind the Gamestop case and why apps like Robinhood were so involved. Shavak ends this section by highlighting ways in which consumers communicate with the marketplace and giving an overview of the regulatory threats to the Gig Economy.

'In the eye of the tweetstorm', Noeme attempts to capture the discussions on climate change and the cancel culture taking place on twitter. Following this, our politics team gives a special coverage on the 'conflicts' taking place across the globe. Mawdud begins by focusing on the Geopolitics of Sudan while Noemi narrates the tale of political unrest Myanmar. Moving on, Angus takes over Russian politics, giving a detailed account of the Navalny's crusade to free Russia, while Nim dives into the US-Saudi relations and what differences the Biden presidency brings to the table. Syed throws light on the Indian political landscape and uncovers what the market reforms for Indian farming mean for the Modi Government.

The politics section finally ends with a discussion on UK media, particularly about the GB News and News UK tending to snatch up the supposed right-wing vacuum neglected by today's liberal media. This year, we hosted the first ever Tribune Essay Competition, inviting readers all across UK universities to submit their entries on various themes ranging from the pandemic to media and politics. Take a look at that section to see the work of the top 3 entrants.

We finally arrive to our last section: Research. This begins with a widespread discussion on 'whether low value coins should be discontinued?'. Take a look at what your fellow students as well as two of the departmental academics have to say about this question. After this, our research correspondents return to provide you with an insight on how research at UCL looks like! Ansh begins by resuming his exploration of the bargaining power of women in households and gives an account of the Cash Transfer programs which have been conducted in this regard. Even Phin gets his micro model into action and investigates the determinants of consumer switching in the UK Telecoms market.

After a heavy discussion on Microeconomic theory and Development issues, three of our researchers resume their attempt to Modernise Macroeconomics. In the second installment of her research, Ananya puts her macro model to use and compares DSGE models with Agent Based Modelling on the basis of their adaptability. Jasmine implements her empirical methodology to answer the question about whether growth of Islamic banking increases financial inclusion. Marc ends the research section by providing his findings on the Central Bank issued digital monies in Zimbabwe and Venezuela.

That brings us to the end of this issue and a goodbye from this year's Economic Tribune team. Before I end, I would like to thank you all for your support during the entire academic year. With your assistance and continued readership, we were able to embark on new projects and different forms of engagement. With nearly 20 newsletters for the academic year, 30 blog posts, a great turnout of the essay competition, 3 Tribune Takeovers, and recently the launch of 'Beyond Finance' series in partnership with Tharsos, it has been a great pleasure serving the readers with all these opportunities. To end, I wish you all Good luck for your summer assessments and I hope you enjoy reading this issue.

Kind Regards,
Shivam Gujral
Director, 2020-21

Learning & Assessment, Now Online!

Q&A

The Wise Senior 2.0

By your distinguished seniors

Online Vs In-person exams, which one would you prefer? Sample Size: 150

How do you tackle learning online and has your studying style changed in any way?

I think I always preferred watching lectures online even before the pandemic, because I was able to pause lectures when anything got confusing. I found that when I went to lectures in person, I easily lost focus or would need to rewatch them again, so having lectures online hasn't made much difference! I also think the pandemic has helped me keep more on top of uni work as I have much less going on this year that I need to travel to, so more time for studying!

Katy Brown, Third Year

I used to go to every lecture and tutorial but now it's much harder when everything is recorded to do this. It means I'm less likely to ask questions and my studying takes me double the amount of time it used to. Perhaps that's just lockdown though.

Antara Roy, Third Year

Maintaining a methodological learning process and ensuring that I didn't rely on virtual mediums to make notes (I.e., continue to make handwritten notes).

Mihir Gupta, Third Year

What was the most difficult part about online learning?

My bedroom has become where I sleep, study, relax, and exercise - that makes you go a bit crazy

Sai Muvvala, Third Year

Not having someone around to discuss material or to bounce ideas off of. It helps to have someone around to ground you.

Ananya Ashta, First Year

Is there any element you would like to retain from online learning if we get back to in-person classes? (eg. flexibility, complementary material, etc.)

The structure of classes and the mini quizzes to ensure we understand the material

- Niharika Singh, Second Year

The pre recorded lectures helped a lot especially as I can refer to them when I have doubts

- Ananya Ashta, First Year

Flexibility in terms of scheduling work because of availability of recorded content.

- Ansh Raj, First Year

What habits enhance your productivity and how did you develop them?

Pomodoro technique - study for 30min with no stops, 5 minute break, then go again. After doing this 4 times, you have completed one "Pomodoro" and now can have a 25 minute break. Enforcing this on myself took practise, I invested in a old-fashioned stopwatch to keep me going.

Sai Muvvala, Third Year

I'm more productive when I have a regular study/work schedule. Without one I often found myself spending almost as much time thinking about what to do next as actually doing it.

Phin Godfrey, First Year

Studying in a room without any distractions (such as people or my phone) really helps me to concentrate more.

Spasiana Dimitrova, Second Year

What differences have you observed between studying in high school and at university?

Grades will be much lower! Most people at UCL come from high school, having gotten A*s, As and above 80-90% in exams. Then you get to uni and you realise that getting 60+ is considered great, but adjusting your expectations in your head is quite difficult at the start. Studying for exams is also very different, especially when you aren't given past paper answers (grrr). A lot of high school you realise is remembering facts, as the 'understanding' comes very quickly, but in uni you really have to practice everything so much and apply your knowledge so you know why you are doing something.

Katy Brown, Third Year

Lots of self discipline, and regularly studying everyday for long hours everyday.

Ansh Raj, First Year

It's more independent, but it's far more satisfying when you understand something yourself.

Ananya Ashta, First Year

How do you feel about changing back to in-person exams in the future?

Terrified.

Niharika Singh, Second Year

I'm in my third year so won't have to do this. I would say that I love online exams though! I have found that this year, I have learnt and understood so much more about each module because instead of learning things and trying to memorise formulas and facts, before practicing applying them to questions, we now don't need to worry about the memorising and only need to focus on the understanding. I think they are also much less stressful, and it makes you realise that time pressured, in-person exams really should have been updated much earlier, especially given the era of Google where in the real world the skills that are important are finding information and using it, rather than learning it.

Katy Brown, Third Year

Not in favour. In person exams force you to learn and remember for 3 hours, online exams have allowed more scope of essay questions/practical questions which are a better testament to your understanding.

Soumya Khurana, Third Year

It depends on the type of exam. I don't feel there's much gained from forcing people to write long essays under time restriction as this only tests their memorising ability and would be better off as coursework, but for shorter answer questions in person exams could decrease the risk of cheating while still being a fair test of students' understanding.

Phin Godfrey, First Year

What are your tips for success in online exams? (be it 24hr exams, coursework, etc.)

Make sure to treat the process like that of an in-person exam and refrain from relying too much on opening/referring to the material.

Mihir Gupta, Third Year

Have accessible notes, still do all the material prior to the exam, revisit your answers a few times (for courseworks) to ensure you haven't missed anything.

Soumya Khurana, Third Year

This is entirely module dependent but:
Don't rely on having an open book!!!!! You don't want to be spending precious time researching. Have your notes and everything completely ready beforehand.
24 hour exams are hard. But get some sleep, I know too many people who pulled an all nighter for it and I don't think it pays of.

Antara Roy, Third Year

Burn-Out vs Bore-Out

Yash Dewan and Daniel Chen

Yes, it is time to talk about it. You're sat at your laptop again with yet another cup of coffee, 20 minutes into yet another lecture recording. It seems as though, no matter how much you work, responsibilities continue to dogpile on your overflowing to-do list. You begin to feel overwhelmed, but exhaustion cripples any motivation or energy to progress further. Eventually, you succumb to sleep at 3am with the hope that sleeping will bring about productivity for tomorrow.

The experience of 'burn-out' has become ubiquitous for students pursuing their degrees under the elongated shadow of the COVID-19 virus. While the colloquial use of the term has endowed each of us with an intuitive understanding of it, with exam season coming up, it becomes more important than ever to understand how to avoid, tackle and overcome this phenomenon in healthy ways. So, let us begin by understanding what it means to feel burn-out.

In the context of vehicles, a 'burn-out' refers to the practice of keeping a car stationary and spinning its wheels, resulting in the tires to heat up, smoke and tear. Today, a lot of us feel like that tire: overworked, spinning out of control and seeming to go nowhere. By enduring a period of consistent stress and mental fatigue, many will experience the creeping effects of demotivation and even nonchalance, building into a feeling of hopelessness and resentment.

According to the New Scientist, there are three major signs of burn-out which, unsurprisingly, hold a perfect metaphorical mirror to that wheel:

1. Exhaustion, even after a good night's sleep: Your days seem to become a vicious cycle of work and frustration. Before you know it, it's already late into the night. You call it a day to refresh and recharge, only to feel the same lack of energy tomorrow morning.

2. Emotional detachment: Simply put, things that were enjoyable in the past are not so anymore. You do not feel engaged with or excited about your hobbies or work. The highs are lower and the lows more frequent.

3. No feeling of consequence: This is the uneasy feeling that anything you do doesn't really matter. You may have gotten a lot done or nothing at all and both sort of feel the same.

While these are some of the telling signs of being burnt-out, it is important to highlight that it is a natural and widely-recognized reaction to prolonged stressful situations. However, burn-outs can make individuals more susceptible to depression or anxiety in the same way as driving on torn wheels can increase the likelihood of a crash.

It is important to note that a lot of people today also occupy the other end of the spectrum: lockdown restrictions have given them large amounts of free time. Though this was initially taken as a blessing by many of us, with individuals finally having the temporal resources to catch-up with family, learn an instrument or fill their house with indoor plants, it seems to be that doing something new can also get old and eventually, one can once again feel trapped in the mundane. While most of the literature on burn-outs deals with the work environment, scientists have named this new phenomenon, the equally crippling cousin of burn-outs, the 'bore-out'. Fortunately, in her article in Happiful, Bonnie Evie Gifford presents us with metaphorical breaking pads that can effectively help us deal with both these issues. They take the form of:

1 .Identifying root causes and addressing them: By writing out your stressors and thinking of ways to minimise their burden on you, you can recognize small and easy changes to rationally feel more productive.

2. Sharing the load: Taking on unnecessary commitments and responsibilities can easily overwhelm you. Whether it be asking your team members for help or talking out your burdens with your friend, reaching out to your social circle is a sure-fire way to alleviate some pressure.

3. Taking breaks: Although seemingly counterintuitive at first, occasionally taking breaks is essential to maintaining your productivity. This could be a few minutes away from the desk or a day of rest after an intense project, or even away from your devices to miss out on FOMO.

4. Set boundaries: Online learning has made it difficult for us to separate work from leisure. With the bombardment of Moodle forum questions and dreaded internship application updates, a blurred line between the two environments would be enough to make even Robin Thicke stressed.

Those experiencing this deserve to be commended for their perseverance, especially during the trying times of the pandemic where we can often feel isolated from our friends and family. It is important to be forward-looking, crediting yourself with your achievements and grit in anticipation for the future.

Debugging the Virus

Catching flights, not Covid

Yushra Rashid

As the seasons change and workloads get heavier, many students look forward to an escape from it all. For those fortunate enough, this escape may come in the form of a summer getaway with friends or family, a week spent in a foreign city full of good memories and new experiences. However, many of us probably can't bring ourselves to fantasise about these kinds of escapes right now. COVID-19 has drastically changed the nature of travel and holidaying over the last year or so, but how long will this change last? Can we look forward to a future of catching flights, rather than Covid?

Nosedive

In an era of lockdowns and "stay-at-home" regulations, it's no surprise that the pandemic has had detrimental impacts on a sector that relies on affluence and mobility. The World Trade Organisation estimates that in 2020 international tourist arrivals had fallen by 74% in comparison to 2019 (UNWTO, 2021). This trend extends to airplane ticket prices and airline revenues - almost all indicators of the travel industry's health have nosedived.

However, not all of these crashes are unwelcome. Greenhouse gas emissions from commercial airplanes have fallen sharply, an outcome that was not observed during other travel shocks such as 9/11 and the eruption of Eyjafjallajokull in 2010 (Hook et al., 2020). This interesting development has led to hopes of looking at the pandemic as heralding a period of transformation for tourism, rather than a depression. A report from the OECD describes this as a moment for governments to reshape tourism to become more sustainable and resilient through diversification, implementation of new technology, and promotion of environmentally friendly practices (OECD, 2020). Even though these ambitions cannot immediately ease the deterioration of an industry which contributes 10.3% to world GDP, it's hoped that these transformations will better prepare tourism for the future to come (WTTC, 2019). As the saying goes, when one door closes, another opens.

Staycations

It seems that holidaying during a pandemic isn't completely impossible. In the face of cancelled flights and the urge to enjoy the hot summer weather, Britons substituted their passports for their driving licenses and opted for "staycations". Unsurprisingly, the word staycation itself reached peak interest on google search in late July of 2020 (Google Trends, 2021). Domestic tourism has partially softened the blow of the pandemic on the travel industry and will continue to be a key factor in its recovery in the medium term (OECD, 2020). Even recently, when Boris Johnson announced his roadmap for lifting lockdowns in the UK, domestic holiday bookings increased by 300% (Coffey, 2021).

Beyond domestic tourism, it seems that not everyone has banished the idea of going abroad this year. Some countries have experienced tourism surges due to lower travel restrictions and the label of a "Covid-safe destination". Dubai was a particularly popular destination for Europeans during the winter holiday season. The sunny paradise welcomed this inflow of tourists escaping their own lockdowns in order to support local businesses. Since then, COVID-19 cases in the UAE have increased rapidly, though experts say that this was not due to tourists and the openness of the UAE's borders (Defterios et al., 2021).

Whether it's staycations or Covid-free paradises, some have found a way to holiday in the middle of the chaos of the pandemic, indicative of a demand just waiting to make a return. So the question becomes, just when will holidaying return to normal?

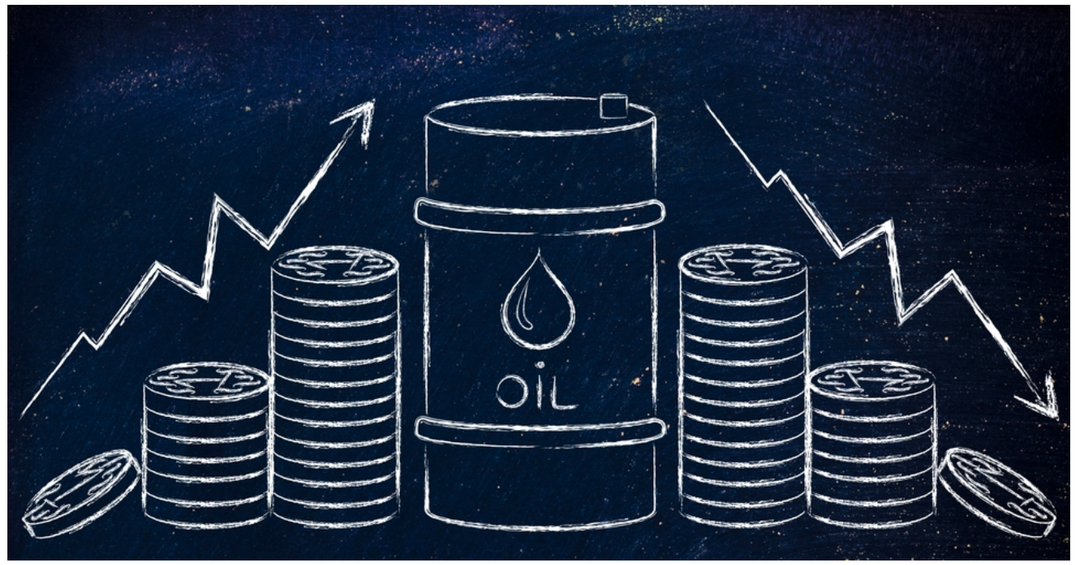
Back to the future

The restrictions on international travel and importance of hygiene that we are experiencing in this extraordinary era is somewhat reminiscent of times past - when ancient travellers were susceptible to local diseases and long-distance travel was limited to the wealthy.

Thankfully, it is expected that the industry will recover from this blast from the past, albeit at a much slower rate than industries less affected by COVID-19 restrictions. In a report by McKinsey&Company, it is estimated that tourism revenue will not recover until 2023 and that this recovery will be driven by dependence on domestic travel and strength of economic recovery (Binggeli et al., 2020). This highlights an interesting feature of this travel shock, the desire to travel has not wavered despite the uncertainty and catastrophic nature of the pandemic, in fact lockdowns are only increasing this desire to "get out". Hence the recent coining of the term "revenge tourism", the idea that intrinsic demand for tourism has not changed but is restricted by travel laws and health measures.

When this recovery does happen though, it may be that the tourism sector will have changed for the better. The implementation of new greener technologies, and higher attention to hygiene and health could make travelling a better experience for everyone.

Curing the Dutch disease



Daniel Chen

With COVID-19 exacerbating the volatility of the oil market, an uncanny parallel seems to be drawn between diseases and commodities. The pandemic gave rise to significant political pressures against the progress made towards globalization with many countries engaging in protectionist measures to ensure the robustness of their supply chains. However, considering Venezuela's crisis and Chavéz's administration, it becomes apparent that economies are not just vulnerable to physical diseases. In this article, we explore the developmental illness that has been plaguing nations much before the coronavirus.

I. Symptoms:

In 1959, the Netherlands discovered the Groningen natural gas field, accounting for approximately 25% of the European Union's natural gas reserves today. This newfound resource fueled a liftoff in Dutch oil exports, bringing home large influxes of foreign cash. However, this gain in wealth was windfall. The sharp surge in demand for the Dutch guilder resulted in a significant appreciation. Although the oil industry was lucrative, international markets began to experience costlier Dutch exports. This meant that hidden within the trojan horse of the Groningen was the loss of international competitiveness for all non-oil industries, resulting in the infamous decline of the Dutch manufacturing sector as well as the broader economy.

This paradox of the rapid development of one sector damaging the growth of the wider economy has since been coined as the Dutch disease. Whilst typically applied to natural resource discovery, it can also be used to explain the detriments of other windfall gains such as surging commodity prices, foreign aid and FDI. It serves as a counterweight to the arguments of comparative advantage, where economies with large amounts of naturally endowed resources primarily export commodities due to lower opportunity costs of production. This means that, through freedom of trade, all economies will benefit from the efficiencies in the form of cheaper and higher quality goods.

In an attempt to dampen the surge in the guilder whilst reducing the interest burden of capital-intensive gas extraction, the Netherlands held interest rates low. This resulted in hot money outflows as the negative interest differential disincentivized foreign investment, with other markets presenting themselves as more attractive alternatives. This becomes especially critical considering the transience of natural resources. Whilst the Dutch economy collated their resources into natural gas production, international competitors moved into the once-productive manufacturing sector which had now stagnated due to a lack of investment. Attracted by a temporary but attractive boom in a specific industry, the Dutch were sidetracked away from a well-rounded development, allowing other economies to raise barriers to re-entry through their relative competitiveness.

A lack of investment could easily be pinned as the primary

cause for the 4% increase in unemployment observed throughout the 1970s. However, the severity of the Dutch disease depends significantly on microeconomic factors. Natural resource discovery typically concentrates income into the hands of the few, raising concerns of distribution. Due to non-homothetic preferences, where consumer preferences differ with income, demand for luxury goods and services skyrocket. The profitability of luxury sectors will likely skew employment trends due to the increase in derived demand for labour. This movement of labour and shift in consumption preferences mean that the country no longer produces certain goods due to a lack of feasibility. As gas reserves diminished, the demand for luxuries followed suit. Workers that left the manufacturing sector to supply luxury goods and services are now redundant, with the opportunity to return dwindled through stagnation.

Ultimately, the Netherlands served as a cautionary tale for commodity-rich countries that forgo diversification. The Dutch suffered crimped long-term development through lack of investment alongside structural unemployment and a set-back in long-term comparative advantage due to both direct and indirect deindustrialization.

II. Diagnosis:

To understand the treatment of the Dutch disease, we must first break the resource curse down to its fundamentals. W. Max Corden and J. Peter Neary developed a model of the economy, differentiating it into booming and lagging sectors. In the case of the Netherlands, it is the natural gas and manufacturing industries respectively.

The boom of natural resource reserves has two major effects on the economy:

-The resource movement effect illustrates the shift in employment trends towards the booming sector. However, we have established that natural gas extraction is capital-intensive. In this context, this means that direct deindustrialization will be minimal due to the negligible movement of labour away from the manufacturing sector.

-The spending effect is more pronounced. This results in indirect deindustrialization through the increased derived demand for labour in luxury sectors. Due to the disproportionate increase in demand for non-tradable luxury services from non-homothetic preferences, prices will rise relative to that of tradable goods which are determined by international markets. This translates to a rise in the real exchange rate.

III. Treatment:

From this, we can conclude that there are two explicit ways of addressing the Dutch disease. One of which attacks it at its root of currency appreciation. By reinvesting the foreign cash gained through their oil exports, any price increments from the increases in demand for the Dutch guilder will be offset through foreign investment, regulating its supply of foreign exchange. This involves creating a stabilization fund, allowing the Dutch government to have a stable revenue stream in the future by gradually withdrawing their money.

However, this ignores the political implications of such policies. Some may argue that the gains from commodity exports may be used to alleviate domestic issues such as poverty, which becomes especially critical for developing countries.

Another potential policy addresses the support of the lagging sector. For the Netherlands, imposing larger tariffs or providing greater subsidies towards the manufacturing sector may protect it from competition from foreign imports, massively reducing the possibility of worker redundancy.

Although this seems effective on paper, it has the potential to yield counter-productive results. By reducing demand for foreign currency due to relatively costlier imports, the Netherlands would effectively contribute towards the real appreciation of the guilder, worsening the Dutch disease. This is due to the fact that importing foreign goods may mitigate part of the inflow of foreign currency, dampening the rate of appreciation.

IV. Outlook:

Given the commendable progress of the vaccine roll-out and a foreseeable relaxation of lockdown in the UK, a return to relative normality seems well overdue. As an escape from the COVID-19 pandemic which has dominated headlines, the exploration of the Dutch disease is a fresh but pivotal factor in the development of countries. Although not as optimistic as we would have hoped, it is an issue faced by many economies in the past and will likely continue to do so long after the pandemic has ended. However, unlike the coronavirus, we have a tried and true cure to the commodity curse.

The World of Food Delievery

Vaishnavi Manivannan

The streets of London have been eerily quiet over the past months. Memories of sharing a pizza in a bustling restaurant or clinking glasses at the pub have gradually become more distant. 2020 saw the collapse into administration of many UK high street retailers such as Topshop and Bonmarché (Baker, 2021). But amidst our struggling economy, lockdown has created great opportunities for some buseinesses – and at the top of this list lies food delivery companies. Last June saw Amazon buying 16% of Deliveroo (BBC, 2020), and Just Eat Takeaway's acquisition of Grubhub in a £5.75bn deal (BBC, 2020). Although such apps are often vilified for their commission charges and employee satisfaction, the army of cyclists zooming around the city emphasises just how popular delivery apps are becoming, but also hides the struggles faced by these firms in equal measure.

The idea of modern food delivery was born in a University classroom in 2006. Collin Wallace wished to order a sandwich without his lecturer noticing, and created a computer program which faxed a restaurant after he sent a text from his mobile phone. Originally, the prospect of phone operated delivery was met with low demand, but in 2007 the world of technology changed. Steve Jobs unveiled the first-generation iPhone and Wallace's business proposition was suddenly given the opportunity to flourish. He went on to work as the head of innovation at Grubhub, but eventually condemned the company, expressing his disapproval of it forcing small immigrant-run restaurants to face high commissions and share their customers' data (Nunn, 2021). Grubhub is an example of an order only business model, which has a network of enlisted restaurants on its application but relies on the eatery to provide its delivery fleet. This allows it to reap the benefits of low start-up costs and relatively easy growth, which involves adding more restaurants to the app. The main downside is the difficulty in attracting places to the platform initially, and marketing successfully to highlight what is being offered. The commission for an order is between 10 and 15% on average, and it charges restaurant owners a monthly fee to earn a place as a top search result (Babych, 2020).

UberEats and Deliveroo are amongst firms who offer eatery owners a further stage forward in the lightening of their workload, using the order and delivery model. These firms can benefit from charging commissions at margins of up to 57% (Babych, 2020). But hidden behind the general preconceptions that these are thriving businesses is the reality that most delivery services keep losing money (Barro, 2020). Theoretically, the availability of Deliveroo, UberEats and its competitors should allow for a more efficient allocation of resources. They encourage a better matching of labour to work as restaurants are not swamped with an excess of orders without enough delivery drivers, nor are they forced to pay for an employee on the quieter days with fewer deliveries. However, these gains can be

entirely offset by failures on the delivery side itself – lower-quality delivery involves drivers being unaware if the bag contains the correct food products, and a lack of familiarity with the neighbourhoods of frequent customers. It was also revealed in a US study that almost 30% of drivers admit to taking food from an order (Gilbert, 2019). Such behaviours diminish the productivity gains from optimal staff matching and reveal that the main reason behind the survival of these businesses is their willingness to lose money on their transactions. Food delivery is a significant component of the on-demand economy, and this relies on the population requiring more assistance-type services than in the past. The technology aspect that has been introduced with these apps does not appear to have improved quality enough to warrant customers paying more, nor do the advantages of these third-party providers allow for a significant increase in productivity. Therefore, the underlying factor which ensures demand is that customers are not paying the true economic cost of having their food delivered. If investors in these app-based services begin to expect profits, the world will see a contraction in the size of the personal-service part of the economy as the value proposition disappears with higher charges.

Another difficulty faced is the sheer competition amongst these firms. Setting up a food delivery business involves creating an app to allow demand and supply to meet, on-boarding the customers and restaurants respectively, adaptable labour laws and a location with potential for a large client base. This allows new entrants to enjoy the low barriers to entry despite the high fixed costs. What separates competition in this market is predominantly alliances with well-established companies – such as that of Deliveroo with Pret a Manger and UberEats with McDonalds. However, these contracts tend to be on fixed-length terms and therefore suppliers will pick a new service with a lower take rate, which is the split of revenues going to the delivery company, after the agreement's expiry. There has even been proof of regional chains with just over 10 branches leveraging offers to lower the delivery fees paid (Powell, 2019). Therefore, in spite of the negative perspectives of delivery companies' impact on small businesses, they too are feeling the heat of pricing pressure from major suppliers across the country.

A deeper understanding of the changes in customer behaviour with the availability of food-delivery platforms have shaped the way for these firms' survival. The expectations and needs of the client base have transformed over the past decade. The most noteworthy characteristic now is that apps are sticky, with a study showing that once customers have registered, 80% of them never or scarcely change the platform they are using, which highlights the importance of ensuring a high volume of customers sign up in a short amount of time. Delivery times make up the most significant component of ensuring customer satisfaction, with the optimal wait time being no more than 60 minutes. Finally, it is important for these apps to carefully assess food preferences based on the aspects that the highest-volume days for orders are on the weekends, and consequently 82% of all orders are placed from home (Hirschberg et al., 2016). These key traits have given delivery companies the framework of ensuring their drivers are dispersed evenly, their marketing is alluring – with tactics such as getting the England football team involved in Deliveroo's 2020 advert – and that a range of cuisines are offered to suit the adventurous preferences exhibited after a difficult week of work.

Alongside allowing restaurants to outsource the costly door-to-door delivery rate, the other advantages that are often swept under the rug for eateries include being able to reach an entirely new set of customers. Collin Wallace openly stated to restaurants doubting the positives brought about through using third-party platforms, that these services "are simultaneously selling the same customers to your competitor across the street, but are also selling their customers to you" (Nunn, 2021). And in this way, many of us have found ourselves pleasantly surprised after trying out the local dessert place which has truly earned its high app rating. Therefore, being able to offer food through new channels presents new revenue streams and allows revenue maximisation on days which used to be characterised by an empty restaurant and consequently a quiet kitchen (Deloitte, 2019). Additionally, entrepreneurs have seized the opportunity for profit with the phenomenon of ghost kitchens – a space devoted entirely to preparing food for delivery. These have offered jobs to otherwise underdeveloped areas and are a stepping stone to success for early-stage food businesses (Courier, 2020).

All these aspects show an interesting future ahead for food culture all over the world. There are worries about wider delivery leading to an increase in off-premise meals and therefore a substitution from dining in. Across Europe, a study has shown that the online food delivery sector is expected to grow by over 10% a year to approximately $25bn by 2023 (Deloitte, 2019). This should ease third-party delivery services' fears, spawning from their lack of profitability, as it is clear demand will remain consistent. But simultaneously, lockdown has taught many of us to seize opportunities to go out more – it is difficult to overcome the regret from saying no to that one dinner invitation from February of 2020. And this is the attitude that many businesses should find comfort in. Once we have truly seen the end of this pandemic, our streets will be filled with cyclists delivering to those returning from a hard day at the workplace, but also restaurants filled with diners who have spent months craving the joys of seeing their food travel directly from the kitchen to the table.

Infinite Stimulus and Long-term Inflation: What will post-pandemic monetary policy look like?

Sharia Tan

Introduction

The coronavirus pandemic triggered a global economic downturn of uncertain duration. Similar to the 2008 financial crisis, governments and central banks around the world had to employ powerful measures to attenuate the impacts of a recession and prevent lasting damage to the economy.

In light of the pandemic, many questions on the central banks' monetary policy frame-work and strategies have come to the forefront. In what ways will monetary policy need to adapt? How can it be ensured that it continues to be a powerful countermeasure to recessions and increased unemployment? The most important and obvious limitation of monetary policy, in this case, would be the liquidity trap, as confidence levels are hard to manipulate.

One interesting thing to note is that the pandemic has led to far greater cooperation between central banks and governments; as central banks printed more money, governments offered stimulus packages ensuring people were able to spend it. If governments can borrow and spend in the knowledge that they won't put upward pressure on interest rates, then that should be quite a powerful stimulant to the economy. This cooperation could not only be enough to pick inflation up off the floor, but it could also help repair the global economy.

Inflation in the past two decades

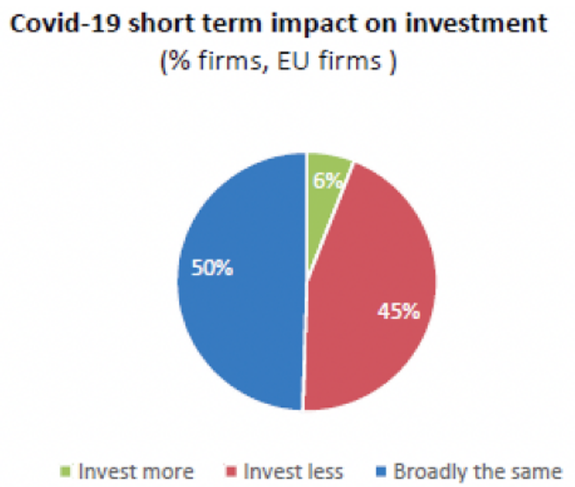
In the past two decades, inflation has puzzled economists by remaining low in good times and bad. Could the pandemic cause it to rise?

Historically, inflation was perceived as dangerous and violent. In the case of hyperinflation such as what Germany experienced after the First World War, where inflation accelerated to 1,000,000% per annum, the German Mark ceased to function as money and people had to use other commodities such as cigarettes as the medium of exchange. However, ever since the onset of inflation-targeting monetary policy regimes, it seems that inflation has been tamed. Instead of struggling with runway prices, most economies have found inflation too low in accordance with their inflation targets. Since 2009, the base rate of the BOE has remained below 1%. Despite a decade of near-zero interest rates, that has not changed. Nor has the printing of money by central banks globally and unemployment rates being at their lowest in decades.

Could it be that central banks have kept inflation low for so long that people no longer expect them to rise even in a job boom? The key question now is could an unexpected outcome of the disruption caused by the pandemic help raise inflation and get it back on track?

Will there be inflation post-pandemic?

In the short term, when cases surged worldwide and heavy lockdown measures were implemented, disinflation dominated. Due to the short-term shock, 45% of EU firms said they were investing less, with investment plans either delayed or canceled.



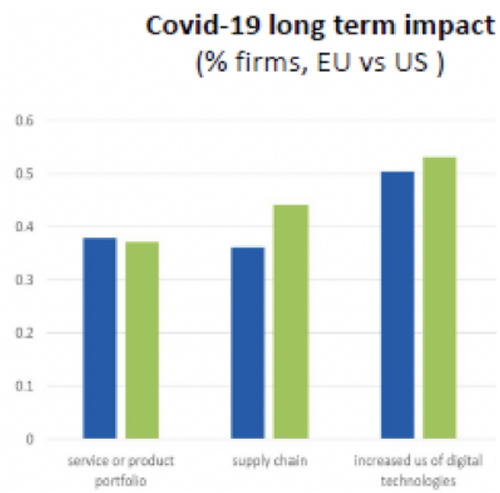
In the medium term, several factors suggested that disinflationary pressures would continue to dominate. The disruptions to production and supply chains caused by COVID-19 continue to create upward pressure on prices. However, this effect is dominated by the decline in demand leading to very low inflation. Although consumption has started to increase, it is expected to remain below pre-pandemic levels for quite some time.

In the long run, transformations such as deglobalization or shifts in consumption patterns could lead to structural changes. The pandemic has revealed the fragility of global supply chains - they are highly vulnerable to major shocks, and this could lead to companies reconsidering the geographical distribution of their production. In many advanced economies such as European countries and the US, local production of essential goods such as medicine and food is likely to be encouraged. This force could potentially reverse the recent disinflationary effects of globalization. Firms expect the need to adapt to a 'new normal' past Covid-19 - 50% of EU firms say that more investment in digitalisation will be needed; 40% of firms see a long-term need to edit their products and services portfolio; 40% predict an impact on their supply chain. Lastly, this crisis is predicted to have permanent impacts on the behaviour of consumers and businesses which could lead to changes in consumption baskets, patterns, and even investment decisions.

Global policy responses

What tools are central banks looking at, what are they predicting, and why?

The first concern is public health, but given the specific circumstances SMEs around the world are facing, a wide



range of measures have been introduced to alleviate the negative economic impacts of the Covid-19 pandemic on businesses. Many countries have been quick to deploy measures to support SMEs and the self-employed during this difficult time, focusing specifically on initiatives to sustain short-term liquidity. Many Central Banks have stepped in to support lending by alleviating monetary conditions and enabling commercial banks to provide more loans to SMEs. Examples include the unprecedented measures taken by the US Federal Reserve and European Central Bank.

Many countries have also introduced SME specific policy measures such as deferral of tax, social security payments, tax relief, provision of grants, etc.

Findings from the World Bank SME Support Measures dashboard suggest that out of 845 SME policy instruments used worldwide 328 relate to debt finance (loans and guarantees), 205 to employment support, and 151 to tax. Structural policies have been used sparingly to focus on teleworking and digitalization, but they are predicted to be implemented in more countries. The use of all policies vary between countries due to the different circumstances faced.

Table 1 gives an indication of the intensity of measures used by different countries. The table distinguishes between immediate fiscal measures, which include for instance grants and subsidies to SMEs (but also additional health expenditure), deferral of tax, social security and debt payments (for businesses and consumers) and other liquidity and guarantee instruments. Table 1 provides an overview of differences in approaches taken by various countries. We see that the size of the fiscal impulse in Germany is significantly higher than in other countries, but also that countries like Germany, Italy and to a lesser extent the UK and France rely heavily on providing loan guarantees. In the United States the immediate fiscal impulse as a percentage of GDP is significantly larger than in other countries, although it should be taken into account that in many European countries the fiscal impulse works via non-discretionary through automatic stabilizers related to existing social security arrangements.

Early July, (Segal and Gerstel, 2020[63]) estimate the fiscal response in G20 countries to be 11.2% of GDP. (Elgin, Basbug and Yalaman, 2020[64]) show that the fiscal policy effort by countries correlates with GDP per capita and the number of COVID-19 cases.

Expansionary monetary policy such as lower interest rates will increase the money supply, lead to higher demand for goods and services may push wages and other costs higher, influencing inflation. Expansionary fiscal policy which seeks to increase aggregate demand such as a decrease in taxes can lead to increase in disposable income which encourages spending and may lead to inflation.

Conclusion

Inflation is likely to rise in 2021 after a deflationary trend for the past two years as the Covid-19 pandemic suppressed demands for goods and services. However, it is likely to be mild. A resurgent economy that will benefit industries hurt by the Covid pandemic will help fuel the run. Bond market traders and Wall Street experts have been signaling rising inflation from its current dormant levels. Many see inflation moving towards and even a little higher than the Federal Reserve's 2% target rate which has been far-fetched for the past decade. The primary driver is an economic reopening fueled by more Americans getting vaccinated, which will cause upward price pressure in industries that were held back during the Covid-19 pandemic. The same can be said for most developed countries. And for less developed countries it is uncertain how soon and to what extent inflation will rise as they are likely to recover slower from the Covid-19 pandemic.

	Immediate fiscal impulse	Deferral	Other liquidity/guarantee
Belgium	1.4%	4.8%	21.9%
Denmark	2.1%	7.2%	2.9%
France	4.4%	8.7%	14.0%
Germany	13.3%	7.3%	27.2%
Greece	3.1%	1.2%	2.1%
Hungary	0.4%	8.3%	0.0%
Italy	3.4%	13.2%	32.1%
Netherlands	3.7%	7.9%	3.4%
Portugal	2.5%	11.1%	5.5%
Spain	3.7%	0.8%	9.2%
United Kingdom	4.8%	1.9%	14.9%
United States	9.1%	2.6%	2.6%

The Beginning of the End for the Free Riding Fuelling the Gig Economy

Shavak Matalia

From Uber to JustEat to Fiverr, firms in the gig economy have revolutionised the way consumers purchase goods and services on demand. They have brought an unparalleled degree of convenience to acting on impromptu consumption decisions and, in doing so, have become household names. The verb 'uberize' has even finessed its way into the Cambridge Dictionary to describe transformative changes to buying arrangements. Yet what precisely defines the mystifying 'gig economy', and what are we to make of the emergent conflict between national policymakers and judiciaries with the sector?

The 'gig economy' (or strictly speaking the 'platform economy') is characterised by companies operating under a technology-based business model, centred on providing an on-demand digital platform for people to sell the use of their labour to prospective buyers. The rapid advancement of technology over the past decade, including mobile technology and cloud computing, kindled the growth of these enterprises.

The ability for platform workers to sell their services at times of their own discretion, via being seamlessly connected to customers to meet available market demand, has provided a useful degree of flexibility to the labour market.

However, in its process of fundamentally reshaping buying arrangements, the gig economy's arrival has simultaneously radically disrupted the nature of work within infiltrated industries. This has occurred due to its establishment of a new way for assembling a workforce in sectors which have historically been the domain of the strictly self-employed. The archetypal example of this is most apparent with a probe into the taxi-hailing gig company Uber.

Across the world, taxi drivers have conventionally been self-employed – each running their own individual taxi-service businesses. Uber, branding itself as a technology company, then injected itself amidst the taxi-service market. The company pioneered a smartphone application in the late 2000s to act as a live matchmaking platform for deploying self-employed drivers, from its pool of enrolled roaming drivers, to waiting customers requesting a ride. The matched driver would turn up to the customer's location and provide a one-way trip to the declared destination. A commensurate fare would then be paid by the passenger through the app. A service fee would also be deducted from the fare of each trip, forming Uber's core revenue stream.

Similar business models consisting of a triangular relationship between digital platform, worker and customer have spread fast and wide. The result can be seen in the estimated 14 million platform-based workers in the worldwide economy, amounting to 1.3 million of such gig workers in the UK alone.

These new institutional working arrangements have brought severe ramifications for the health and rectitude of our modern labour markets. To understand this, we must consider the balancing act underpinning the dichotomy between employment statuses in employment law around the world. In general, this manifests as a two-tier system of employment status serving to distinguish entitlement to workers' rights based on categorisation of workers as either employees or self-employed.

Employees are defined under this framework as those working under a contract of employment (i.e. a contract of service) with an employer, such that they are personally obligated to work in accordance with the terms of their contract. By contrast, the self-employed are characterised as those who work for themselves, entering into their own contracts with clients to directly provide services to them. It is this element of autonomy over directly contracting one's work that results in the self-employed being alternatively referred to as 'independent contractors'.

Workers of the employee status typically gain access to the full suite of a nation's employment protections, including a minimum wage, various types of paid leave, and other core employee benefits such as access to an occupational pension scheme and health insurance coverage. By contrast, the self-employed largely lie outside the scope of employment law and so receive effectively no statutory employment protections. This disparity reflects the decisions of legislators to offer greater protection to individuals occupying a working relationship which involves being in a position of subordination to a form of higher economic entity that exercises control over work carried out (i.e. an employer). In this way, a nation's employment law reflects its calculated attempt to resolve the societal trade-off between the desire to protect workers and the desire to preserve labour market flexibility and dynamism.

In a bid to provide a taxi-service of uniform quality to its users, Uber strictly regulates the work of its drivers. Whilst the drivers can work when they like by logging on or off the application, Uber:

- Sets the maximum fares for each trip, effectively dictating how much drivers are paid for the work they do.
- Temporarily deactivates live drivers from the platform if they fail to meet prescribed performance targets, such as a specific trip-request acceptance rate.
- Permanently deactivates drivers from the platform if they fail to maintain a required average star-rating from customers.
- Takes active steps to restrict communications between passenger and driver, preventing drivers from establishing a working relationship with passengers capable of extending beyond an individual trip.

This high degree of control which Uber exerts over its drivers results in the drivers being unable to exercise any meaningful autonomy over their work. This stands in stark contrast to the defining characteristic of "autonomy over work" long held by traditionally self-employed taxi drivers. Moreover, as Uber drivers are classed by the company as 'self-employed', the drivers are not afforded key employment rights. The result is that, under its gig-economy business model, Uber benefits from an unfair competitive advantage. The company is effectively able to exert strong control over its drivers whilst eschewing the financial costs of providing the employment rights typically conferred upon workers subordinate to such a principal's control.

On 19th February 2021, this inequity culminated in a pivotal ruling against Uber by the UK Supreme Court. The court's judgement pronounced the company's drivers to belong to a distinct legal category of "limb (b) workers"; rather than being independent contractors of passengers. "Limb (b) worker" is a British term of art, embodying a relatively unique employment status. It stems from the greater nuance to employment law in the UK compared with many other advanced economies in Europe and North America. As such, the UK operates under a three-tier approach to employment status; rather than the rigid dichotomy between employees and the self-employed. The concept of "limb (b) workers" hence resides between the categories of employee and self-employed and is intended to offer the UK labour market more variation in the available associations between employment relationships and employment protections. Nonetheless, to fully appreciate the concept of "limb (b) workers", we must consider contracts of employment again - the crux of the conventional definition of an employee.

Under the common law in the UK, an employment contract must consist of at least all of the following three features:

1. **Substitution** – The employee must be required to perform the work personally; rather than being able to send another person to perform the work.
2. **Mutuality** of obligation (MoO) between the parties – The employer must offer work to do, and pay for it, and the employee must carry out the work provided, and get paid for it.
3. **Direction and control** – The employer must have a sufficient right of supervision, control and discipline over the employee.

Limb (b) workers are defined under *Section 230(3)(b) of the UK's Employment Rights Act 1996* as those who do not work under such an employment contract (i.e. a contract fulfilling the aforementioned common law test of employment), but who still work under a contract for services which requires them to personally provide a service as part of another entity's business undertaking.

As a halfway house category, limb (b) workers have the legal right to the UK's baseline employment protections including the minimum wage and paid leave. However, they are not covered by the entire suite of employment protections such as parental leave, redundancy pay and unfair dismissal rights.

This relatively unique three-tier framework of employment status was hailed in 2017 as "the British Way" to employment law by Matthew Taylor (chief executive of the charity 'Royal Society of the Arts'), in a government-commissioned review into modern working practices. Interestingly, the Taylor review also included a semantic recommendation to change the technical term of "limb

(b) worker" to the more self-explanatory framing of "dependent contractor".

By classifying the drivers as "limb (b) workers" due to Uber's strong control over the drivers' work, the watershed judgement from the Supreme Court entitled the Uber drivers to the national minimum wage, holiday pay and sick pay. The court's application of the "autonomy over work" principle in reaching this judgment hence struck not only at the core of Uber's business model; but at the core business model undergirding the entire gig economy.

Nevertheless, Uber maintains this judgment only concerns the claimant drivers who brought the case. This is because it insists to have meaningfully reconfigured its operations since 2016 – the year in which the claimant drivers first brought their case to the judiciary in an employment tribunal.

Workers in similar situations in the UK, at Uber and other gig companies, will therefore have to bring their own court cases and argue the Supreme Court decision as precedent for entitlement to the same baseline employment rights. This underscores the difficulty in relying on complaint-based case law for protecting workers from business models that are abusive-by-design. The delay in the legal challenges from platform workers being resolved via authoritative court judgements will consistently give gig companies time to tweak their operating procedures and thereby claim specific court findings no longer apply. As such, the impact of the Supreme Court decision will likely be piecemeal but nonetheless profound.

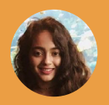
The seminal Taylor review advocated a solution to this problem, in the spirit of the approach behind "the British Way" to employment law. The remedy proposed was for the UK Parliament to embody the recent developments in context-specific case law into clearly generalised primary legislation. The power and clarity emanating from a new statutory footing would thus facilitate the end of gig companies like Uber profiting from the ambiguity in employment regulation at the margins of employment statuses. However, this policy prescription still awaits incorporation by Parliament into "the British way".

With the EU and the USA concurrently considering significant regulatory reforms to working arrangements in the gig economy, perhaps much can be learned from the compromise personified in "the British way". Modern businesses increasingly want to ensure they are operating on a level playing field, complying with any legal responsibilities without being undercut by irresponsible employers playing fast and loose with the social contract buttressing employment statuses. Moreover, many individuals want to remain able to capitalise on the opportunities that new technology offers for flexible work. Getting these changes correct is thus about far more than safeguarding workers. It is about making labour market regulation smart enough for dealing with the technological developments of the 21st century. Only time will tell what regulatory framework will indeed come to dominate the world in modulating the gig economy.

Yet as technological change rapidly alters working practices, it is now beyond question that legislators must drive forward in a relentless attempt to catch up.

The article's facts are true as of 15/03/21

Financial Independence Retire Early



Niharika Singh

"Retire in your 30s with 1 million in the bank." Titles like these have long been used to lure young adults into sacrificing the early years of their working life to build a future where secondary sources of income can give them a comfortable life. The FIRE (Financial Independence, Retire Early) movement came to fore in the 1990s, coined from the book "Your Life or Your Money" by Vicki Robin and Joe Dominguez. The key principle of the FIRE movement is that as the savings rate increases, your ability to retire early increases as well which is where the FIRE movement comes from. The three key rules of the movement? Make saving your default action, track your spending and be careful of spending just to maintain a social life. The authors claim there are many ways to have fun that do not involve breaking the bank.

Outlined below are the key ways you can implement this saving into your own life:

At a savings rate of 10%, it takes (1-0.1)/0.1 = 9 years of work to save for 1 year of living expenses.
At a savings rate of 25%, it takes (1-0.25)/0.25 = 3 years of work to save for 1 year of living expenses.
At a savings rate of 50%, it takes (1-0.5)/0.5 = 1 year of work to save for 1 year of living expenses.
At a savings rate of 75%, it takes (1-0.75)/0.75 = 1/3 year = 4 months of work to save for 1 year of living expenses.

Considering the FIRE movement a way of life is in stark contrast to the Permanent Income Hypothesis (PIH) taught in Year 2 Macroeconomics. Under the PIH, people only spend the annuity value of their lifetime wealth. Or in other words, they discount their total wealth to its net present value to smooth consumption over the course of their life. If there are increases/decreases to total wealth, this affects present day consumption as people want to ensure they have an equal amount to spend each day of their lives. Smooth consumption is the exact opposite of saving upto 70% of your income in order to have enough savings to retire at 30.
It would be interesting to see which savings plan appeals more to the tired millennials trying to build a life for themselves in today's fiercely competitive world. The NY Times calls the movement a way out of "soul-sucking time stealing work that runs on an economy fuelled by consumerism" and I'm sure many share this sentiment. Having spoken to numerous that have corporate jobs, it seems the only things on their mind is how much longer they can feasibly keep going. It's the one feeling that ties careers in investment banking, law, medicine and even sports together. If you look at athletes, it's only feasible for them to continue training at their hardest level until the average age of 35, 40 if they're Roger Federer. So why shouldn't people with careers in other high pressure fields do the same? It's every banker's pipedream to one day retire and dive into a more fulfilling, relaxed career to fill their time when they get older.

Just like the hippies in the 70s who valued time over material gain, the FIRE movement is the millennial equivalent. It is a way for people to buy themselves time till they find their actual passion and dream career, which may not pay the bills. At its core, it is about having the freedom to choose and spend your time doing something that might not pay as well as your initial job, but that you enjoy more. People who live this way value their time more than their money because that is the opportunity cost they give up when they choose to leave behind their six-figure salaries.

Though a bit left-field and uncommon in today's world, thinking about the FIRE movement still makes us reconsider whether we're making the right choices with regards to our demand for our time versus money. Perhaps it's time our indifference curves change to reflect which of the two is truly more important for a fulfilling life. . .

Fire Vectors by Vecteezy

Letter to an Economist

Gaurav Khatri writes to Prasanta Chandra Mahalanobis

Dear Sir,

The 15th of August 1947 has been described to me so vividly that it feels like I too, watched with rapturous pride as India broke free of the shackles of British colonialism. The economist in me however, cannot help but consider the arduous task of reconstruction that lay before the nation as nearly 200 years of oppression drew to a close. Reviving an economy that has been so thoroughly suppressed is no small undertaking, and it is thus, an immense honour to be writing to you- the man who accomplished just that.

I remember most distinctly Professor, how I first became interested in your work. As my high school economics teacher enthusiastically narrated the story of the establishment of India's first Planning Commission in 1951 and its role in reversing decades of economic damage, a heated discussion ensued on the achievements and pitfalls of economic planning. Particularly contentious was the debate on your pioneering contribution: the second Five Year Plan (1956-1961). This document which affirmed that India would reject the free market in favour of rather rigid state control was understandably divisive.

Despite my fervent support of free competition in contemporary India, I must concede Professor, that your policy recommendations benefited the nascent Indian economy. In the absence of trade restrictions, emerging domestic producers would have been washed away by competition from abroad. The desire to achieve self-sufficiency through import-substitution was also fitting given India's all too recent tussle with foreign dependence.

Your mathematical demonstration that government-led capital formation is crucial for sustained growth in developing economies also left me convinced that the proposed 'investment-focus' of the Plan was justified given India's conditions at the time. You may find it interesting to hear, Professor, that this proof of yours has come to be known as the Mahalanobis-Feldman Model of Growth, after you and the Soviet economist Grigory Feldman, who derived the result independently.

Indeed, the more than 20% increase in national income and rise in annual investment from 8.5 to 16 billion INR over the Plan period is indicative of its economic success. Why then, you may wonder, did discussion on these policies spark such strong debate in my classroom. The answer, Professor, is that even after your sad demise in 1972, the three fundamental tenets of your Plan- investment focus, government participation and trade restrictions- continued to inform policy, despite having lost their relevance.

While protectionist policies were justifiable at the dawn of independence, refusal to depart from them led to declining quality in the long run as reduced competition provided producers no incentive to innovate. Low quality of domestic produce also meant poor export-worthiness, causing grievous damage to the nation's balance of payments. The government remained unwilling to privatise industries that could have been handled more efficiently by profit-seeking private players, like bread and telecommunications. Even in sectors where private participation was allowed, bureaucratic hassle in the form of excessive regulation and licensing requirements discouraged investment.

As public sector enterprises grew complacent, their revenue fell. Simultaneously, the government committed significant expenditure to low return sectors like defence, healthcare and education. Cumulatively, the effect was to significantly increase national debt. In 1991, matters reached an unprecedented low: foreign exchange reserves fell to a level scarcely enough to import two weeks' worth of oil requirements, prices surged and the government found itself without any willing lenders.

With no other avenue available, the government approached the World Bank and IMF in dire need of aid. The Bretton Woods institutions were willing to provide it, but only upon the acceptance of certain conditions, which have affectionately come to be called L.P.G.: Liberalisation, Privatisation, Globalisation. Grudgingly, India agreed to open up its economy to competition and was provided a loan of approximately 7 billion USD to restore economic health.

You'd be stunned to hear sir, just how effective the L.P.G. reforms were! The pre-reform GDP growth rate of 1.057% rose dramatically, rarely falling below 5% in the following decade. Notably, it reached an impressive high of 8.8% in 1999. As old policies were rescinded, competitiveness and productivity recovered rapidly.

From this rather tumultuous economic history of India, I learned a valuable lesson: policies must be revised regularly and appropriately to meet the demands of prevailing circumstances. What my class malcontents failed to realise is that the late 1900s crisis was not a result of your cogent policies Professor, but rather of the administration's stubborn unwillingness to consider that changing circumstances may call for changing methods. Your work facilitated early India's robust growth, and continues to inspire budding economists. It would be a true privilege to follow in your illustrious footsteps.

Yours Respectfully

Gaurav Khatri

The Economics & Politics of Regulation

Financial Services and Brexit

Jordi Brown

What does Brexit mean for financial services?

Recent figures show that the financial services industry contributes £132 billion to the UK economy annually – 6.9% of the country's entire economic output (Hutton & Shalchi, 2021, p. 3). But with Britain's departure from the European Union, the prosperity of that industry is under threat. In this article, we take a look at what Britain's withdrawal from the EU means, before taking a look at two possible broad approaches for the industry – challenging the EU head-on, or looking further afield to challenge markets such as Singapore or New York. This latter approach could be achieved through deregulation, although it is not without its critics.

Current situation

The Brexit transition period ended on the 31st December 2020. The Brexit trade deal itself makes little reference to services (Hutton & Shalchi, 2021), with even Boris Johnson admitting that the deal "perhaps does not go as far as we would like" on financial services (Yorke, 2020). The arrangements between the UK and EU on financial services are still being negotiated.

With the UK's departure, the country has lost passporting rights in the EU, making it harder to operate in the single market (Boscia, 2021). Passporting allows firms that can do business in one EU member state to trade freely with any other in the bloc. Because the regulations of EU member states are assumed to be harmonised, passporting enables a bank authorised to operate in one EU member state to operate in any other member state, whilst meeting the same high standards. They are regarded as the "foundation of the EU single market for financial services", and effectively prevent firms from having to duplicate their services in another EU member state, because they do not need to set up a separate subsidiary in each country (BBA, 2016). In 2016, 5,500 firms in the UK needed passports to do business in the European Union. However, this relationship is not one-sided, as 8,000 EU companies used passports to access the UK in the same year (Martin, 2016).

The European Union has also opted not to give the UK financial services industry what is known as 'equivalence' – a recognition that a third country's rules are acceptable for businesses in that state to have access to the EU. However, the access granted by equivalence is much weaker than passporting (Stojanovic & Wright, 2020). Because the UK spent many years in the EU Single Market, the rules of the UK and the EU should be similar. Therefore, it should in theory be relatively straightforward to agree equivalence (Stojanovic, 2020). The UK and EU are holding "memorandum of understanding" talks. Essentially, this is a forum in which the UK and EU make clearer what regulatory decisions they want to take. However, it is important to note that equivalence is not necessarily the end result here. Equivalence is granted unilaterally by either side. For example, the UK has let European firms in around 20 of the 40 sub-industries that make-up the financial services industry operate in the UK. But, the EU has not done the same in the opposite direction. Both the UK and the EU aim to have the talks wrapped up by the end of March (Boscia, 2021).

Challenging the EU

It is clear that the UK needs to do something. On the day of the referendum result, Hubertus Väth, head of the Frankfurt Main Finance lobby group, predicted that 10,000 jobs would move from London to Frankfurt. This prediction has not quite come true. However, Brexit has, in his view, resulted in the creation of 3000 jobs in the German city (Arnold, et al., 2020).

Elsewhere, Amsterdam has overtaken London as a share trading hub. In January, with the Brexit transition period over, €9.2 billion in European shares were being traded daily in the Dutch capital, compared with €8.6 billion in the UK. This is a sharp fall for London, where just previously a month earlier in December 2020 more than €14 billion a day was being traded (Stafford, 2021).

The future of euro-denominated clearing also hangs in the balance. Clearing is a process where a third party acts as middleman for the buyer or seller of a financial contract, such as a bond, share, index or currency. In 2017, it was estimated that the London Clearing House cleared a whopping €927 billion in euro-denominated contracts every day. Moreover, the clearing employs 100,000 people in the UK (Hope, 2017). But this industry is under-threat: for the moment, the London Clearing House has been allowed to continue its euro-denominated clearing on a temporary basis until mid-2022. However, the European Securities and Markets Authority have stated that this is dependent on equivalence. Otherwise, the body is working on a "plan B" to move all European clearing out of London (Menin, 2020).

One approach to solve all these problems would be to in effect become a 'rule-taker'. If the UK could harmonise its regulations with the EU, then the EU would be more amenable to granting equivalence, and UK firms could once again have access to the European market.

Andrew Bailey, the Governor of the Bank of England, doesn't like this idea. He would rather see a global system of standards, than be effectively dictated to in terms of regulations from Brussels (BBC News, 2021). On the flipside, the EU's worry – as voiced by its financial services commissioner Mairead McGuinness - is that the UK, now a third country, can "capture" the EU and force it to be reliant, in spite of its regulatory divergence (Fleming & Brunsden, 2020).

Looking further afield and Singapore-on-Thames

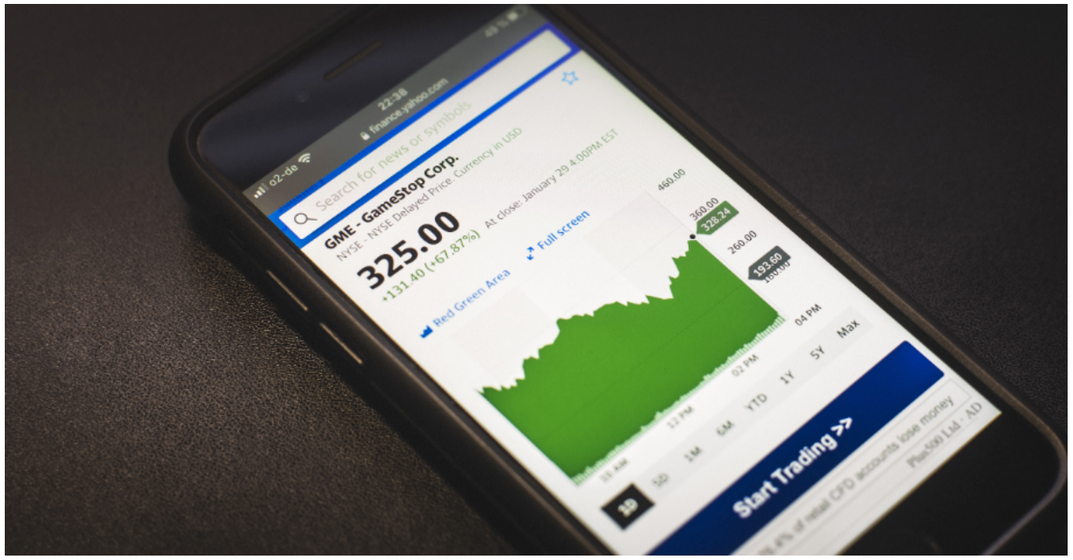
So what about the rest of the world? Barclays boss Jes Staley thinks that, instead of looking to the EU, Brexit is an opportunity to compete with global financial centres such as New York and Singapore (Jack, 2021). But how can this be achieved? Well, one way to do this is to pursue regulatory equivalence with the United States, rather than the European Union – an idea muted by former Bank of England Mervyn King (Morris, et al., 2020). Again though, it should be noted that the granting of equivalence is a unilateral one – just because the UK grants US firms the ability to do business, there is no guarantee that the US would want to grant equivalence in the opposite direction.

Another approach would be to consider more widespread deregulation and become a "Singapore-on-Thames". The benefit of doing this is that you can attract business from emerging markets. But Staley has argued against this, seeing regulation as a strength, not a weakness. He pointed to the example of the Financial Conduct Authority clamping down on "buy now, pay later" schemes such as Klarna, as an instance where regulation has been a good thing (Jack, 2021).

Concluding Thoughts

Ultimately, the City is at a crossroads. We should await the "memorandum of understanding" talks with bated breath to get a better sense of where the future of the UK's financial services industry lies.

GameStop: What Went Wrong?




Rumeysa Yilmaz and Matias Mäkiranta

Who knew the online platform Reddit, infamous for its anonymous users posting about conspiracy theories, would cause such a frenzy in the financial markets. The American video game company GameStop experienced a surge in their stock prices from less than $20 in December 2020 to nearly $350 on 28th January 2021 (Bloomberg, 2021) as a result of a crowd-sourced attempt to overtake institutional traders. This article will go through what happened, why as well as the political response to this wild event.

It all started with the Reddit forum "wallstreetbets". Millions of the forum's followers (made up primarily of day traders) bought up shares of GameStop amidst the posts supporting the belief that the share prices would soon rocket. Even though these Reddit (retail) traders have less equipment and infrastructure in place compared to institutional traders, they have direct access to the markets and infinite information online. Platforms such as Robinhood facilitated such activity. On the other hand, hedge funds had a "bearish" position on GameStop - meaning that they had bet against the stock. If a trader believes the stock will decrease in price - first she borrows the stock, then sells it only to buy it again in the future for a lower price. Thus, she makes a profit upon returning the stock to the original owner. However, when Reddit traders started buying up the stock, GameStop's stock price increased sharply, resulting in institutional traders who best against it bear the great loss. This further added to the price increase of the stock (Investopedia, 2021).

Some of the big-name hedge funds that suffered a loss, including Point72, which was forced to pull out of trade due to prior bets against GameStop. Maplelane Capital and DI Capital were among those also hit by the event. As a result, firms had to sell other investments to recover from their losses, which ultimately led to declines in the US markets in the days following the event. On the other hand, BlackRock and Fidelity saw the value of their holdings rise due to owning more than 10% of GameStop shares (BBC News, 2021).

To add to the confusion, Robinhood restricted the trading of GameStop shares. This was mainly because of logistical issues as too many people were trying to trade the shares all at once. So much so that an estimated 50% of Robinhood's users were exposed to the stock at that time (The Economist). Unsurprisingly, it brought Robinhood under massive scrutiny from political leaders and regulators alike. Even rival politicians agreed on Twitter:

"This is unacceptable. We now need to know more about [Robinhood's] decision to block retail investors from purchasing stock while hedge funds are freely able to trade the stock as they see fit," tweeted the Democratic congresswoman Alexandria Ocasio-Cortez (2021) to which Republican senator Ted Cruz (2021) replied, "Fully agree".

The reactions from the politicians ultimately led to a congressional hearing organized on 17th February, which gathered all the key players including Robinhood CEO Vlad Tenev, Keith Gill aka "Roaring Kitty", Gabe Plotkin CIO of Melvin Capital, Reddit CEO Steve Huffman and Citadel CEO Ken Griffin.

The hearing concentrated around Robinhood and the CEO Vlad Tenev admitted that Robinhood had a liquidity problem during the trading frenzy. Both Tenev and Ken Griffin – CEO of Citadel, the market maker that pays Robinhood to handle its trades, claimed that the hedge funds had nothing to do with the decision to halt trading on meme stocks. Tenev also apologized to retail investors. (Politi et al., 2021) Yet an apology may not be enough, and Alexandria Ocasio-Cortez repeated her earlier statement in the hearing by declaring that Robinhood had "harmed" more than 13m customers who trade on its app. (Platt, 2021) The apology won't stop financial market enthusiasts to question the fairness and accessibility of the markets and if the system is built to protect the Wall Street elite.

The aftermath of this fiasco has left a complex scene for regulators and law agencies to investigate. The US House of Representatives Committee on Financial Building is reviewing if the actions of online communities and brokerages require more oversight. The key question being: Was there market manipulation? Market manipulation has been happening since the birth of the financial market. A famous one, depicted in the movie "The Wolf of Wall Street", is the Stratton Oakmont "pump and dump" scheme of the early 90s. Investors were convinced into betting large sums of money on a stock. This inflated the price and so Stratton brokers then sold the stock, making a profit. When it comes to GameStop, the Reddit users also used a similar "pump and dump" scheme. Regulators main concerns rotate around the intentions of these users. However, investigating this can be tough because Reddit is an anonymous public forum and determining the identities of the members may prove difficult from a legal perspective. The SEC (the US Securities and Exchange Committee) is a law enforcement agency and can request records from Reddit by sending a subpoena for records. Reddit can agree and hand over the identities of those behind the usernames or it could use the First Amendment argument to deny the request. Regardless of what happens, one side will not be happy with the actions taken.

Joseph Grundfest (Stacey, 2021), a Stanford professor and former commissioner at the SEC doesn't believe that the retail investors will face a prosecution:

"If someone has been posting on a subreddit [messaging board] that they are very enthusiastic and are acquiring shares in a company, and all the while they are selling, then you have a potential violation. But if in all of the tweets and postings there is no misrepresentation, then you could well find that there are no violations in law", Grundfest comments.

The policy response for the Gamestop episode is still to be determined. Some talking points have included the role of short selling and hedge funds as well as zero-commission trades and retail investors. Tenev had earlier complained that the two-day process used in the US to settle deals and legally transfer assets from seller to buyer was affecting the US financial system. Due to these complaints, the Depository Trust & Clearing Corporation has now set out a plan to halve trading times to one day by 2023. (Stafford, 2021)

Another question raised was: is the US market overheated? It can be argued that it was an isolated phenomenon or that the stock market is a bubble. Why? Because the current high levels of liquidity and stimulus policies in place have led to more people having larger sums in their bank accounts. Therefore, this event was unlikely to happen before but can now due to increased liquidity.

The whole episode tells us that games and memes seem to play a larger role in investing, which at least value investors should consider to be an alarming sign. During the congressional hearing, New York Representative Nydia Velazquez declared that Tenev "appeared to have perfected the gamification of trading, providing users with the perception that investing through the Robinhood app is a recreational game." (Darbyshire, 2021)

Policymakers and investors should also note that memes and games are here to stay – at least for a while. It is hard to believe that the stock of Gamestop actually carries this much value, but for gamblers, the great fluctuations do provide opportunities to win and lose huge sums of money. On 24th February, the price of Gamestop was 44.94 USD and only one day later the stock peaked again at 177.65 USD.

In the Eye of the Tweetstorm

Noémie Da Costa

Elon Musk @elonmusk · Nov 10, 2018

We know we'll run out of dead dinosaurs to mine for fuel & have to use sustainable energy eventually, so why not go renewable now & avoid increasing risk of climate catastrophe? Betting that science is wrong & oil companies are right is the dumbest experiment in history by far ...

> **PBS NewsHour** @NewsHour
> "We're not saying that climate change is literally causing the events to occur. What we can conclude, with a great deal of confidence now, is that climate change is making these events more extreme," @MichaelEMann says of events like droughts, heatwaves and fires taking place now

Elon Musk @elonmusk

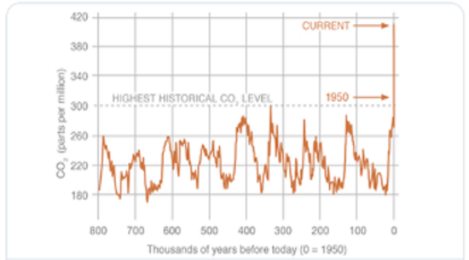
Makes me so mad when smart, ethical scientists I know are accused of publishing climate papers for "grant money". They earn 🥜 vs their other opportunities, but give that up to help world. But their accusers make billions by slowing down clean energy. Which is more credible?

9:39 PM · Nov 10, 2018

85.9K 16.2K Copy link to Tweet

NASA Climate @NASAClimate

January 2021 numbers are in: Earth's global average concentration of atmospheric carbon dioxide was about 415 parts per million, a 32% rise since direct measurements began in 1958 and a 48% rise since pre-industrial levels (1850).



Carbon Dioxide
Graphs and an animated time series showing atmospheric carbon dioxide levels from the last three glacial cycles to present day.
climate.nasa.gov

9:55 PM · Feb 19, 2021

128 110 Copy link to Tweet

Joe Biden @JoeBiden
United States government official

When I think of climate change, I think about jobs. Good-paying, union jobs that put Americans to work, make our air cleaner, and rebuild America's crumbling infrastructure.

2:45 PM · Dec 17, 2020

171.7K 25.9K Copy link to Tweet

Greta Thunberg @GretaThunberg

Our house is on fire, and words and promises will not put out the flames, no matter how beautiful they may sound.
We have our eyes on you @WEF #TheWorldIsWatching

10:37 AM · Jan 29, 2021

10.7K 1.9K Copy link to Tweet

Bjorn Lomborg @BjornLomborg

How is this science?

Global warming is rebranded "global weirding"

CBS & Kerry wants you to believe climate change also leads to *colder* temperatures

Of course, convenient to blame everything on climate

But wrong

cbsnews.com/news/climate-c...

Donald J. Trump @realDonaldTrump · Following

The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive.

RETWEETS 24,831 LIKES 14,654

2:15 PM - 6 Nov 2012

Climate Change

Sammy Wilson MP @eastantrimmp

Climate Change policies are more harmful to the economy & environment than Climate Change itself - @TonyAbbottMHR at @thegwpfcom lecture.

1:37 PM · Oct 10, 2017

6 6 Copy link to Tweet

Patrick Moore @EcoSenseNow

The "climate crisis" is a lie, a hoax, a fraud, an affront to science and logic, a travesty, an economic and social sinkhole, a fake phoney baloney preposterous fabrication, a boondoggle, a massive waste of time and money, a pain in the arse, and it's really silly too.

Traduire le Tweet

10:57 PM · 21 mai 2019 · Twitter for iPhone

3,1 k Retweets **6,8 k** J'aime

Cancel Culture

Paul Musgrave @profmusgrave

this is what cancel culture looks like

9:55 PM · Mar 1, 2021

532 108 Copy link to Tweet

House Judiciary GOP @JudiciaryGOP

#BREAKING: Ranking Member @Jim_Jordan calls on @RepJerryNadler to hold first full committee hearing on "cancel culture."

Congress of the United States
House of Representatives

9:18 PM · Mar 1, 2021

Eugene Gu, MD @eugenegu

The mainstream media is a lot more racist against Asian Americans than Dr. Seuss. But you can't cancel the arbiters of cancel culture. They make the rules and are above the law.

2:16 PM · Mar 2, 2021

191 27 Copy link to Tweet

Matt Goodwin @GoodwinMJ

"Over half of [UK] universities have experienced 'cancel culture' of open letters/petitions that pushed for restriction of views, 50 experienced incidents that led to demands for censorship of speech or written material, 22 had direct disinvitations & 'no platforming' -Civitas

7:21 PM · Feb 23, 2021

Alexandria Ocasio-Cortez @AOC · Jul 10, 2020

People who are actually "cancelled" don't get their thoughts published and amplified in major outlets.

This has been a public service announcement.

Alexandria Ocasio-Cortez @AOC

The term "cancel culture" comes from entitlement - as though the person complaining has the right to a large, captive audience,& one is a victim if people choose to tune them out.

Odds are you're not actually cancelled, you're just being challenged, held accountable, or unliked.

2:00 AM · Jul 10, 2020

Charles M. Blow @CharlesMBlow · Jul 11

Once more: THERE IS NO SUCH THING AS CANCEL CULTURE. There is free speech. You can say and do as you pls, and others can choose never to deal this you, your company or your products EVER again. The rich and powerful are just upset that the masses can now organize their dissent.

3.9K 23.2K 97.2K

Rep. Steven Woodrow @WoodrowForCO

Cancel culture is just the term the Right uses to describe any attempt by others to hold it accountable.

If you don't believe me just ask the Chicks, Bill Maher, Jane Fonda, Colin Kaepernick, Nike, the NFL, Yeti Coolers, Starbucks, Keurig, Disney, or the election results.

1:56 pm · 1 Mar 2021 · Twitter for iPhone

Brit Bennett @britrbennett

Ah yes, cancel culture: formerly known as "consequences"

10:01 PM · Sep 16, 2019

123.1K 26.7K Copy link to Tweet

Conflict

source: https://twitter.com/sebastibo/status/783659092132765696

Geopolitics of Sudan

Mawdud Ahmed

Country Profile

Economic

Decades of irresolute decision making, global isolation and political unrest has dragged Sudan's economy to its knees. Once ogled by neighbours as the most propitious nation in the region, today it lies dejected, soaked in blood from years of empty civil war and infamous as one of the poorest countries in the world.

High inflationary pressure combined with volatile currency movements has dampened private consumption and deterred investment. Consequently, GDP contracted by 2.5% in 2019, adding to the four-year drought in economic growth. Continued decline has decimated Sudan with over 6 million unemployed, 9.6 million facing severe food deprivation, over 24 million in poverty and a crumbling agricultural sector battling with fuel shortfalls (Sudan Economic Outlook, 2020). Understandably, protests are frequent, with no recovery in sight, people have been left jobless, starving and apoplectic. Indeed, the word desperate, though even this an understatement, encapsulates the government's position with $60 billion of debt and numerous financial sanctions, they are cash strapped and struggling to find lenders to stave-off imminent collapse.

Economic rejuvenation and political stability, the number one priority for the new 2019 interim administration, is still an ideation as 21 months later, unemployment has remained at 15%, food prices continue to soar and GDP is, again, projected to shrink in 2020 (Sudan Economic Outlook, 2020).

History

North-South Divide

Ever since Sudan's modern borders were drawn up by the British in the last century, the country has been marred by conflict and turmoil. Prior to South Sudan's independence in 2011, the nation with its amalgamation of ethnicities did not fit comfortably into the Arab world. Arab culture – language, media, manners – permeated Northern Sudanese thinking and behaviour; its influence evident among the Southerners who resisted it (Sudan-Foreign Relations, 2011).

At the time, Sudan was suffering from endless internal conflict and economic devastation. Many Northerners saw a benefit in embracing Arabism, eyeing the job and aid opportunities Arab countries could and sometimes did provide. While their peers tended to accept 'Arab status' as useful, Southerners perceived Arabs as unjust and oppressive people, blaming the misrule and inequality on them (Sudan-Foreign Relations, 2011) .

Religious differences also performed a significant role in the north-south division. Christian South Sudan had little in common with the Muslim North, and since independence, have rebelled against central Muslim Arab rule in the capital Khartoum. However, one particular standoff went beyond anything anyone thought possible. In one of the bloodiest wars since WW2, the Second Sudanese Civil war claimed the lives of around 2 million people, mostly southerners, and made millions more homeless (Economist, 2010). Outcry and condemnation flooded in at the scale of death and destruction that laid waste to the country. 20 years of conflict later, an agreement was reached in 2005, granting South Sudan independence in 2011 and finally ending Africa's longest civil war (South Sudan country profile, 2018).

Observation

Political commentators have pointed out that this Arabist link is, in many ways, an artificial conception. Racial factors, the historical stain of the Arab slave trade, discrimination, and Islamic nonconformity perceptions have distanced Sudanese somewhat from the Arab mainstream (Sudan-Foreign Relations, 2011).

Darfur Conflict

Ethno-religious tensions in Sudan are far more complex and deep-rooted than most realise. Many wrongly come under the impression that hostility in the region is mostly confined to religious divergences between Christianity and Islam. However, the troubled Darfur region highlights the fallacy of this thesis.

Darfur is the western area of Sudan, the most remote region in the country. Home to ethnically black tribes called the Fur, Masalit and Zaghawa, they live alongside various Arab nomadic tribes. Nothing particularly jumps out as a reason for why this area is highly susceptible to conflict. However, a hierarchy of some sorts exists in Sudan whereby people who are 'more Arabic' and paler skinned are considered more advanced and higher up (McCormack, 2008). Northerners who unquestionably perceive themselves as Arab show undisguised disdain for those that are ethnically black, generating tensions in the Darfur region where opposing sides live. Reason for tension in this area bears little logic, highlighting the danger posed by adopting these archaic views.

Deteriorating relations between ethnic-blacks and Arabs erupted into civil war in 2003. The Arab government at the time pursued a 'get the fish by draining the sea' strategy whereby to suppress the ethnic-blacks, they ordered their fighters to raze and obliterate all the villages in Darfur. Nightmarish violence ensued and to date has left over 300,000 dead and 2.5 million displaced. While the conflict has not officially ended, UN peacekeepers have been deployed to bring stability to the region.

Strategy

Measuring almost 1.9 million square km, Sudan is one of the largest countries in Africa. Occupying a strategic location, the state controls the junction between the Blue and White Nile. Sitting on this point of intersection, Khartoum is blessed with an abundance of fresh water and consistent sunlight throughout the year; it's no wonder why the country is estimated to have over 200 million acres of arable land, which, for some context, accounts for 45% of all the arable land in the Arab world (CaspianReport, 2020). 63% of Sudan's land is agricultural and only 15–20% of it is currently under cultivation offering tremendous private investment opportunities (Sudan Economic Outlook, 2020).

Furthermore, the country has around 500km of coastline by the Red Sea, allowing it to connect to the global markets and break away from its isolationist past. For instance, Port Sudan is located less than a day's sail from Saudi's Jeddah port, providing convenient access to Middle Eastern markets.

President Omar al Bashir's ousting in early 2019 brought renewed hope for Sudanese who've suffered over the past 30 years. The new interim government must capitalise on underexploited resources and carry out structural reform to reduce unemployment and reinvigorate economic growth. But why did Bashir not exploit his nation's strategic advantages? Relentless political instability and unrest proved to be too much and crushed any ambitious plans.

Foreign Relations

United States of America

Over the past two decades, US-Sudan relations have been abysmal. In 1993, the US relegated Sudan to the list of State Sponsors of Terrorism when then President, Omar al-Bashir, in addition to hosting Osama bin Laden in Khartoum, was also harbouring Palestinian militant groups such as Hezbollah. Washington had labelled Khartoum a hub of the "axis of evil" (EFSAS Commentary, 2020). Devastated by years of mismanagement, civil war and corruption, the sanctions now imposed cut off Sudan from much needed international financial systems to prop up its destroyed economy.

However, in December 2020, the US removed Sudan from the list, a move expected to unlock access to debt relief. Mike Pompeo explained, it represented "a fundamental change" in US-Sudan bilateral relations. In exchange, Khartoum agreed to pay $335 million to the families of the victims of the 1998 al-Qaeda bombings outside the US embassies in Nairobi and Dar es Salaam (Schipani, 2020).

Israel

Israel has been a foe of Sudan since the former founding in 1948. Famously during an Arab League assembly in 1967, Khartoum swore "no peace with Israel, no recognition of Israel, no negotiations with it" and have supported Palestinian guerrilla groups in wars against Israel in 1948 and 1967. However, with Omar al Bashir's ousting in 2019, the political dynamics changed as leaders sought to establish relations with Israel to persuade the US to lift sanctions. Hailed by Israel as a "dramatic breakthrough for peace", Sudan normalised relations with its former enemy in October 2020, a move seen by many as a desperation ploy to escape US sanctions rather than goodwill (Sudan-Israel relations, 2020).

Russia

Shunned by the United States and other western powers, Sudan naturally pursued deeper relations with Russia (Cafiero, 2020). The Kremlin has grown its influence in the nation, seeking to position itself as indispensable to Sudan. As a resource rich-country, sharing seven international borders, Russia sees Sudan as a linchpin for Moscow's ambitions in Africa.

Their strong relationship goes back several decades when Russia used its vote in the United Nations Security Council to protect Khartoum from international pressure concerning the Darfur Crisis. Reciprocation came in the form of arm purchases with Sudan being Russia's second biggest buyer in Africa. The Kremlin also gets preferential access to gold reserves in Sudan and, in exchange, Russia sent private military contractors to beef up Sudanese security forces (Cafiero, 2020).

However, with the recent opening of Sudan's relations with the US, we are yet to see how this will threaten Moscow's status in Khartoum.

Pakistan

Pakistan has characterised their relations with Sudan as "close", "brotherly", and "cordial". Relations between the two are based on strong Islamic bonds and have strengthened over the years as both nations have increased joint activities; Sudan declared its support for Pakistan in the Indo-Pakistani wars and Pakistan stood by Sudan during their boundary disputes with Egypt. Until recently, both countries were united in their refusal to acknowledge the state of Israel and fully supported the Palestinian cause. Both nations work closely in the field of agriculture, healthcare and education (Hanif, 2017).

China

Before South Sudan's independence in 2011, China had deep trade and investment ties with Sudan, making them their third-biggest trading partner in Africa. Oil was the main target for China, consistently making up around 95% of Sudan's export revenue (AlJazeera, 2011). In the wake of Sudan's partition, Beijing has accelerated a re-orientation of its engagement in the resulting two states as almost all of the oil fields are located in the South. China's historical support for Khartoum left a sour legacy in the South, but the potential for mutual economic benefit led to greater cooperation. However, oil cannot be exported directly out of South Sudan as it needs to be refined in Khartoum and leave through Port Sudan. This has left China in an awkward balancing act to keep relations friendly with both states to prevent an oil crisis (CrisisGroup, 2012).

Myanmar, an attack on democracy

Noémie Da Costa

"We need further strongest possible action from the international community to immediately end the military coup, to stop oppressing the innocent people, to return the state power to the people and to restore the democracy," stated Myanmar's ambassador to the UN on February 26th, defying the military junta of his country. He was publicly laid off one day later.

Earlier that month, Myanmar's army launched a coup, arresting its democratically elected leader Aung San Suu Kyi, cutting TV broadcasts, while suspending telephone and internet lines in most of the country. Since then, the country has been in a state of unrest, as civilians took to the streets, refusing to give up their democratic rights.

History of a short-lived democracy

Myanmar's faltering democracy was as budding as problematic. The country, led by a dictatorial military junta since 1962, had already been marked by a history of rigged elections- when there were any - until 2011, gross human rights violations, and bloody civil wars between various ethnic and religious groups. This unstable and undemocratic political climate resulted in economic and business sanctions. In 2010, the junta was unexpectedly dissolved, and a nominally civilian government was established. Surprisingly, in 2015, what can be considered as the most democratic elections in the modern history of the country occurred - not without political pressure from the military on voters- and Aung San Suu Kyi was elected president. Nevertheless, the junta continued exerting pressure and influence on the government, which reached a critical point after the November 2020 elections. Indeed, the NLD overwhelmingly won, gaining 396 seats on 476, representing 83% of the Parliament, while the USDP, the military party, only won 33. The NLD became a threat to the military, gaining too much power and influence for the generals to be certain of maintaining their power and control over the country. As such, the USDP claimed voter fraud, and when those were rejected by the election commission, a coup was staged. On February 1st, Aung San Suu Kyi, along with important officials from the NLD, were imprisoned. She was accused of breaching coronavirus rules and owning unregistered walkie-talkies, although tangible proof has still to be demonstrated. The NLD leader was not even given access to a lawyer, a blatant and explicit abuse of power from the military, which further stresses the difficulty the international community will have in leading negotiations with the junta. Since then, some of the biggest protests in the history of the country have taken place, uniting tens of thousands of peaceful civilians in the streets, demanding that their democratic rights be respected - not without shedding any blood.

The strong resurgence of the dictatorship

On the day of the coup, a succession of nightmarish events unravelled for the citizens, leading to a

complete shutdown in the country. The TV broadcasts went off, internet and social media such as WhatsApp and Facebook, widespread among protest organisers, were suspended. Writers and activists were arrested, muzzling the newly emerging free press. Weeks of protests came to their culminating point on February 20th, when millions of workers organized a massive strike following the killing of several protesters by the military, one of whom was only 16 years old. This movement paralyzed the banking system in the country, putting the illegitimate government into a difficult position. Additionally, 850 protesters have allegedly been arrested and imprisoned since the beginning of the crisis, although many more have been reported. Ever since then, protests have kept going strong, with violence escalating and the crackdown reaching a peak on 28th February, when civilians were targeted by the police with bullets, stun grenades, and tear gas. 18 people were killed in one day, sparking international pressure towards the military.

International outrage

The coup was condemned by several world leaders and the UN, with clear demands such as respecting the outcome of the November elections, and the immediate release of Aung San Suu Kyi,NLD officials as well as political prisoners. Antonio Guterres, Secretary-General from the UN, also expressed his concern over the coup, stating that it represented 'a serious blow to democratic reforms in Myanmar', and called 'on all parties to respect election results and return to civilian rule'. Despite this, it has yet to be confirmed what action, if any, will be undertaken by the UN.

Among the major powers that have expressed concern about the violent anti-democratic coup, Biden's administration has announced some sanctions. However, the US influence is extremely limited in this part of the world, much less than in the 1990s, when it was able to lead strong economic and international sanctions against the junta. It is thus quite likely that the actions against the country are going to be strictly targeted at the core members of the military's hierarchy, a process that had already been used in 2017 against some Myanma officials, who had actively organized the Rohingya genocide.

Across the Atlantic, the UK has already acted: on February 25th, the Foreign Secretary, Dominic Raab announced that 6 members of the junta would be sanctioned for serious human right violations. Further, he ensured that none of the UK's businesses are trading with military-owned companies to prevent any aid that could potentially support the unlawful government.

China's reaction was awaited, both domestically and internationally: how would Myanmar's biggest neighbour – and foreign investor – handle the coup, as its relations with the country were just starting to warm up with the NLD in power? Unsurprisingly, China emitted a very bland statement, cautiously trying to maintain its new yet fragile friendly bonds. Wang Wenbin, spokesperson for the Chinese Ministry of Foreign Affairs, stated on February 22nd, that "China and Myanmar are friendly neighbors. We hope that all parties will properly handle their differences under the Constitution and legal framework to maintain political and social stability". However, in another watered-down UN statement, it was implied that China was not entirely in favour of the coup: the military junta is a far more unstable and unreliable political and economic partner than Aung San Suu Kyi's government ever was. Indeed, China is known to be one of the main foreign investors in Myanmar, closely following Singapore. Myanmar is economically interesting, as it is rich of natural resources such as gas, jade, and timber. But it is most useful for Beijing for its strategical access to the southwestern coast, which would allow China to further strengthen its commercial activity. An agreement on the construction of China-Myanmar Economic Corridor had hence been established under the rule of Aung San Suu Kyi in 2017. However, if the junta was to remain in power in Myanmar, the international community would very likely cut off its fragile ties with the country- an unfavorable outcome for China's investments in international connectivity projects.

This new downturn in Myanmar's modern unpredictable history makes it difficult to anticipate what the future of the country will hold. As confrontations seem to be going stronger every day, and as the junta clings to power despite international pressure, it is difficult to predict what will happen in Myanmar in the following weeks, and whether Aung San Suu Kyi and the NLD will manage to get back to governing the country. If they don't, it would be a serious step backwards for Myanmar, which was just starting to recover from 50 years of dictatorship and economic mismanagement. However, one thing is for sure: after being given a taste of quasi-democracy, it seems unlikely that the junta will be able to quash the revolted civilian protests as easily as they did in the past. And if they do, the people's trust in their government will be definitely lost. Another worrying factor will be the fate of the already persecuted Rohingya: with the military now in power, no one on the national level will be holding them back from the atrocities and genocide that they have been committing against the Muslim minority.

Navalny's Crusade to Free Russia

Angus Conway

"It was never a question of whether to return or not. Simply because I never left. I ended up in Germany after arriving in an intensive care box for one reason: they tried to kill me" (Navalny, 2021).

On the 20th of August, Alexei Navalny, Russia's most prominent opposition leader to Putin, was on a plane to Moscow when he began feeling severe pain. The plane landed in a nearby city where lab technicians determined there was nothing wrong with him. The hospital began filling with Russian government officials when a German humanitarian non-profit group offered to fly Navalny out to Berlin for treatment. It was in Germany where doctors discovered that the opposition leader was poisoned by Novichok, a Soviet-era nerve agent only available through military and security circles (Harris, 2021).

Following his recovery in Germany where he had to regain the ability to walk and talk, Mr Navalny was detained in Russia on January 17th 2021 after attempting to return to the country and will serve a two-and-a-half-year sentence. Prison authorities say that he was arrested for repeated violations of his probation for a sentence he received in 2014 for embezzlement. However, the European Court of Human Rights asserts that his case was politically motivated. The imprisonment of the opposition leader led to the organisation of protests by Navalny's allies calling for his release and an end to corruption in Russia, a plight Navalny has fought for years. Many are also fighting for an end to the economic suffering that Russians civilians have faced over the past few years and more recently due to COVID-19.

One of the primary goals of the protests is for regular civilians to voice their discontent with the corruption and absence of civil liberties in Russia. Corruption permeates across many of Russia's economic and political systems, including the judicial system, political influence in the energy sector and courts, and a lack of funds and significant bureaucracy in public services (Russia Corruption Report, 2020). In addition, the lack of free speech and press is evident in the government's attempt to suppress voices of opposition to the Kremlin and also in the heavily controlled state media. During the protests in support of Mr Navalny, protesters were attacked by batons and stun guns, with thousands detained by the Russian police. The censorship of online content is imposed through the Kremlin's online watchdog Roskomnadzor, a federal agency that has threatened to fine social-media platforms for encouraging young people to participate in protests (Simmons and Grove, 2021). The aggregation of these corrupt systems all serve to maintain Putin's long-standing leadership in the Kremlin, leading to a lack of accountability and poor incentives for the Russian government to serve its people. This directly leads to the second reason for outrage amongst the Russian people.

Many protesters are fighting for accountability in the Kremlin because of the economic turmoil suffered by civilians over the past few years and most significantly during the COVID-19 pandemic. Real incomes have fallen for 5 of the past 7 years, falling 3.4% last year. GDP per capita is 30% lower than it was in 2013 and 13.3% of Russians lived below the poverty line in the first 9 months of 2020 (Foy and Seddon, 2021). Much of this is due to austerity measures imposed by the government over many years to bolster the Russian national wealth fund. The Kremlin increased retail taxes and raised pension ages to achieve these goals at the expense of their people. Even in the economic fallout of COVID-19, spending was limited and very few ordinary Russians experienced benefits (Guriev, 2021). This all happened while Putin was building a $1.3 billion palace on the Black Sea which Mr Navalny posted drone footage of on display for the entire world to see. All of this culminated in the civilian protests fighting for the end of Putin's authoritarian reign over the Russian people.

The Kremlin's response will also further contribute to the deterioration of Russian relations with the United States, especially after the annexation of the Crimean Peninsula in 2014 and Moscow's election interference in 2016. Current U.S. President Joe Biden has recently placed sanctions against the Russian government for the poisoning and detention of Mr Navalny. The current US Secretary of State Antony Blinken (2021) has also tweeted that "The United States is deeply concerned by Russia's actions toward Aleksey Navalny. We reiterate our call for his immediate and unconditional release as well as the release of all those wrongfully detained for exercising their rights". These responses will certainly escalate the 'Second Cold War' between the two countries' diametrically opposed ideologies.

The ambitions of the protesters are accurately described by 55-year-old Vyacheslav Vorobyov (2021), "I do not want my grandchildren to live in such a country, I want them to live in a free country". The detainment of Mr Navalny was the tipping point for an inevitable clash between the government and its people. Similar conflicts have occurred in the past, including in 2011 where protesters turned out to condemn alleged ballot-rigging in the parliamentary elections of that year. These protests, which were of similar size to the most recent ones, were described as the largest protests seen in Russia since the fall of the Soviet Union (Russian election: Biggest protests since fall of USSR, 2011). The magnitude of the recent demonstrations are a testament to the frustrations of the Russian people derived from a lack of personal liberties, economic suffering, and the prevalence of corruption in the Kremlin. Only time will tell whether Alexei Navalny's crusade will successfully purge corruption and economic suffering to make Russia a freer society.

No More Mr Nice Guy:

A 'New' US Hostility Towards Saudi Arabia, And What It Means for Future Relations

Nim Etzioni

In October 1973, subsequent to US military support for Israel in the 'Yom-Kippur War', the Organization of the Petroleum Exporting Countries (OPEC) announced an oil embargo on the west (Corbett, 2013). Students of economic history will know what followed: rampant inflation, in a period of already falling growth rates, wreaked havoc on what was supposedly the most powerful nation in the world – the United States. And it was - of course - furious, especially at the country whom it perceived as the main culprit – Saudi Arabia. Secretary of state Henry Kissinger likely spoke for many when he remarked: "it is ridiculous that the civilised world is being held up by eight million savages" (Gramer and Johnson, 2020).

The US-Saudi relationship has always been 'transactional', grounded in a harsh geopolitical and economic realism employed by both sides rather than any philosophical commonality. Indeed, this mutual understanding has been referred to rather bluntly as an "oil for security" bargain (Gramer and Johnson, 2020). The agreement has been very beneficial for Saudi Arabia: US weaponry, of which it is the largest consumer, has allowed the Saudis to assert might in their dangerous geopolitical neighbourhood (SIPRI, 2020). It has been less beneficial for the US: though it provided and still provides an ally in a highly volatile region, its ability to cripple the US's economy was an obvious disadvantage. It was this leverage – US oil reliance – that caused the unequal distribution in the benefits of the bargain.

However, times have changed. Energy developments in the US, specifically in renewable energy and natural gas, have led to imports falling to lows not seen since the 1950s (Energy Information Administration, 2020). Reliance on oil from the Middle East has all but disappeared – in January of this year, the US imported no oil from Saudi Arabia for the first time in 35 years (Tobben and Lee, 2021). Though the Saudis can still attempt to hurt Americans by cutting world oil prices, as they did in April of last year, this caused more political damage than economic and - as we shall see - was a strategic blunder (Suleymanova and Sabga, 2020). Largely, it was the 'last gasp' of this leverage assertion, which has ultimately fallen to null.

In conjunction with the economic shift in the dynamics of the relationship, equally important political forces are driving further the American antipathy towards working with the Saudis, embodied by a new administration. The first owes to our hyperpartisan and divided age: given the Saudi de facto leader, prince Mohammad bin Salman's 'overly friendly' relationship with former President Donald Trump and his senior advisor and son in law Jared Kushner, he is seen as 'compromised' by a Biden administration that campaigned on standing up to 'strongmen', such as MbS. The 'Trumpian stench' he carries, just like his Israeli counterpart Binyamin Netanyahu, puts the Saudis in a very weak position should they be requesting any favours (Ferziger, 2020).

The second political force surprisingly owes to cross-partisanship and unity, both amongst the American political elite, and the populace. A horrific human rights record: abroad, with its handling of the Yemen crisis, and alleged sponsoring of terrorist groups such as the Taliban; and domestically, with repression of women's rights and persecution of Shia minorities. This record received vociferous condemnation, though admittedly mostly by Democrats (Human Rights Watch, 2021; Fayazi, 2017). It took two 'flashlight' events – the killing of journalist Jamal Khashoggi, and the oil fiasco noted above – to ignite the wrath of the Republicans and more broadly the American people. Lindsey Graham, a senior Republican senator, has promised there will be "hell to pay" for the Khashoggi killing and a new documentary on the subject (The Dissident), which indicts MbS in the killing, is not going to raise Americans' estimation of the morality of the Saudi government (Breuninger, 2018).

Nor is it going to lead to Republican criticism when the Biden administration publicly condemns and acts against the Saudis. A taste of this new hostility came in early February, when in his first foreign policy speech, President Biden announced that the US would halt sales of offensive arms to the Saudis in an attempt to blunt their operations in Yemen (Biden, 2021).

This raises the following question: if the Saudis have little economic leverage, and there is little political appetite in the US for a close alliance, why is the US still providing defensive military support? The answer is Saudi Arabia's geostrategic importance in 'balancing' another middle eastern behemoth with a similar eye for domination: Iran.

Since the 1979 Islamic revolution, the country - which is home to 83 million people - has been ruled by a succession of religious figures (Select Committee on Foreign Affairs, 2003). Moreover, it has adopted support policies for Shia militancy groups in foreign countries where Sunnism is the majority sect. Partly, this is a defensive action aimed at protecting Iranian sovereignty, and partly this is an offensive act aiming to "export the revolution", assert dominance, and obtain regional hegemony (Ram, 1996; Rabinovich, 2019). This puts them in conflict with the Saudis who see Iranian aggression as a direct threat, and the US, who see Iranian ambitions as a vector of instability. Saudi Arabia is thus a geostrategic necessity to temper such ambitions and this therefore explains Biden's begrudging support.

Therefore, a cocktail of diminishing Saudi leverage and American political hostility, mixed with geostrategic importance, has led to a similar transactional and unenthusiastic relationship rooted in the realities of the region. The US must still support the Saudi regime if it wants to balance against Iran. But the fact that the economic and political winds have shifted against the Saudis does mean that they will have to work harder for US support. The redistribution of leverage in the relationship necessitates a change in behaviour.

How will this materialise in the future? The answer can be reduced to two parts. Firstly, it is likely to accelerate the current trend of Saudi modernisation. On February 10, the Saudi government announced a release of Loujain al-Hathloul, a high-profile women's rights activist, judicial reforms, and changes to "state-approved schoolbooks that promoted martyrdom and anti-Semitism" (Koduvayur, 2021). A blatant attempt to court the Biden administration, it is what must be expected should the Saudis want the US on their side in the coming four years.

The second consequence of the new relationship concerns Saudi foreign policy, primarily with regards to Saudi intervention in the Yemen Civil War. Beginning in 2015, the Saudi-led coalition has been fighting Houthi-led insurgents backed by Iran. The statistics are harrowing: 230,000 dead and 3.5 million displaced (UNHCR, 2020). Food insecurity is rife, and coupled with a deadly pandemic, the current situation is a humanitarian catastrophe (Laub and Robinson, 2021). The offensive arms freeze by the Biden administration, and the simultaneous pressuring of other Western nations to follow suit, will diminish the offensive capability of the Saudi coalition, potentially pushing them to the negotiating table, albeit from a position of weakness (Wintour, 2021).

However, this does not necessarily mean the war will end. Some claim that the arms freeze will embolden the Houthis, leveraging the situation in the hopes of territorial gain (Abrams, 2021). But Washington's changing political mood, combined with energy independence will necessitate concessions from Riyadh. America is no longer hostage to "eight million [now thirty-four million] savages" as Kissinger claimed in 1973, even though it still needs them. Thus, the transactional relationship continues. We will have to wait for the results.

A saudi-coalition tank in Yemen. Since 2015, the Saudis have fought in the region, despite concerns about the humanitarian crisis.

Tents, trucks and turmoil in India?

Syed Samin Ahmed

India's political landscape has been marred recently by some of the biggest protests the country has ever seen. Over the last 6 months, tens of thousands of farmers have set up camp in the capital city of New Delhi to demonstrate against India's governing Bharatiya Janata Party (BJP). Some accounts even suggest that over 250 million people across the country participated in a general strike in solidarity with the farmers (Pahwa, 2020), illustrating the size of the revolt that the Indian government has been facing. Recent clashes between protestors and the police even elicited an official response from the U.S. embassy, with a spokesperson commenting "we encourage that any differences between the parties be resolved through dialogue" (Miglani & Bhardwaj, 2021). It's clear that this dissent against Prime Minister Narendra Modi presents one of the biggest challenges that he has faced so far, with the world keeping a close eye on developments. But what exactly sparked these protests?

These protests centre around the BJP government's plans to introduce market reforms to India's farming and agriculture sector. India's current agriculture system dates back to the 1960s, and while it may vary between different states, farmers bring crops to wholesale markets known as mandis, selling off their produce to buyers in an open market. These mandis are established and overseen by the Agricultural Produce Market Committee (APMC), a marketing board established by state governments to ensure that farmers are protected from exploitation by large businesses. They also set a state's minimum support prices (MSPs), below which prices for the farmers' produce cannot fall. However, several pieces of legislation that passed through India's Parliament in September 2020 (PRS, 2020) caused a lot of controversy, eventually leading to the emergence of mass protests. These sought to reduce the role of the state in the agricultural sector and invite more participation by private investors and retailers. The government argued that deregulation was necessary in order to create more efficiency, and these laws would give farmers greater freedom and enable them to negotiate better prices for their goods (Kurup, 2021).

For example, retailers were now permitted to stockpile food, removing a ban on hoarding produce that was originally designed to stop extortionate consumer pricing of goods by retailers. More crucially, however, these laws removed the requirement to trade within the AMPC's mandis, allowing farmers to sell directly to private buyers (Bahree, 2020). Farmers fear that these reforms will soon make the mandi system redundant and will leave them open to exploitation by big agricultural companies (Kurup, 2021). Much anxiety surrounds the existence of the MSPs, which the BJP's legislation makes no mention of. With small farmers making up 85% of the whole sector and over 40% of

India's workforce being employed in agriculture (Ministry of Agriculture & Farmers' Welfare, 2017), many argue that these laws will leave millions across the country vulnerable to losing large amounts of their income (Pahwa, 2020). Many have also been left in disbelief regarding the dispute mechanism detailed in the parliamentary acts, with some suggesting that the lack of written contracts being mandatory and the inability to take companies to court leaves them no reliable means to address any genuine cases of malpractice by big businesses (Lazarus, 2021).

While protesting against these laws initially began in August last summer, they soon gained significant momentum in the following months with up to 300,000 farmers converging in Delhi at one point (Mahajan, 2020). Protestors have taken to blocking roads across India with tractors, makeshift tents and rocks (Abidi & Dash, 2021). According to the secretary of the All India Kisan Sangharsh Coordination Committee, an umbrella organisation of farmers, around 10,000 areas across India were blocked in three hours of protests on February 6th (Abidi & Dash, 2021). Thousands of farmers have even been camping out in the cold streets of New Delhi, occupying national highways around the capital. However, while the farmers' protests have been for the large part peaceful, there have been several occasions of violent scenes between protestors and police. Clashes on 26th January, India's Republic Day, led to one protestor dying and hundreds of injured police officers and farmers (Associated Press, 2021). In late January, the Indian government also suspended mobile internet services in several areas across Delhi in an attempt to "maintain public safety", though some saw this as an attempt to "create panic" and was "killing democracy" (BBC, 2021).

There are also fears that the government is transgressing on the existence of free speech in India by cracking down on online dissenters. On January 31st, the Indian government ordered Twitter to block accounts of people criticising Modi using a hashtag referring to 'farmer genocide', with the social media platform banning over 250 accounts (Biswas, 2021). While Twitter partially complied, suspending over 500 accounts, it also released a statement explaining that it would not remove accounts that belonged to "news media entities, journalists, activists, and politicians" in fear that it would "violate their fundamental right to free expression under Indian law" (Twitter, 2021). While it remains to be seen whether the Indian government will take further action, it's clear that they are worried about the coverage the farmers' protests are gaining across the world. So much so, the Ministry of External Affairs referred to comments by celebrities as "neither accurate nor responsible" (Srivastava, 2021) following tweets by the likes of global superstar Rihanna and environmental activist Greta Thunberg on the protests.

Narendra Modi has maintained that the proposed agricultural laws have been brought in "for the benefit of the farmer" (Bahree, 2020). Nonetheless, the nature in which the reforms were pushed through Parliament without consulting with various stakeholders undoubtedly raises significant concerns. And despite the intervention of India's Supreme Court suspending the controversial laws in order to encourage negotiation between opposing parties, farmers have repeatedly stated that they will not call off their protests until the proposed legislation was repealed. It therefore seems that any potential resolution is out-of-sight, especially given that Modi has not shown himself to be a leader swayed by protests, as shown by his lack of movement over the Citizen Amendment Act in 2019 that led to mass demonstrations totalling 500,000 protestors (Rakesh, 2020). The farmers show no sign of letting up, but it's clear that one side will eventually have to give way – who, however, remains to be seen in the coming months.

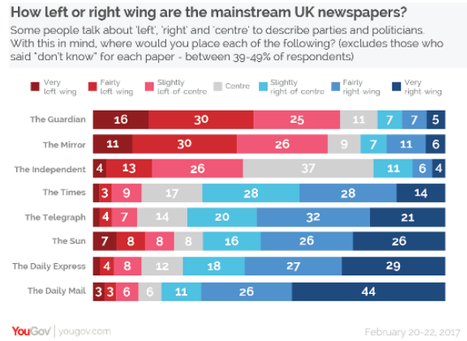
Stop the presses: the rise of GB News and News UK

Mawdud Ahmed

Media moguls have locked horns as they set their eyes on the culture-war ravished shores of Britain. This article will discuss how two emerging channels: GB News and News UK, intend to snatch up the supposed right-wing vacuum neglected by today's liberal metropolitan instincts of the current incumbents in British TV news. However, as we shall soon see, it is far easier said than done as the newcomers must outface the behemoths of UK TV – BBC, Sky News, Channel 4 and ITV – or watch their starry-eyed fantasies of a conservative utopia crushed under the weight of a 'poor viewership' label.

GB News, chaired by Andrew Neil, who until recently was BBC's champion combatant in political interviews, is set on "disrupting the status quo". Offering to produce near 24/7 rolling news service focussing on opinions and debates, it will give a voice to viewers angered by the sense of abandonment from mainstream channels. Having already secured £60 million in funding, it has garnered support from wealthy business figures, including legacy mogul John Malone, owner of the Liberty Global empire (Cushion, 2021). News UK is not short for cash either. Backed by Rupert Murdoch, owner of the profitable right-wing American network Fox News, it too hopes to attract disenfranchised right-wingers. Unlike GB news, however, News UK is not planning to launch 24-hour coverage, instead opting for an evening only service mainly delivered through online streaming. While each camp may differ in configuration, both are looking to court presenters such as Nick Ferrari, Rachel Johnson, Piers Morgan and even Nigel Farage, giving us a sense of the pugnacious programming likely to be pedalled by the pair (Burrell, 2021).

The imminent arrival of two new current affairs channels has fuelled debate around the direction of UK broadcast journalism. How much appetite is there for right-wing TV and what sort of influence will they have over British politics and society? Let's break each question down, starting with the first: how much demand will there be? The logical starting point is to verify claims that mainstream broadcasters have shifted left, leaving a gap in the market. Research by YouGov and Cardiff University show, contrary to claims, there may instead be a slight right-wing bias as conservative opinions receive more airtime than progressive alternatives. Eurosceptics, Tories and pro-business representatives all received longer screen time than their counter, highlighting that any assertion of bias should lean right rather than left (Berry, 2013). Numerous studies throughout the decade have firmly rejected claims of bias in UK TV media and recent polling reveals most people across both political sides trust the leading providers (Nielsen, Schulz and Fletcher, 2020).

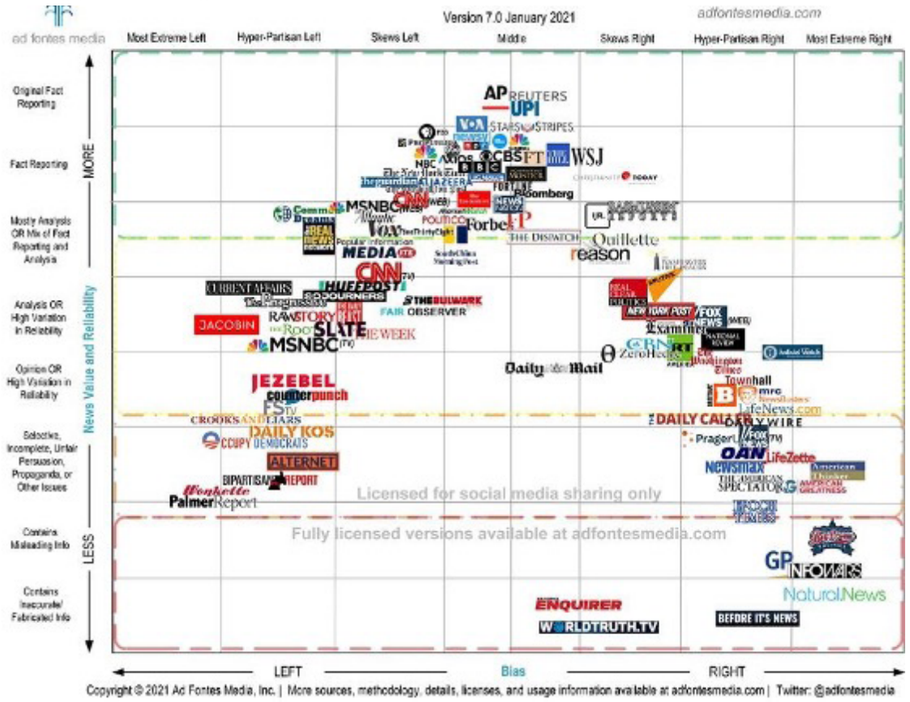


You may be thinking: so what? This only further highlights how conservative viewers are not explicitly catered for and an excellent opportunity for GB News and News UK. This may be theoretically sound but in reality, not so much. While TV broadcasting may be neutral, that is certainly not the case for the broader media environment which is heavily skewed to the right; only the Guardian and The Mirror firmly represent the left (Smith, 2017). Combining TV media and print, it seems unnecessary, even foolish, to launch two conservative broadcasters in an already saturated market believing you can topple long-established names such as the Daily Mail or Telegraph. In fact, they are not the first to try as the infamous Fox News was broadcast in Britain, on Sky, until 2017 when it was pulled for poor viewership (Volpicelli, 2020). Fox News's lacklustre stint in the UK raises alarming warnings over demand for its supposed imitators. Un-ambivalently successful in the US, why did Fox News fail in the UK and can its lookalikes do any better? This brings us to the next part of our analysis: influence.

Hyper partisanship characterises the US broadcasting scene; names such as MSNBC and Fox News show clear bias in their TV reporting and, in their original form, would unlikely be approved for broadcast in Britain (Media Bias, 2021). Why? Astute readers may have noticed I have been strictly referring to TV media, avoiding using print where possible. The reason for this is Ofcom, the UK telecoms regulator, unlike the US, prohibits blatant partisanship and enforces stringent impartiality rules for TV reporting (Ofcom, 2021). Unsurprisingly, Fox News was slammed with impartiality breaches around the same time it was taken off air for excessively pro-Trump coverage (Volpicelli, 2020). GB News and News UK, both already approved for TV reporting, must too abide by impartiality rules - though seemingly infeasible given their conservative blueprint. Therefore, while the name GB News/News UK suggests a nationalistic agenda, they cannot openly market themselves this way and must provide fair debate across the full political spectrum. To many, this is enough, a sign of relief knowing the pair cannot 'brainwash' the masses by exclusively breeding right-wing hysteria. Or so it seems.

What does it mean to be impartial? This isn't an exact science, no equation exists to calculate TV bias and so it is heavily subjective and difficult to measure. LBC, the talk radio outlet, has numerous right-wing hosts but dodges impartiality rules by including a handful of more left-leaning voices. GB News and News UK may follow a similar path, including a smattering of left-wing presenters. Assuming they 'get away' with more right-leaning content: we established earlier that demand is unlikely to be high, leading us to abandon any consideration of public leverage. Frustratingly, this is, again, not as straightforward as it seems. Even if the pair attract a small audience, they can still wield influence. Fox News – one of the most-watched cable news networks in the US – still only reaches 3.78 million primetime viewers in a country of over 320 million; a textbook example of how opinionated news channels can have significant intermedia effect, setting the agenda of mainstream politics (Cushion, 2021).

Setting aside speculation, Andrew Neil has said the channel will be "committed to impartial journalism" – whether this is true or not, only time will tell. GB News and News UK may well succeed in building up a niche audience and may even make some money in the process. But what is agreed among commentators is that the pair will never have the reach nor impact as its US cousin.



Essay Competition

source: https://www.behance.net/jurikalka/moodboards

To what extent do states have a responsibility to ensure that all citizens in the world have access to a coronavirus vaccine?

First Place: Maha Khalid

Over 49.9 million people have tested positive for coronavirus, with a global death toll of 1.3 million people (BBC, 2020). Some of the largest economies have faced historically high contractions in GDP, as supply chains have been impacted by workers having to self-isolate and a lack of international trade, and demand has fallen due to lockdowns and social-distancing (Telegraph Video, 2020). The production of a vaccine seems hopeful, although it is almost certain that demand will greatly exceed supply. This issue of distribution could determine how effective the vaccine is in preventing further transmission and how quickly the global economy is able to recover.

The pandemic has greatly emphasised the vast inequality within countries. Generally, lower paid employment cannot be replicated from home, whereas those on higher salaries can avoid the workplace. Moreover, many of those with lower-skilled jobs have either been made redundant, shown by the increase in the UK unemployment rate to 4.8%, or furloughed (The ONS, 2020). The fair distribution of a vaccination amongst all income levels will boost employers' confidence levels, allowing more people to return to work. In the long term, equitable allocation of the vaccine, leading to fewer social-distancing regulations, will enable the economy to recover, permitting companies to hire more workers.

Although the allocation of vaccinations within countries remains a pertinent concern, perhaps the most important issue regarding access to a vaccine is the equal distribution in wealthy and developing nations. Countries like Brazil and Mexico have experienced some of the highest coronavirus death rates per capita (Statista, 2020). One issue facing these countries is the cost of transportation and storage. The 'cold-chain' ensures vaccinations are safe and effective to use, though it can cost up to 80% of the total expenditure on vaccines (Ansaldo, et al., 2011). Rich nations must contribute to these costs, as with insufficient financial support, countries hit hardest by the pandemic will struggle to store and distribute vaccines to all citizens.

Globalisation has undoubtedly contributed greatly to the spread of coronavirus. Bill Gates, who is financially supporting companies researching vaccines, suggests that remnants of the virus in some countries will return to others, potentially causing spikes in cases (The Economist, 2020). By over purchasing large quantities of vaccine, wealthy nations can prevent other countries from accessing the life-saving prophylactic treatment, as was the case in 2009 with the influenza vaccine (Devex, 2020). This nationalistic approach will cause an unequal distribution, and it is likely that pockets of COVID-19 will remain intact. A study conducted by MOBS LAB discovered that 33% of deaths would be prevented if two-thirds of the vaccine supply was purchased by the wealthiest countries, compared to the prevention of 61% of deaths if vaccines were distributed to all countries, proportional to their populations (Bill & Melinda Gates Foundation, 2020). One cause for this could be the trade-off lower-skilled employees have faced between being protected from the virus or working; many being forced to choose the latter. Mutations are also more likely if the vaccine is not equally distributed globally (Nuki, 2020). Moreover, with the recent surge in the 'anti-vaxxer' movement, it could be difficult to predict how many people in wealthy nations will in fact consent to the vaccine, and so these countries will remain at risk. Therefore, vaccine allocation affects even 'protected' countries, as well as individuals' livelihoods, which wealthy nations must recognise.

Vaccine multilateralism is a potential solution to the problem of vaccine administration. It involves the cooperation of wealthy countries to aid said distribution around the world; an idea endorsed by Dr Richard Hatchett (CNN, 2020). Richer states have a responsibility to ensure countries unable to afford vaccine costs can still distribute it amongst their civilians, and must not wholly absorb its supply. Similarly, Tedros Adhanom (The Economist, 2020) has endorsed COVAX and the ACT accelerator, which are programmes designed to ensure the worldwide distribution of the vaccine is co-ordinated fairly. Such schemes are vital for developing nations, as they promote the collaboration between those who can afford the treatment and those who require financial aid.

To achieve a successful and worldwide recovery from the pandemic, nations must cooperate to provide all citizens with access to vaccinations. This will ensure the global economy experiences a more rapid recovery and will prevent this tragic epidemic from taking more lives, either due to the virus itself or losses in livelihoods. Unfortunately, already over 140 million doses of the newly produced vaccine by Pfizer have been reserved by the USA and UK, despite the company only being able to produce 50 million doses this year (Nuki, 2020). As more treatments are developed, this response to vaccines must be avoided to prevent the prolonging of the epidemic. The spread of coronavirus has caused a worldwide pandemic; it will require worldwide collaboration to bring an end to it.

ESG and Financial Regulation

Second Place: Sean Ooi Hui Jie

Question Claiming to enhance transparency regarding integration of ESG into investment decisions, the European Union has imposed a sustainability-related disclosure with effect from March 2021. What behavioural impacts would financial market players have with the coming of this regulation?

On 27th November 2019, the European Parliament and Council passed the regulation on sustainability-related disclosures in the financial services sector (EU/2019/2088, 2019), referred to as SFDR, as part of the 2018 European Commission's Action Plan on Sustainable Finance. The regulation sought to establish a uniform set of standards and guidelines for financial firms offering products incorporated with Environmental, Social and Governance (ESG) considerations in response to varied definitions of ESG within the industry. In this essay, I will be evaluating the impact of the regulation on the corporate conduct of financial market players, referencing linkages between modern finance and prominent economic thought.

The primary effect of the SFDR would be the elimination of greenwashing through the establishment of uniform ESG standards across the industry. Greenwashing refers to shortcuts taken by financial institutions to repurpose their old funds with an ESG label without re-evaluating the underlying investment process, distorting information available to investors. A sustainable investment report published by KPMG (Sustainable Investing: Fast-Forwarding Its Evolution, 2020) detailed that 41% of respondents in their institutional investor survey reported a 'significant amount of greenwashing', indicating the existing prevalence of amoral cost-cutting measures with regard to ESG regulatory requirements amongst financial firms. After the implementation of SFDR, such firms may now be called to account in a legal setting, raising the costs of dishonest avoidance and incentivising financial firms to repeal greenwashing tactics and restructure their internal investment evaluation processes to incorporate ESG considerations.

A secondary impact is the expansion of the market for legal and compliance service providers. After the 2009 Global Financial Crisis (GFC), the slew of regulations imposed by regulatory authorities dramatically raised the costs of compliance for financial firms. The Financial Services and Capital Markets Union published a report (CEPS et al, 2020) that showed a 700% mean increase in compliance cost in absolute terms since the 2009 GFC, a sharp and consistent positive trend reflecting the incremental demands on financial institutions. Conversely, we observe an increase in revenues of legal departments in consultancy firms. Deloitte reported an 8.7% growth in its tax and legal department in FY2020 (2020 GLOBAL IMPACT REPORT, 2020), symptomatic of the expansion of consultancy demand in the financial market. It is clear that SFDR will provoke similar effects in the financial industry, with firms advertising legal and compliance services, such as PwC, already offering compliance packages for their existing clients (PwC, Sustainable Finance Disclosure Regulation (SFDR), 2020). Larger firms may now find it profitable to invest in in-house solutions and we can also expect the gradual restructuring of larger financial organisations to develop this capability as they reduce their reliance on third-party providers and drive down outsourcing costs.

The implementation of the SFDR will encourage firmsto pre-emptively position their products in an ESG friendly stance that goes beyond the 2021 requirements. Since the introduction of the action plan, the European Commission, with assistance from the Parliament and Council, has followed through on the roadmap, demonstrating a unified commitment to the thorny issue of ESG in the finance industry. Noting the consistent delay between regulation and innovation, firms might seek to pre-empt regulatory alterations based on their analysis of the likelihood of regulatory intervention, therefore gaining a comparative advantage over their competitors by future-proofing their investment products. Hence the regulation may produce greater than expected improvements in the incorporation of ESG considerations through the financial industry.

A contrasting perspective is that the regulation may not effect significant changes in the industry's commitment to ESG due to firms utilising the status quo bias and trust fallacy. The status quo bias is an application of behavioural economics advanced by Samuelson and Zeckhauser (Status quo bias in decision making, 1988)that explains the tendency to choose the option that requires the least mental effort, which leads to an exaggerated preference for the status quo. Trust is an established heuristic that people use to minimise effort expended in checking information (Schneider, P. and Fukuyama, F., 1996). The application of trust and status quo bias in the financial consumer industry has been explored in a research paper by Nottingham University (Chuah, S. and Devlin, J., 2010), illustrating the tactics which financial firms utilise to increase revenue and sales. It is no great extrapolation that come 2021, some firms will declare that their products do not consider ESG factors in order to circumvent the cost of restructuring them, and only offer 'opt out forms' to existing clients, utilising the status quo bias and trust in the organisation to retain most of their clientele and impeding the ESG movement through the financial industry.

The SFDR is a major milestone in the recognition of ESG and the movement against climate change, clearly distinguishing sin industries in capital markets and creating negative associations with such firms. It serves as the current regulatory standard for global administrations, such as the US and China, and is the precursor to a more sustainable reality. As a first-year economics student, it fills my expectation of the future of finance with hope.

Fighting fake news, who would do the job better: government regulatory authorities or private players in the market?

Third Place: Terence Wong

The term "fake news" has been explored by many, especially since the inauguration of US President Donald Trump (McNair, 2017). Many have used misinformation to manipulate the general public, which creates an environment of asymmetric information. Governments have increasingly stepped in to correct this problem but to limited efficacy. Private players definitely play a more direct role in influencing the fight against fake news but the cooperation between the two is essential for it to be successful.

Detractors may postulate that government regulatory authorities would do better as they have greater control and certainty over punishing perpetrators of fake news through enacting and enforcing laws, which acts as a deterrent. With Singapore's new fake news law: Protection from Online Falsehoods and Manipulation Act (POFMA), regulators identify falsehoods and correct them swiftly to halt the virality of the misinformation to users via Internet intermediaries (Haziq, 2020). Moreover, for recalcitrant non compliance to change, individuals or companies could even be liable to heavy fines (SingaporeLegalAdvice.com, 2020). Regulatory authorities can function as watchdogs, to execute the laws that should deter potential perpetrators given that the incentive for perpetrators to spread misinformation would have decreased.

However, there are many contentions when it comes to the definition of "misinformation". Often, some may consider certain news to be fake, but others may posit that it is merely an expression of opinion (Jaipragas and Sim, 2019). We could see that even US President Donald Trump has coined the mainstream media that were against him as fake news (Ehrlich, 2019). With the constitution of fake news being blurred, there is a propensity of abuse where people can exploit these loopholes in the legal system. Authorities face the difficulty of distinguishing between misinformation and opinions and often a wrong classification will lead to the uproar of the masses for suppression of free speech. This makes policing of fake news a tall order and it continues to linger in online platforms.

Conversely, private players, such as social media platforms, play a more direct role as they own the services provided. Therefore, they are more efficient in managing the spread of falsehoods. As seen from Facebook's non-compliance, authorities have limited influence over containing falsehoods if private players do not co-operate (Milman, 2019). In the case of POFMA, the Singapore government has to go through internet intermediaries to correct the misinformation online (Haziq, 2020). Clearly, even governments have to seek assistance from private players, showing that private players exert a stronger influence over the proliferation of fake news. Hence, engaging them to fight misinformation would be critical since they have more direct interaction with the fake content and can monitor it closely.

Moreover, private players have a greater incentive to combat fake news, which fosters a stronger drive for them to scrutinise online falsehoods compared to the government. Often, these private players have the image motivation to portray themselves as having corporate social responsibility and this is a strong economic rent to drive them to outperform regulatory authorities (Legum, 2018). They have poured in large investments in training, research and development of new technologies such as algorithms to identify misinformation (Singh, 2020). Such news boosts the public image of private players, which is a powerful intrinsic motivation that encourages them to select a pro-social choice of doing better in fighting falsehoods (Ariely, Brancha and Meier, 2009), vis-à-vis the government where combating misinformation is expected of them despite risks of misconstruction as aninfringement on free speech.

However, government and private player's support in educating the masses is essential in immunising people against misinformation. With fake news spreading instantaneously, it will always disseminate quicker than it can be removed. Hence, teaching people on the discernment of falsehoods is the long term strategy. Implementing it in the education system promises considerable success in the population deciphering misinformation online (Henley, 2020). Moreover, online interactive tools created by private players has also helped increase media literacy of the public (Perez, 2019). Using algorithms to identify the falsehoods only solves the symptoms but not the root cause of the problem. Instead, targeting the root cause, which is the propensity of individuals falling prey, would lead to a longer-lasting impact since falsehoods would then lose their effectiveness. Ideally, this eliminates the motivation for perpetrators to spread them online.

In conclusion, to effectively fight against falsehoods, the government regulatory authority needs to implement harsh punishments as deterrence while private players continue to police misinformation online as it perpetuates. While private players do a better job since they play a more direct role, their success is limited by the discernment of fake news by the public. Education is essential to combat the negative externality caused by fake news. Instead of postulating who would do a better job, it would be more meaningful to identify aspects they could co-operate together to combat falsehoods.

Does UCL Economics think low value coins should be discontinued?

Context "On the 4th of February 2013, unassuming internet users were greeted by a most unconventional Google Doodle, with a copper-plated coin replacing the first O. The multinational search engine had chosen to mourn internationally the demise of the beloved Canadian Penny. Owing to high production costs (it took 1.6 pennies to manufacture 1 penny!) and low transaction value, the Canadian government had decided to discontinue the minting of pennies. With debates on similar policies gaining traction in other nations with high minting costs (though not quite as extreme as Canada), notably the USA, the Tribune seeks to uncover: does UCL Economics think low value coins should be discontinued?"

Gaurav Khatri, 1st Year Economics

Coins and also paper-money should all be scrutinised whether their continued use really represents the best-value use of the corresponding material and human resources. With the increasing spread of smart phones and apps capable of handling money-transfers in a safe way a critical scrutiny of the added value of coinage and paper money is necessary. Evidently a reliance on smart phones brings up accessibility issues, especially for poor and low-income individuals or individuals living in regions with poor wireless internet coverage. But resolving the accessibility issue may be preferable over retaining an antiquated coinage system because access to modern technology also provides access to other resources, beyond financial apps, that will generate significant spill-over effects.

Dr Frank Witte

The debate of coin discontinuity varies in a wider context. Given the differences in purchasing power of a currency, a coin worth a pound can't be compared with the same denomination of a rupee. While these macroeconomic facts are debated heavily, there are deeper microeconomic issues involved. An important one here is the point of donations to the homeless. A survey from the Charities Aid Foundation discovered that nearly 70% of the donations were in loose change in 2018. Given such high involvements of coins, i believe it is a bit too early to take such a step at least in the UK. For a further scope of research, it would be interesting to look at the role purchasing power of a currency denomination plays while taking a categorical decision of the discontinuation of coins.

Shivam Gujral, 2nd Year Economics

Low value coins absolutely should be discontinued - I read somewhere that in countries where they had done so and rounded up or down to the nearest .05, there was no effect on GDP attributed to that change, nor a reduction in charitable income (if people haphazardly placed individual pennies in charity boxes). However, I think the discontinuing of pennies is also a good thing as it should form part of a wider trend to discontinue physical currency. In the context of COVID-19, physical currency is increasingly being considered unhygienic. For example, one in five banknotes have faecal bacteria. A shift to card payments also stops communities from being unfairly targeted by ATMs with fees attached for taking out cash.

Jordi Brown, 2nd Year Philosophy, Politics and Economics

As many economies around the world aim to continue with low and stable inflation, the real value of a single unit of currency decreases. However low value coins help out those who are currently struggling financially and any sort of monetary currency helps them out greatly to be able to survive on a daily basis. The removal of low value coins will have a major impact on this group of people around the world in various nations leading to many potential negative results. In my opinion governments should only discontinue the production of low value coins if and only if there is a solution to helping out the financially unstable people sustainably.

Sabhya Jain, 1st Year Economics

In a digital age, where so many of us are now using challenger banks and smartphones to transact it may seem inconsequential to erase the existence of a penny we seldom use. Yet for those living on the streets, scraping by on the donations of people who want to get rid of inconvenient pennies, it is a source of income that sustains them. Such a shift while economically logical would need to be accompanied by broader social and poverty based measure to prevent the worsening of poverty and degradation of the impoverished.

Rameez Hashmi, 1st year Economics

A very strong no - spare change in the form of coins is what is often donated to the less fortunate all over the world, and discontinuing low value coins could further lower these individuals' living standards. Most buskers and those showcasing other talents receive payments in the form of pennies, which altogether add up.

Vaishnavi Manivannan, 2nd Year Economics

Coins served many purposes, the biggest of which in my eyes was as a donations to poor people on the street. Contactless payment is a convenient way of avoiding giving money to the beggars, and this has contributed negatively to the destitute.

Ansh Raj, 1st Year Economics

My first thought was that it's a good way to raise inflation and reduce the real value of money. Places that have faced hyper-inflation have tended to have very high value notes in the past. And this does nothing to curb the effects of inflation. Although with regards to the cost of minting coins, perhaps it can be replaced by notes, such as the one dollar note in the US.

Jasmine, 1st Year Economics

In a world, even before Covid-19, where less than a quarter of transactions were made by cash in the UK it is a wonder we have small coins at all. Do people really use them or do they just sit in everyone's wallets or jars at home? Before deciding whether or not to get rid of coins it would be important for any government or Mint to understand how much they are used in day-to-day transactions and how related they are to pricing. A risk with removing small coins is inflation. All prices with a 0.99 at the end would be rounded up - I am old enough to remember when halfpenny sweets suddenly cost a penny. Across a whole basket of goods this can have a detrimental impact on inflation. Of course, there could be a separate downward pressure on copper prices with a significant reduction in demand for copper if the copper plated 1p and 2p coins were no longer produced, which could come as a blessing to many other industries that use copper as an input. Bear in mind that there are estimates that 2p coins cost 3p of copper to make! Moving away from the impact on price it may be worth considering whether there is an impact on savings. How much money is in jars full of 1p and 2p coins that is not being used for transactions in the economy or saved in a traditional savings account? From time to time people take these jars to the bank and find that they have actually saved quite a bit of money - reinforcing the old saying 'look after the pennies and the pounds will look after themselves'. It can also be a very useful way to encourage children to develop saving habits from an early age as they marvel at how much money the can gather in a year simply by putting aside the 1p and 2p coins. Will this now need to happen with 50p or £1 coins? Of courses, if many transactions happen at low denominations in some countries, and there are fees for using payment cards or contactless payments, then the net cost to consumers and retailers of removing the coins could be high, both because of rounding up of prices and/or a requirement to shift away from 'cash' for small items. This could similarly be detrimental for consumers in the UK who are not comfortable with card or electronic payments. It appears there are pros and cons to such a move and the nature of economics transactions - consumption and savings - and the cost of alternative options needs to be considered. Of course I also wonder how we pay the children for undertaking chores at home, but perhaps they will use the opportunity to renegotiate the wage rate!

Professor Cloda Jenkins

Research

‘Amplifying her voice’ Looking at studies evaluating women empowerment in cash transfer programs

Ansh Raj

Brief Recap

In our literature review, we outlined the framework Amartya Sen designed as the basis for analysing the bargaining power of women in households. A quick summary of our discussion is as follows: the welfare positions of households can differ significantly from that of women – and a trade-off can, though not necessarily, exist between the two. This trade-off’s existence was highlighted from our analysis of the fact that women – particularly in poor households – are inclined to value an improvement in her household’s welfare position equally to an improvement in her own welfare, although this may just be an internalised patriarchal-centric norm[1]. Welfare can be described in subjective terms, but volumes of literature on development economics have outlined the criteria for human welfare without any biases inflicted by subjective beliefs[2][3].

Motivation

Sen did not present a particular solution to the bargaining problem, but his parting remarks did discuss the role of external payments in providing the leverage for an increased personal welfare position. This research attempt is inspired by this notion – to judge whether outside earnings have any significant bearings on a woman’s intra-household bargaining position. This judgement will be conducted through an extensive review of the different studies on government-initiated cash transfer schemes where the recipient is the woman .

Layout of Final Analysis[4]

Our analysis is characterised by two important caveats. The first pertains to the indicators of an “improvement in the woman’s bargaining power”. Our literature review has surmised what should qualify as grounds for a woman’s welfare - and what should not. To put these in perspective again, we will borrow the language of Kabeer (1999), who highlights the importance of choice and agency in the woman’s consumption decisions. Kabeer lays emphasis on the “transformatory significance” of these choices – to what extent do they have the ability to destabilise or challenge existing social inequalities (or to what extent they simply contribute to the ongoing process of exploitation). This fits well with Sen’s framework, and also gives us clues on what we can use as true indicators of women’s welfare. Noting that we will be applying our framework to cash transfer programs which have been mostly implemented for poor households, our indicators would ideally involve women’s food consumption, leisure time, rate of domestic violence, divorce rates and the development of female children . While food consumption, leisure time and domestic violence rate carry obvious intuition as indicators of women’s welfare, the inclusion of the

1. Das and Nicholas (1981).
2. Miller (1981), Mazumdar (1985), Sen (1986).
3. Further literature-related material can be found in Issue Refresh of the Economic Tribune.

4. This is a detailed methodology of the work behind the next and final edition of this research.

latter two is what distinguishes our research from the general objectives in government-launched initiatives.

Government initiatives often transfer money to women with objectives such as the better use of the cash in mind – though gender equality could also be an intended consequence sometimes. This better use perception is another reinforcement of the notion that women are inclined to think of their personal welfare as synonymous with household welfare, which we talked about earlier. In such circumstances , divorce rates and the development of female children are not particularly indicators of household welfare. Divorces bear an adverse impact on children's long run education and mental health (Gruber, 2004). The development of female children – be it in terms of years in education or simple anthropometric indicators of height and weight – does not translate into lower household welfare. However, if there exists a discrepancy between girls and boys on these grounds, this will not generally be accounted for in household welfare – especially when it's the boy's development which has been prioritised in patriarchal societies. These two indicators are not socially attractive prospects, but they do exhibit the strengthening of female empowerment, perhaps more so than others precisely because they are in defiance of the household welfare standards.

Our second caveat rises from the first caveat of empowerment indicators. As mentioned earlier, governments generally have household welfare improvements in mind when they spearhead cash-transfer initiatives. When evaluating the results of their programs, they tend to focus on household welfare outcomes – but our aim is different. Accommodating our framework with the data available will not be possible if we wish to focus quantitatively. There do exist studies on divorce rates and the like in cash transfer programs, but these will only help in a qualitative judgement, and not with a possible regression model because of the lack of other relevant data.

Our empirical method relies on cash transfer programs because that is where data is most readily available when we want to separate men and women into having or not having external payments. But cash payments can have a few drawbacks too. Most prominently in the case of domestic violence, cash payments to women can increase the threat their male counterparts use against them to appropriate or at least manipulate the use of the transfer money (Vyas and Watts, 2009). In such circumstances, cash transfers to women are actually endangering women's position, contrary to what we would expect as per our framework. When evaluating our results, we will aim to look at data on a weakened female position due to cash payments, and argue if there exists a distinct set of factors responsible for it.

In our results section, we will operate by sifting through those studies which analyse divorce rates, domestic abuse rates and development indices of female children as a function of cash transfer payments to women.

Should I Stay or Should I Go? Determinants of Consumer Switching in UK Telecoms Markets

Phin Godfrey

In the previous issue, I constructed a game theoretic model of collusion which frames strategy choice as a weighing up of short-term gains from deviating against discounted future profits from collusion. When studying the Irish mobile services market, I found that as of June 2019 only 26% of consumers have ever switched suppliers (ComReg, 2019). It was unclear at first how to interpret this low rate in relation to collusion - was it a sign that firms were providing a good service at a low price and there was no reason to switch, or that there were significant barriers to switching which reduced competition? The answer to this depends on what factors determine switching behaviour.

Consumer switching behaviour has a significant impact when services are delivered as a subscription, as in the mobile services market, because firms not only lose the profits from the current period but from future periods too (Keaveney and Parthasarathy, 2001). Consumer switching behaviour could then potentially have a large impact on which strategy firms select: competition or collusion. In the rest of this article, I will outline what consumer switching behaviour means for collusion, and investigate consumer switching determinants in the UK mobile services market.

Why is switching important?

We turn to the game theoretic framework outlined in the previous issue of the Tribune to analyse the effect of consumer switching on collusion.

Strategy	Profits
Collude	$\frac{\pi_C}{n} = \delta \times (P_C \times Q_c)$
Deviate	$\pi_D = \alpha P_C \times \beta Q_c$

Table 1 – Strategy Choices

Table 1 shows the strategy choices available to a firm in a collusive market with n firms. If they continue to collude, they will earn $P_C \times Q_C$ profits each period – giving a total value of future profits of $\frac{\pi_C}{n}$ after the discount factor, δ, is applied. If they deviate by reducing prices to αP_C, where α is between 0 and 1, then their profits of $\alpha P_C \times \beta Q_C$ will increase compared to $P_C \times Q_C$ as long as β changes by more than α. Whether the change in β is large enough to also offset all future collusive profits, given a certain δ, depends on the responsiveness of demand to changes in price – i.e., price elasticity of demand.

Ivaldi et al. (2003) claim that demand elasticity is not relevant to the sustainability of collusion – but this conclusion rests on the assumption that firms are capable of earning the entirety of π_C after deviating because having a price lower than other firms', even by the smallest possible unit, will lead to the capture of the entire market. However this assumption is not valid if there are significant barriers to switching, which is the topic of our investigation. The degree of demand

elasticity affects the level of short-term gains a deviating firm can realise. Lower demand elasticity also means that the collusive price can be profitably increased to higher levels, harming consumer welfare (Ivaldi et al., 2003).

What is the relationship between consumer switching and price elasticity of demand? While the rate of consumer switching measures the frequency at which consumers change suppliers given the current market conditions, they do not indicate how consumers would respond if one supplier hypothetically dropped their price in a deviation from the collusive equilibrium. Empirically analysing the determinants of consumer switching will allow us to see whether changes in price have a significant impact on consumer switching behaviour. If not, the market could be more conducive to collusion.

Methodology

The framework set out by Antón et al. (2007) was used to identify the determinants of switching that will be investigated. They differentiate between "direct effects", which cause consumers to develop a switching intention, and "moderating effects", which either reinforce or attenuate consumers' likelihood of following through on this intention. Direct effects may be a single incident, like a price increase, or may take place over a longer time, such as poor quality of service.

Consumer level data on consumer switching were unavailable for the Irish mobile services market, but were available for UK telecoms markets from the regulator's (OFCOM) "Open Data" Scheme. The dataset recorded the answers of consumers who had recently switched or considered switching providers in telecoms markets to a questionnaire about the switching process. The questions of interest to this investigation related to which factors first caused consumers to think about switching, consumers' level of confidence about different aspects of the switching process, their socioeconomic group, and whether they had actually switched or not.

While non-mobile switchers could have been filtered out from the data, it was decided that the loss in direct applicability to mobile markets was offset by the greater statistical power from tripling the sample size to n=3,391. Given the similarity of buying experiences between telecoms markets, consumer switching behaviour is not expected to vary dramatically between them.

The fact that the survey was only conducted amongst consumers who have switched or considered switching is a weakness of the data. While we can use the data to compare the effects of direct and moderating factors, but we cannot estimate the prevalence of these factors in telecoms markets as a whole. Moreover, if consumers who have considered switching experience a lower than average level of attenuating moderating factors this analysis will underestimate the effect of moderating factors on consumer switching.

A study by Bansal and Taylor (1999) estimated determinants of switching in the Canadian mortgage market using a bespoke survey. Although the low response rate (10.4%) and potential non-response bias are drawbacks to this method, it could be an avenue for building a more representative sample in further research

The specific direct effects that will be investigated are perceived low service quality and unfair pricing. Perceived service quality was measured by dummy variables indicating whether the respondent first thought about switching due to poor customer service or a technical issue. Perceived pricing fairness was measured using dummy variables indicating whether the consumer had switched due to finding a better deal elsewhere, their provider increasing their costs (and whether they had been informed they could leave their contract), their provider refusing to negotiate on costs, or wanting to reduce their spending on telecoms services.

The potential moderating factors investigated were consumers' confidence with different parts of the switching process, whether they had been targeted with "proactive retention offers" by their provider, their socioeconomic group, and whether they were regularly checked to see if they were getting the best deal. These were all also measured by dummy variables. Socioeconomic group was included as consumers may be less likely to search for a new deal if telecoms subscriptions are a smaller part of their income.

Logistic regression, which models the probability of a dichotomous event based on the values of explanatory variables, was used to compare the effects of the potential determinants listed above. In our case, this dichotomous event was whether a consumer had switched suppliers or not, and the explanatory variables were the determinants of switching.

The full regression model has been omitted from the main body for conciseness, but is shown in the appendix following the article.

Results

Service Quality		Price		Moderating Factors	
Cust. Service	0.41**	Better Deal	0.47**	Conf. Compare	0.16
Tech. Issue	0.40**	Cost Inc.	-0.05	Conf. Speak	-0.01
		Could Leave Contract	-0.37*	Conf. Lang.	-0.15
		No Nego.	0.60**	Conf. Options	0.13
		Want Cost Red.	-0.45**	PROs	-0.11
				Reg. Rev	-0.47**
				SEG	-0.11
Constant = *0.42*					

**=p<0.001, *=p<0.1, No Asterisk=p>0.05

Logistic regression coefficients do not directly convey changes in probability. Instead, they convey changes in log odds – i.e., $In\left(\frac{y}{1-y}\right)$, where y is the probability of a binary event like switching suppliers. This allows for constant coefficients to always lead to probability estimates between 0 and 1, which would not be the case if coefficients were direct estimates of changes in probability. While this does make the coefficients less intuitive, the sign of the coefficient still corresponds to the direction of the change and the magnitude of the coefficient still correlates with the size of the change.

The fact that the survey which produced the dataset was conducted amongst people who had at least considered switching means that the estimated coefficients should be interpreted as affecting the probability of a consumer switching given that they are already considered switching. For example, the negative coefficient on the "Want Cost Red." variable does not mean someone who wants a cost reduction is less likely to switch than the average consumer, just that they are less likely to switch than the average person considering switching.

With this in mind, we turn to the results. Firstly, we observe that the positive and statistically significant coefficients for service quality factors mean that service quality are important determinants of switching relative to the other factors studied. The failure of providers to negotiate on costs or perceptions or consumers finding a better deal elsewhere also appear to be relatively important. Conversely, the desire for reducing costs and the cost of services being increased, whether the consumer is informed they can leave their contract or not, are relatively unimportant.

It is also observed that all of the hypothesised moderating factors, except consumers being regular reviewers of the market, do not have a statistically significant effect on switching outcomes. The presence of a significant negative effect of regular reviewing could be linked to the significant negative effect of wanting a cost reduction, given that regular reviewing is likely motivated by a desire for cost reduction.

Conclusions

This analysis indicates that price is a relatively weak determinant of consumer switching when consumers do not already have an alternative provider in mind. This could indicate a low own-price elasticity of demand which in turn causes concern about the possibility of price collusion. However, the limitations of the data mean that only the relative effects of determinants can be measured, so it is unclear whether service quality is a particularly strong determinant or price is a particularly weak determinant. The lack of effect of the investigated barriers to switching suggest the former, but this part of the analysis could suffer significantly from the biased sample.

To tackle these unanswered questions, data needs to be collected from consumers that are representative of the whole telecoms market, not just those that have considered switching. This would particularly strengthen understanding of the effects of moderating factors, and questions on a greater number of barriers to switching could be included as those studied do not account for all possible barriers. Subject to data availability, this is a topic I aim to investigate in subsequent issues.

One concrete finding is the sharp difference in the effect on switching likelihood of having a specific better deal in mind compared to a general desire to reduce costs. If regulators want to improve market efficiency, making sure that consumers can easily identify better deals to switch to is a key measure.

Appendix

Regression model:

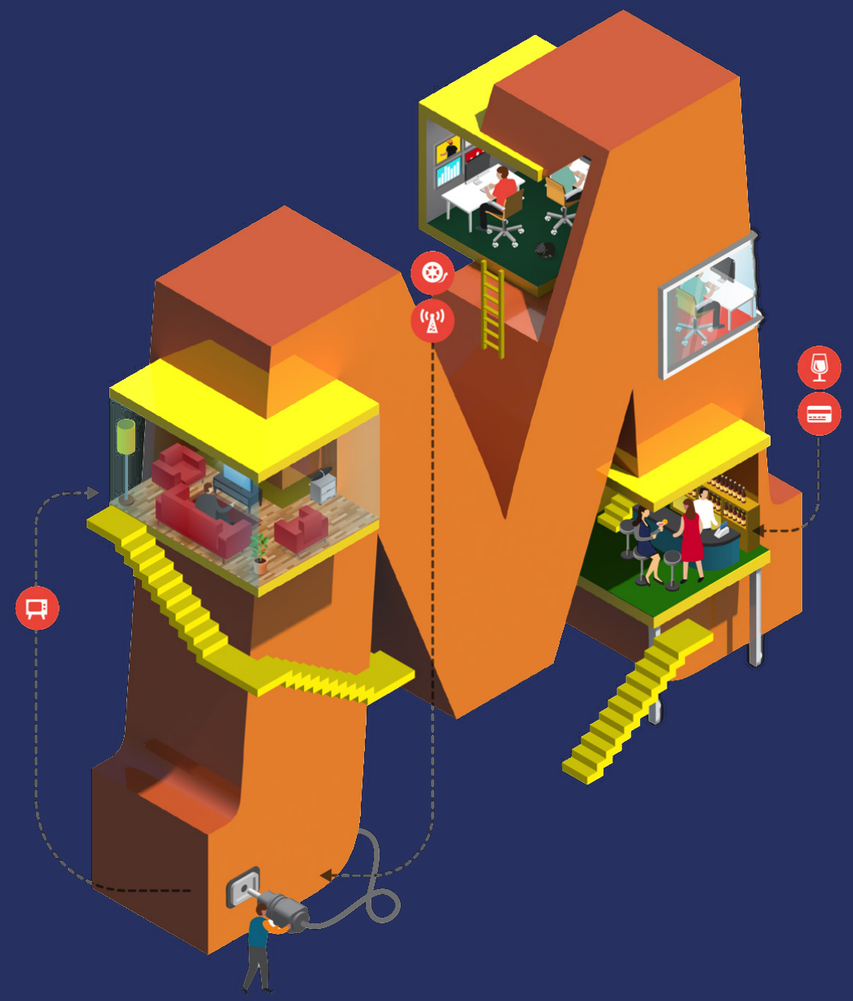
$$\ln\left(\frac{y}{1-y}\right) = \alpha + \beta_1 CustServ + \beta_2 TechIss + \gamma_1 BetterDeal...$$

$$... + \gamma_2 CostInc + \gamma_3 CouldLeaveCont + \gamma_4 NoNego...$$

$$... + \gamma_5 WantCostRed + \delta_1 ConfCompare + \delta_2 ConfSpeak...$$

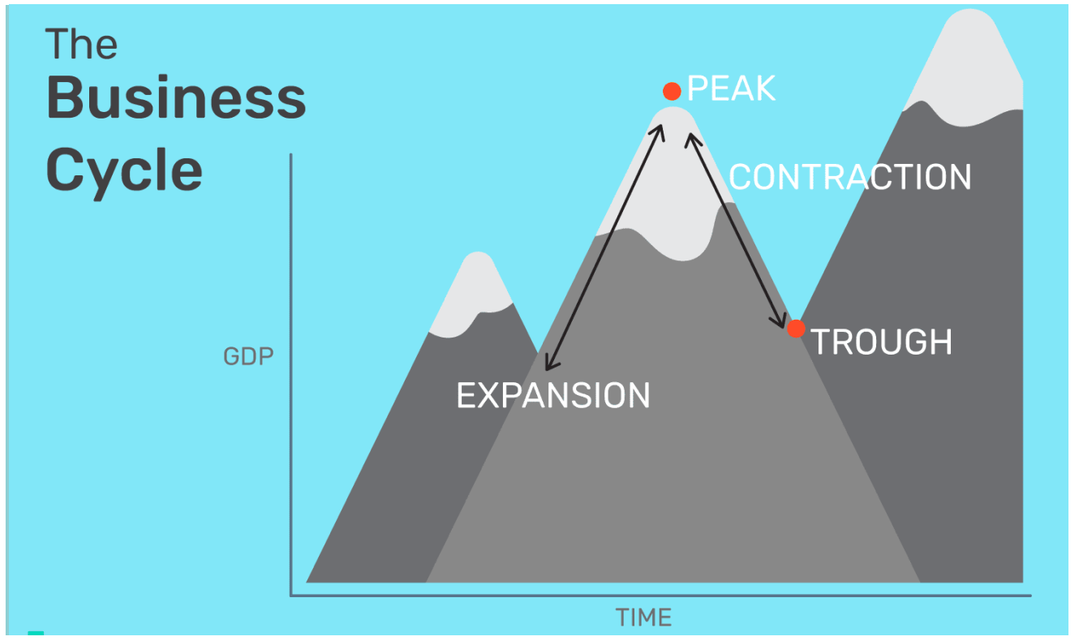
$$... + \delta_3 ConfLang + \delta_4 ConfOptions + \delta_5 PROs...$$

$$... + \delta_6 RegRev + \delta_7 SEG$$



Modernising Macroeconomics II

Pushing Macroeconomics into the Future: a Foray into Modelling (Part 2)



Ananya Ashta

Quick Recap

The first edition of this research[1] endeavour outlined certain shortcomings of currently used Dynamic Stochastic General Equilibrium (DSGE) models which are based on Real Business Cycle theories. This was met with a literature review on the possibility of a shift to Agent Based Modelling, which involves the creation of a simulation with the aid of interacting "agents". The question still remains: Why should we augment a bloated model when Agent Based Modelling offers more than just improved predictability and flexibility? In this installment of my research, I compare both models on the basis of their adaptability.

Since it was the bursting of the housing bubble that was part of the reason why there is so much debate around DSGE models, I've compared this installment to the construction of a house. I hope this analogy is useful in understanding how DSGE models and Agent Based Models are constructed.

Assumptions: Bedrocks and foundations

Assumptions form the basis of economic models and, interestingly enough, their criticisms too. It should be noted that DSGE models are a family of models and while they have gone through revisions, the core of their assumptions does not seem to have changed much. They are as follows:

1. Individuals have rational expectations and work towards them
2. Perfect competition
3. All prices adjust instantaneously
3.Absence of asymmetric information
3.Pareto efficient competitive equilibrium
4.Both firms and households are identical and are price takers

Added to these are frictions related to taxation, adjustment costs on labour and investments, and habit persistence (Sala, 2014).

1. Refer to Issue 22 (Hit Refresh)-- [Rethinking Macroeconomics: A Foray into Machine Learning, pg 62-64]

These seem to be standard among most economic models. But these are obviously not very representative of how real humans and institutions behave and interact. If the recent wave of research in Behavioural Economics has taught us anything, it's that Homo Economicus has not yet arrived. Nevertheless, DSGE models still find major applications in policy formation, but assuming identical, price-taking households and firms would not reveal much about the expected effect of targeted policies. If a policy wishes to limit the control of monopolies, encourage homegrown cottage industries or smoothen the consumption of minority community households, a DSGE model would not be able to forecast its success. In contrast, New Keynesian models begin to explore the possibilities of imperfect competition (monopolistic, price making firms) and price rigidity (Carlin and Soskice, 2007).

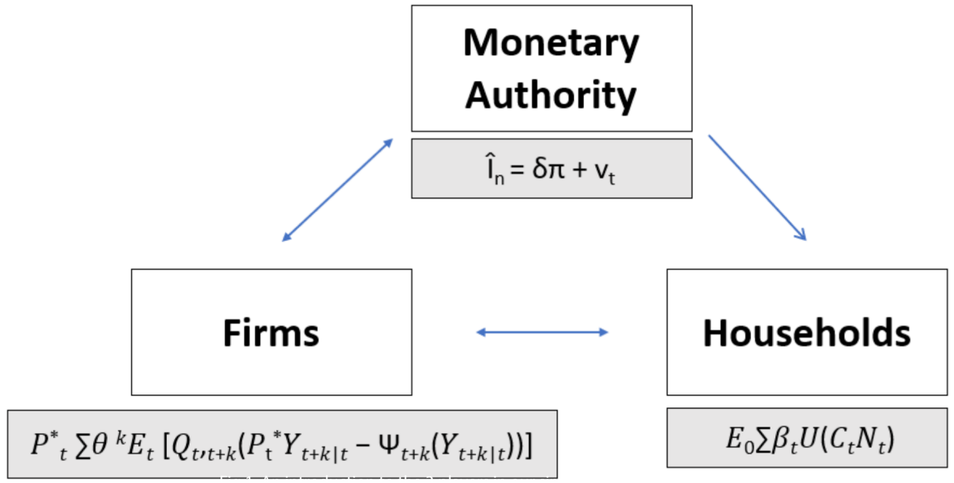
While the DSGE models failed to capture nuances of heterogeneity, given the mathematical difficulty involved, recent breakthroughs in Machine Learning have cleared a path towards heterogeneous modelling. In light of this, Agent Based Models seem to be a good alternative to consider.

There are no set economic assumptions as far as Agent Based Models are concerned as the behaviour of agents are not generalised across models. Such models are unique in the way that agents within the same model can display completely opposing behaviour. For example, one may have complete impatience while the other displays far more patience. One issue with this may be that these models overestimate the amount of irrationality among agents within the model, implying that things could go wrong in an infinite number of ways. However, an Agent based Model, that base the characteristics of agents on the perfect rationality assumption, inspired by DSGE models, is shown to be a remedy to this shortcoming (Poledna, Miess and Hommes, 2019).

Construction: Building blocks

New Keynesian DSGE Models

This is a simple representation of the framework of a basic New Keynesian DSGE model. Three kinds of players exist: the monetary authority (the central bank or any other such institution), identical firms, and identical households. The



monetary authority sets the interest rates which influences inflation, aggregate demand and spending ($\hat{I}_n = \delta_\pi + v_t$). This is important as New Keynesian models introduce the possibility of price rigidity, and the variables that bring the model to equilibrium can only be determined in the presence of monetary policy (Fagiolo and Roventini, 2012). Firms wish to optimize their prices given by the equation

The constraint is given by output $Y_{t+k|t}$. $\Psi_{t+k|t}$ is the cost function and $Q_{t't+k}$ is the stochastic discount factor for nominal payoffs. The latter is used to capture the pricing of assets through time "t".

$$\text{Max}(P^*_t) \sum\theta^k E_t [Q_{t,t+k}(P_t^* Y_{t+k|t} - \Psi_{t+k}(Y_{t+k|t}))]$$

Similarly, households try to maximise their utility function $U(C_t N_t)$

$$E_0 \sum\beta^t U(C_t N_t)$$

where N_t denotes hours of employment and C_t is the consumption index. Their behaviour is limited by constraints such as those which safeguard households from fraud or ponzi schemes (Da Silva, 2019).

The expectations generated from the change in interest rates, inflation and unemployment influence the behaviour and interactions of firms and households.

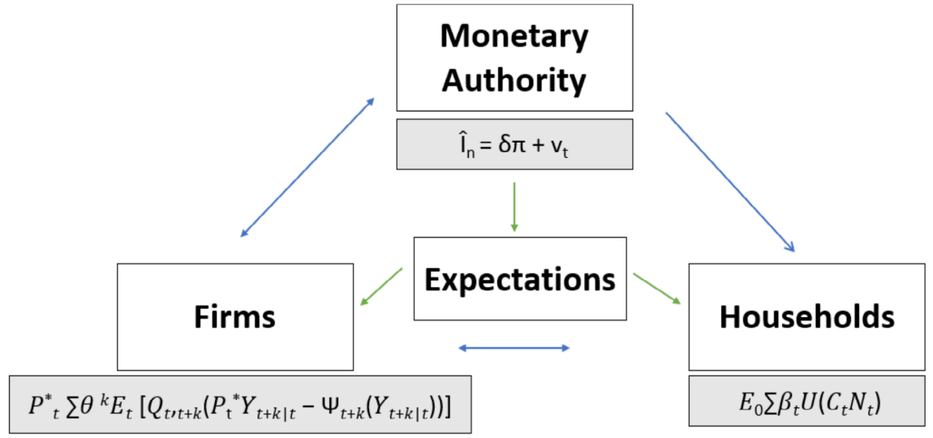


Fig 2: Expectations are generated from monetary policy which influences behaviour of households and firms.

We then make the application of periodic shocks to each of the players in the model possible.

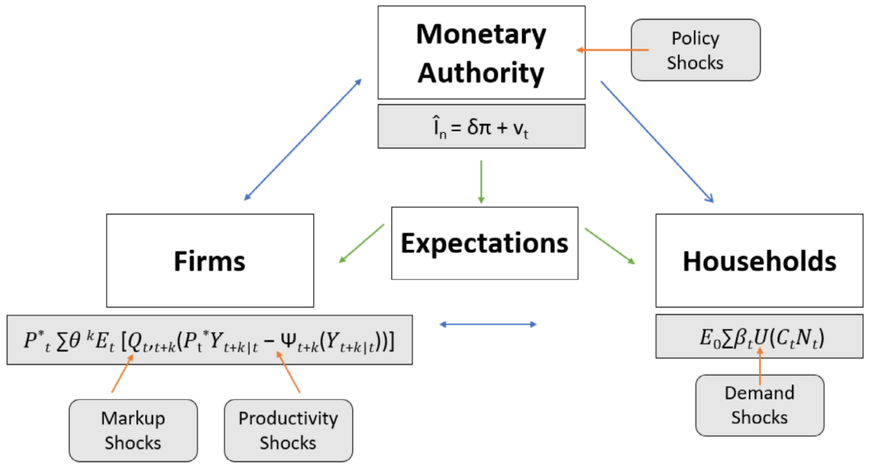


Fig 3: Representation of the application of shocks

After establishing the motivations and behaviour of the above, the final piece of the puzzle is the creation of equilibrium conditions. This follows the key assumptions that equilibrium is always reached.

This equilibrium has three components: a price system (determined by wages, amount of labour supply and productivity), valuation for goods and services (determined by supply, consumption, investment, labour supply and capital), and a Production Possibility Frontier (which works on the principle that $Y_t = C_t + I_t$ at equilibrium). Once equilibrium conditions are set, endogenous variables that make the same possible must be found.

This is a sample, but it is representative of the building blocks, external shocks, characteristics and behaviour of the

elements of a New Keynesian DSGE model. The difference between New Keynesian and Real Business Cycle models[2] is that while the former embraces the existence of fluctuations caused due to market failures, the latter assumes that fluctuations are natural responses to the technological state of an economy.

Agent Based Models

These models are fairly flexible, and since they resemble real life simulations more than a simplified model there are almost an infinite number of ways to create one.

Just as DSGE models aggregate microeconomic behaviour (Dilaver, Calvert Jump and Levine, 2018),Agent Based Models show that by assigning individual behaviour patterns to agents, it is possible to study the emergence of collective behavioural patterns. To conceptualise a simple simulation, we can see how agents react or change their demand in response to a change in the price of tea or coffee (which are assumed to be substitutes).

One interesting divergence from DSGE models ABM has is that agents are not assumed to be immortal, and have defined life cycles. For the purpose of this research, we will leave discussion of programming for now[3] and instead focus on three other aspects that are to be considered while creating an ABM.

The first is the characteristics of Agents (Abdou, Hamill and Gilbert, 2011) which are as follows:

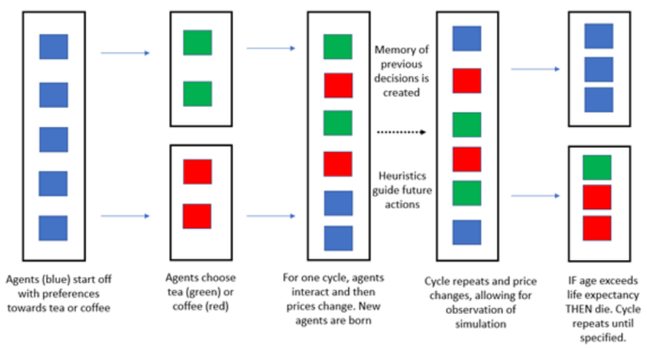
1. Perception: Agents need to be able to access the goods (tea and coffee) and be aware of changes in price as well as where to obtain them.
2. Performance: Their set of behaviours include interacting and communicating with the environment and other agents, consuming tea/coffee and switching consumption between the two.
3. Memory: Agents can maintain records of their previous actions within the model.
4. Policy: Heuristics and logical decision chains laid out that set the path for future decisions. Eg: Agents will decide whether to keep on consuming tea or switch to coffee.

The second is the production system for the agent (Abdou, Hamill and Gilbert, 2011). This provides the framework for the decision chains mentioned above and are extracted from the characteristics of the agent.

1. Each agent has a set of rules which determine what it will do. This consists of IF – THEN statements. Eg: IF price(tea) > 10 THEN switch preference to coffee.
2. A memory that stores information about previous decisions.
3. A rule interpreter which aids the agent in behaviour in accordance to rules which have been specified each cycle. Rules can change in each cycle.

It is not difficult to extend the above into learning. If an agent can store its previous decisions and make future steps based on logic,it is almost intuitive to say that agents can learn from their interaction with the environment.

This brings us to the final aspect that is the environment within which the agents operate. This can be geographical, cell based or even abstract locations such as "knowledge spaces" (Gilbert et al. 2001). The environment may create paths to guide the agents, or have barriers which nudge agents. In our substitute goods example, the weather could be more conducive to growing tea or the main way of sourcing coffee could be through imports.



This is obviously a very simple example of an Agent Based Model, but the fact that rules can be modified and conditions

2. Refer to Issue 22 (Hit Refresh)-- [Rethinking Macroeconomics: A Foray into Machine Learning, pg 62-64]
3. See (Abdou, Hamill and Gilbert, 2011) for more about this

added hint towards the fact that ABMs have the potential to be worked upon again and again. It could be possible to start from the observation of a very small phenomenon and build the model until it simulates a segment of the economy.

Could this also mean that it is possible to apply theories stemming from disciplines other than Economics in the creation of models?

It can be seen from the above that as far as flexibility, adaptability and inclusion of heterogeneous players are involved, the ease of using Agent Based Modelling makes it a better candidate for constructing realistic simulations.

Further Steps: Putting it on the market

In this installment, we have established the potential ABMS hold for lifting macroeconomics out of its bubble of insularity. The third installment would be a quantitative trade study of both models as well as an analysis of how ABMs have successfully managed to fuse together theories from within and outside economics.

Can the growth of Islamic banking increase financial inclusion?

Jasmine Karimzada

Abstract

Islamic banking is the provision of financial services that comply with Sharia law, Islam's legal system, and is derived from the Quran and fatwas (rulings by Islamic scholars). According to these rules, interest payments and receipts are forbidden, as well as speculation (including gambling) and the finance of illicit activities, specifically the production and sale of pork and alcohol. It is necessary for all transactions to have real economic value. Due to this, Islamic banks do not invest in derivatives (a type of security), e.g. futures or options.

In the last literature review, the paper introduced Islamic banking as an emerging and fastest-growing form of banking at the moment, growing to become systemically important in 13 jurisdictions. Through the works of various authors, the literature review found that Islamic banking tends to be more stable and credit-worthy in times of crisis, less regulated, less efficient, and therefore less profitable than conventional banks.

In this article, I will explore whether the growth of Islamic banking has improved financial inclusion across countries by considering research within this field, as well as comparing them to microfinance as an alternative to Islamic banking for improving financial inclusion. To do this, this paper has primarily focused on the research of Naceur, Barajas & Massara (2017), Leon & Weill (2018), and Shahinpoor (2009).

Increase in financial inclusion due to Islamic banking

Naceur, Barajas & Massara (2017) described financial exclusion to be of two types: voluntary and involuntary. Although involuntary exclusion may be more harmful since it deprives households and firms who require financial services from accessing it, voluntary exclusion also restricts the wider use of credit in economies by withholding liquidity, which can unlock higher development through increased lending that can fund investment in the economy. Household survey information from the Global Findex database (accounting for more than 124,000 people in 149 countries) was used to estimate that around 50% of adults globally do not have access to a formal bank account. 30% lacked sufficient money to open an account, 23% had a family member with an account (that they were sharing) and nearly 5% had religious reasons for not having a formal account. Religious reasons for self-exclusion tend to be higher in Muslim coutnries, although they range from nearly 0% in Malaysia to 34% in Afghanistan.

Through an OLS regression[1] of Islamic banking presence (indicated by the number of banks) against the bank's respective business activity (indicated by their total assets), Naceur, Barajas & Massara found limited empirical evidence that Islamic banking increases financial inclusion. Nevertheless, although there is little evidence of a correlation between households making use of greater credit as a result of Islamic banking development. Meanwhile, the challenges that firms were previously expecting with regards to accessing bank credit also did not improve as Islamic banking developed.

The following regression was used to get the results below:

$$FI_i = \beta_0 + \beta_1 X_i + \beta_2 OIC_i + \beta_3 (OIC_i \cdot IB_{ji})$$

Table III.1: Cross-Country OLS Estimation of the Effect of the Islamic Bank Presence and Penetration on Financial Inclusion Indicators[2]

Table III.1

Cross Country OLS Estimation of the Effect of Islamic Bank Presence and Penetration on Financial Inclusion Indicators

Islamic Banking Variables: IB_0 – Islamic Bank Assets per adult (US$ 1,000), IB_1 – Number of Islamic Banks per 100,000 adults.

	GDP per capita	OIC	OIC × IB	GDP per capita	OIC	OIC × IB	GDP per capita	OIC	OIC × IB	GDP per capita	OIC	OIC × IB
Source:	Source: Bankscope						World Bank Islamic Bank Database					
Accounts	57.480 ***	-132.70	-80.890 *	50.150 ***	-312.40	-754.00	55.910 ***	-250.800	-54.310	45.760 ***	-332.000	-452.100
	(6.45)	(0.47)	(197)	(6.02)	(106)	(0.38)	(6.47)	(0.95)	(1.58)	(6.59)	(1.33)	(0.59)
Observations			*96*			*96*			*99*			*109*
Branches	0.327 ***	-8.085 **	-0.560	0.288 ***	-9.449 ***	-2.99	0.318 ***	-8.414 ***	-0.400	0.349 ***	-8.281 ***	-11.610
	(4.10)	(2.40)	(110)	(3.94)	(278)	(0.10)	(4.27)	(2.61)	(0.86)	(4.98)	(2.71)	(1.42)
Observations			*149*			*149*			*153*			*172*
Credit to Firms	1.277 ***	-18.050 ***	43.330	1.335 ***	-15.710 ***	-46.81	1.291 ***	-16.750 ***	32.280	1.296 ***	-14.980 ***	-51.110
	(3.99)	(4.23)	(1.28)	(4.17)	(3.73)	(0.79)	(4.08)	(4.30)	(1.56)	(4.24)	(4.05)	(0.49)
Observations			*81*			*81*			*85*			*95*
Credit to Small Firms	1.201 ***	-15.400 ***	43.180	1.259 ***	-13.140 ***	-39.52	1.208 ***	-13.940 ***	30.810	1.195 ***	-12.050 ***	-76.530
	(3.94)	(3.78)	(1.34)	(4.13)	(3.28)	(0.73)	(4.02)	(3.77)	(1.57)	(4.09)	(3.40)	(1.64)
Observations			*81*			*81*			*85*			*95*
Indicators of Household Use of Financial Services												
Share of adults:												
Borrowing from a formal financial institution	0.074 **	4.128 ***	0.424 ***	0.100 ***	3.524 ***	9.91 ***	0.084 ***	3.835 ***	0.356 ***	0.094 ***	3.972 ***	4.830 ***
	(2.58)	(3.59)	(3.43)	(3.83)	(316)	(3.38)	(3.18)	(3.58)	(3.70)	(3.67)	(3.84)	(2.60)
Observations			*119*			*119*			*126*			*142*
With an account at a formal financial institution	1.225 ***	17.790 ***	0.499	1.171 ***	19.980 ***	4.70	1.177 ***	19.150 ***	0.071	1.240 ***	16.870 ***	12.150 *
	(11.37)	(4.03)	(1.07)	(11.76)	(4.72)	(0.42)	(11.82)	(4.72)	(0.20)	(13.74)	(4.64)	(1.90)
Observations			*119*			*119*			*126*			*142*

For this regression, data has been derived from two sources: BankScope and the World Bank Islamic Bank (WBIB) Database and the results shown on the table. Between both sets of data, perhaps the most telling columns about the effect of Islamic banking development on financial inclusion are those of $OIC \cdot IB_0$ and $OIC \cdot IB_1$. This is because these columns show the result of regressing the number of banks (IB_0) the activity of banks (IB_1). In addition, the OIC dummy variable represents the Organisation for Islamic Cooperation, an international group of 57 countries.

Overall, Naceur, Barajas & Massara (2017) found a weak but positive impact between Islamic banking and financial inclusion. This is because, although OIC countries tend to have lower financial inclusion on average, the operations and presence of Islamic banks was correlated with more bank credit to finance investment by households and firms.

However, as the authors mention, this link is tentative because there are key structural shortcoming in the development of Islamic banks (as explored in my previous article[3]) as well as country-specific credit environments that affect the availability of credit to households and firms across the banking sector as a whole. They also suggest recommendations to improve financial inclusion through Islamic banks such as:

1. Better-trained bank personnel specialising in Sharia-compliant banking instruments, e.g. loans.
2. Support the development of PE and VC activity.
3. Develop Islamic microfinance[4].
4. Establish Islamic equity funds for small and medium enterprises (SMEs).
5. Institutionalise redistributive mechanisms.

1. An OLS regression is a statistical tool used to estimate the influence of unknown parameters on a linear correlation model by minimising the sum of squared differences between perceived and observed values of a parameter (XLSTAT, 2021).

2. From the methodology of Naceur, Barajas & Massara (2017)
"This table shows the estimated coefficients, t-statistic (in parentheses), and number of observations corresponding to a cross-country OLS regression of each financial inclusion variable on a constant, country GDP per capita, and an OIC dummy variable as well as its interaction with, alternatively, IB0, the total number of Islamic Banks, or IB1, total assets of Islamic Banks, both scaled by the adult population. Significance levels of 10 percent (*), 5 percent (**), and 1 percent (***) are also indicated. For the Islamic banking as well as the four first financial inclusion variables shown (Accounts, Branches, Credit to Firms and Credit to Small Firms), the latest available observation is taken n. For all other financial inclusion variables, there is a single observation available per country."

3. The Economic Tribune, Issue 22, p.64-67 ('Introduction to Islamic banking vs conventional banking: a literature review of the growing Islamic finance industry and the challenges it faces')

4. A method of increasing accessibility to loans for small businesses and unemployed people on ethical means (e.g. reasonable interest rates) as a way to improve income and development of small businesses and unemployed people.

In brief, the wider financial environment is likely to have a larger impact on financial inclusion than the presence and activity of Islamic banking. This can only be improved via structural changes in the Islamic banking industry, such as training and the integration of Islamic finance with microfinancing (this may be interest-free loans to SMEs as interest charges are forbidden by Sharia law).

Islamic finance

Leon & Weill (2018) investigated the development of Islamic banks and its effects on access to credit by collecting firm-level data sampling 15,309 firms across 52 countries between 2006 and 2009. This paper focused specifically on credit-constrained firms and the effect that Islamic banking has on them. They define a credit constrained firm when "it was either discouraged from applying for a loan or was rejected when it applied."

Investigating access to credit is important because Islamic banking is most developed across emerging countries in general, and these countries need to have sufficient access to credit to aid economic development.

The authors investigated this by using a probit regression of credit availability with a set of variables such as the presence of Islamic banks in a country. This binary model was judged to be more suited to than a linear model due to the binary nature of the dependent variable (whether a firm is credit-constrained). According to (UCLA, Probit Regression | Stata Data Analysis Examples, 2021), "in the probit model, the inverse standard normal distribution of the probability is modeled as a linear combination of the predictors":

$$Pr(Y_i = 1) = \Phi(\alpha + \beta TotalCredit_i + \Theta F_i + \Gamma C_i$$

, where i refers to the firm.Φ is the standard normal cumulative function. Y is a dummy variable (equal to 1 if the firm has a loan and 0 if the firm is credit constrained). F is a matrix of firm characteristics and C is a matrix of country-level control variables.

Another regression of Islamic and conventional banking development with private credit was investigated. The equation for this is:

$$Pr(Y_i = 1) = \Phi(\alpha + \beta_1 IslamicCredit_i + \beta_2 ConventionalCredit_i + \Theta F_i + \Gamma C_i$$

,where the impact of Islamic banking development on credit availability is given by the sign of the coefficient β_1. *Islamic credit* = size of Islamic private credit relative to the GDP. *Conventional credit* = size of conventional private credit relative to the GDP.

The regressions of Leon & Weill (2018) showed that there is a large positive correlation between total credit relative to GDP and credit availability, indicating that in countries where banking is more developed, credit constraints are lower. More importantly, the regression finds that there is no significant correlation between Islamic banking development and the improvement of credit access. In the meanwhile, another regression of Leon & Weill (2018) found that there is significant positive correlation between conventional banking development and lower credit constrained. Therefore, conventional banking development yields higher credit opening through this causal relationship.

Overall, they found that the development of Islamic banking has no correlation to reduced credit constraints for firms when the wider banking industry's development is occurring both in size and revenue, although it has a positive impact of access to credit when the development of conventional banking is lacking. Therefore, Leon & Weill find that although Islamic banking does not increase financial inclusion, it can act as a substitute in the absence of conventional banking.

However, the effect of Islamic credit varies depending on the firm type. For example, 'opaque' firms tend to benefit more from the development of Islamic banking than others. Opacity refers to the level of information asymmetries between the bank and firm. Generally, these firms have a lower propensity to be granted credit by conventional banks due to their opacity. However, this is a less important aspect of granting credit for opaque firms by Islamic banks because of their differing business model compared to conventional banks. This is, as mentioned in my previous article[5], the profit-and-loss sharing arrangement of credit between the Islamic bank and conventional banks which, in the case of opaque firms, is ideal since the only returns are generated from the investment project and not other aspects such as interest earnings. Despite this, further empirical analysis has shown that conventional banking still has a significant positive impact across all types of firms with regards to accessing credit.

5. The Economic Tribune, Issue 22, p.64-67 ('Introduction to Islamic banking vs conventional banking: a literature review of the growing Islamic finance industry and the challenges it faces')

How Islamic banking and microfinance can be integrated to improve financial inclusion

(Shahinpoor, 2009) investigated the link between Islamic banking and microfinance. In general, Islamic banking and microfinance are similar in their values of promoting equality and fairness by extending credit to all members of society. However, they are incompatible in practice because Sharia forbids the charging of interest on loans while microfinance allows it, and often at high interest rates.

According to Shahinpoor, "microfinancing is the giving of small loans to people who need capital to start a small business and become self-employed to help themselves and build a sustainable future."

Shahinpoor also proposes the establishment of Islamic microfinance institutions that run according to the principles of Islamic banking in the rural areas of the Middle Eastern and North African countries in an effort to alleviate poverty through the encouragement of entrepreneurship. These areas are likely to have low conventional bank development or acceptance and so, as per the results of (Leon and Weill, 2018), Islamic banking would improve financial inclusion as a substitute.

The practise of profit sharing can be applied to microfinance loans. In this case, the Islamic micro-lender would provide the capital and the entrepreneur would provide the labour and entrepreneurship. The two parties can arrange an agreement through which a share of the profit would be received by the lender alongside monthly or weekly repayments of the loan, while the rest are the entrepreneur's.

However, this practise is risky for the lender due to the uncertainty of the profit since transactions are not accurately recorded by borrowers. Hence, monitoring weekly or monthly profits are difficult for the Islamic micro-lender. This also makes the enforcement of a contract very difficult.

Alternatively, the practise of cost-plus-markup can be applied to these microfinance loans. Here, the lender's agency buys the good themselves and then sells this to the entrepreneur (the borrower) for the cost of the good plus the processing and administration costs faced by the lender. The entrepreneur agrees to pay the price in monthly or weekly installments. This is easier to track for the lender, and easier to understand for the entrepreneur.

The risk to this model is to the lender. Since the lender buys the goods, and the transaction is not complete until the customer purchases the good, there is a risk in case of the customer refusing to buy the good. This risk, according to (Wilson, 1990), makes this practise legitimate according to Islamic law, since the markup may be interpreted by some as a form of interest. By taking on risk, this is no longer illegitimate.

In conclusion, Shahinpoor proposes for interest-free microfinancing to increase financial inclusion in rural areas, where conventional banking is less developed. It allows the rural poor to benefit by being able to participate actively in the local economy. This policy can have a noticeable impact. As Jalilian and Kirkpatrick (2001) has found, a 10% increase in financial development may increase the growth rate in poor people's income by about 4%.

Conclusion

In conclusion, empirical studies found that Islamic finance, in essence, does not contribute to financial inclusion, except in the absence of adequate conventional banking development. Conventional banking development was found to have a more significant relative positive effect on access to credit than the development of Islamic banking. However, Shahinpoor proposed the integration of Islamic finance with the activities of microfinance, which have been known to alleviate poverty in rural areas. Therefore, empirical analysis has found that Islamic banking development does not contribute to improving financial inclusion.

Part II. The Optimal Design of CBDCs and Getting Out of Hyper-inflationary Episodes

Marc Clotet

In the publication of Part I in November 2020, I embarked on a new project involving the study of the issuance of the so-called Central Bank Digital Currencies (CBDCs), aiming at investigating the implications that this new type of public digital money could have to our economies, especially in jurisdictions hit hard by inflation. In this second part, I provide some of my findings on the introduction of Central Bank-Issued digital monies in two developing economies: Zimbabwe and Venezuela. I explain which design for a CBDC might be most suitable in both countries and which could help bring the economy back to an inflation-stabilising equilibrium.

"Would you tell me, please," said Alice, "which way I ought to go from here?"

"That depends a good deal on where you want to get to", said the Cat.

"I don't much care where," said Alice.

"Then it doesn't much matter which way you go," said the Cat

Alice's Adventures in Wonderland

Contextualising Hyperinflation: Killing Zimbabwe's Hyperinflation

Since the beginning of the 21st century, the Zimbabwean economy has been characterised by monetary and fiscal instability, brought about by hyperinflation, liquidity issues, deindustrialisation and threateningly high interest rates. With intentions to solve this, the monetary authorities introduced a multi-currency regime including a basket of currencies [1]. This regime was known under the term 'dollarisation', because nearly 85% of the monetary transactions and the Zimbabwean government budget were denominated in USD.

Nonetheless, although dollarising in 2008 seemed to win in the short-run pushing down inflation (Figure 1, 1a), it lost the battle against hyperinflation; it failed to restore financial stability. Since its downfall, the Zimbabwean economy has remained fragile, and hyperinflation brought economic stagnation. With dollarisation, the Reserve Bank of Zimbabwe (RBZ) lost its monetary sovereignty, losing control of both the money supply and its ability to influence interest rates

1. Involving the US Dollar, South African Rand, Bostwana Pula, Pound Sterling, Euro, Australian Dollar, Chinese Yuan, India Rupee and Japanese Yen.

(Hanke and Alex 2009). Basic new trade theory explains Zimbabwe's negative trade balance; expensive exports and cheaper imports (Krugman 1990). Hence, this attempt to mitigate hyperinflation —arising from the government's seigniorage revenue scandal to finance the deficit— with the introduction of a multi-currencies regime was flawed and proved to be inefficient. Moreover, Zimbabweans have to deal with untransparent, highly corrupt politicians which exacerbates the actual situation.

Despite having plans to rule out the dollar and return to its local currency, can the Zimbabwean economy grow without having to print more money? Could the implementation of non-interest-bearing CBDCs reduce inflation and drive the economy towards to a sustainable economic growth?

Venezuela: The Economic Consequences of a Dictatorship and a Discouraging 'Petro' Project

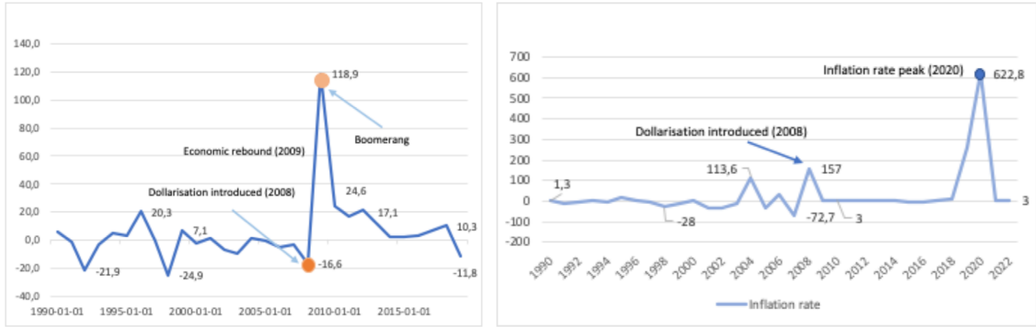


Figure 1, 1a. GDP Growth Rates for Zimbabwe (1990 - 2019) [left] and Inflation rate, average consumer prices (Annual Percentage Change) [right]. Author's Chart. Source: FRED, IMF.

Although Venezuela and Zimbabwe share a few similarities and experiences when it comes to monetary instability, the Banco Central de Venezuela (BCV) must cope with continuous financial turmoil, known as 'The Crisis', which began in 2010 with the presidency of Hugo Chávez. It is well known that the core issue in Venezuela is its out-of-control, excessive money supply, which depreciates the currency day by day. M0[2] reached its highest benchmark in 2017, a 407% increase since the previous period (Figure 2). After its decline in 2018, it is still increasing to new high levels.

Chávez's Petro cryptocurrency initiative relies on the creation of a strong currency backed up by the country's natural resources —basically, oil, gold, diamonds and iron. Ironically, one of the world's countries with loose monetary policies is striving for 'monetary digitalisation', aiming to eliminate international payments barriers with other countries, thereby enhancing international trade. As stated in Petro's whitepaper1, this cryptocurrency will allow the ordinary citizen to buy Bolivian commodities and fosters economic interactions between its users. However, having 50% of 'petros' backed up by oil, a commodity subject to high levels of price fluctuations depending on the world's demand and supply, imposes a far-reaching threat to monetary stability.

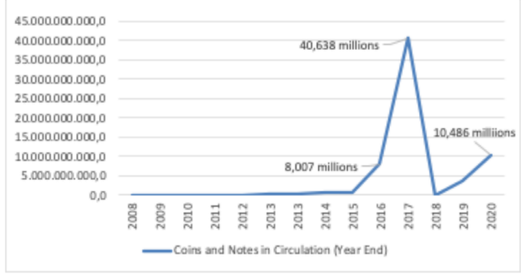


Figure 2. M0 for Venezuela (2008 - 2020). *Includes Cono Bolívar Fuerte and Bolívar. Author's Chart. Source: BCV

How to Get Out of Hyperinflation: The Design and Implementation of CBDCs

It is not about imposing loosened fiscal policies — i.e. cut in taxes, increase in government spending— or exerting

2. Among the different types of money supply (M0, M1, M2, M3), M0 refers to the most liquid form of money: cash (this includes coins and banknotes).

excessive control over Central Banks' bargaining power in seigniorage rents. I explained above how the lack of a local currency contributed to monetary instability in Zimbabwe. Venezuela's 'petro' must attract the public's attention first, not only that of speculators or foreign investors, to become a nation-wide successful digital money.

In Part I, I outlined CBDCs' core foundational principals, arguing that they should not compromise monetary and financial stability. I emphasised that CBDCs must, most importantly, (i)"Do no harm", (ii) Coexist with other monies (cash and deposits), and provide a source of (iii) Innovation and efficiency in the digital payments arena.

Notwithstanding, as I mentioned, one of the biggest concerns on the table is the existence of larger and faster bank runs which could spill over to other countries during financial crises. There is no evidence of a rise in bank runs2. In the US, households and firms can move funds from their bank to government accounts already[3]. Hence, although CBDCs would be entirely managed by Central Banks and can, in a sense, deprive commercial banks of their core business activities, there is little concern that they would trigger bank runs. In fact, as I will explain later, the introduction of CBDCs could make the payments system more efficient, reducing the need for traditional QE.

The Interest-bearing Architecture Behind Central-Bank-Issued Digital Currencies

When thinking about CDBCs, we are imagining Tobin's (1987) suggestion for "deposited currency accounts". Now, two important points should be made when it comes to the creation and distribution of CBDCs, which would have notable implications in an interest rate setting scenario.

The effects of CBDC issuance will depend on whether the CBDC is interest-bearing and the current strength of the banking network (amount of cash in bank deposits in commercial banks). Considering a non-interesting-bearing CBDC, its design resembles that of conventional cash money, and only differs in the way payments are carried out —that is, electronic or physical cash payments. Current Central Banks involved in this project are studying the feasibility of non-interesting bearing CBDCs.

On the other hand, with interest-bearing CBDC issuance, Central Banks could set the interest rates paid on this digital money and enable the private sector to determine its quantity, having control of the supply, in exchange of various asset classes. Alternatively, it could limit the quantity of this money and allow the private sector to bid interest rates until reaching a market equilibrium. Therefore, the distribution of CBDCs might depend on the policymaker's approach and their final decision on whether to have a fully centralised system or to allow private interests to influence its distribution.

Nowadays, Central Banks have access to their balance sheets by issuing banknotes. But cash requires storage and effectively pays zero interest. This might be one of the main drawbacks of non-interest bearing CBDCs. An interest-free financial asset, after considering transaction costs and storage, would constitute a lower bound (ZLB) on policy rates, therefore, aggravating the problem of the ZLB[4] (Barrdear and Kumhof 2015).

By using a model of payment instruments, Agur, Ari and Dell' Ariccia (2019) analyse the optimal CBDC design for maximising social welfare, mentioning first the optimal outcome for a non-interest bearing CBDC and how the optimisation of an interest-bearing CBDC differs from this.

As stated in the paper, when a CBDC is considered to be non-interest bearing, to find the optimal CBDC allocation in both cashless and cash equilibria we must solve an optimisation problem. However, we are not considering how network effects —the improvement

of a good or service's value by an increased use of it by customers— will affect our constraint policy, meaning that the optimal CBDC rate is always zero in the absence of network effects[5]. But, when network effects come to play, we then face an unconstrained policy optimisation problem, meaning that the optimal CBDC rate can now diverge from zero. Indeed, according to the model, the CBDC rate turns negative at the optimum. This last fact would lead CBDC design to be more cash-like, compared to the non-interest bearing case. The value of bank intermediation rises[6], as banks are more involved in matching borrowers to possible lenders, therefore, serving as intermediaries.

The more negative the CBDC rate becomes and the larger the bank intermediation is, the public will be best served by letting go cash (this is represented by the shaded area in Figure 3).

3. Treasury Direct (US) serving as an online system intermediary for the purchase of U.S. Treasury Securities and U.S. Savings Bonds. A bullish bond market in a period of rising interest rates of the 10-Year Treasury Bonds could rapidly move money from banks to government accounts, but it has never happened and there is a low probability that this will actually occur.
4. When the short-term nominal interest rate reach zero, this exacerbates the matter on liquidity, impeding central banks to provide further stimulus to foster the economic growth. Further monetary easing might be required to alleviate the problem (e.g. large-scale financial assets purchases — traditional QE—).
5. This is so according to the findings from (Agur et al. 2019). The absence of network effects implies a zero CBDC rate. I highly recommend taking a look to the paper for empirical reasoning.
6. Bank intermediation refers to the 'matching' effort from banks between lenders to borrowers. The contrary of this mechanism is known as disintermediation.

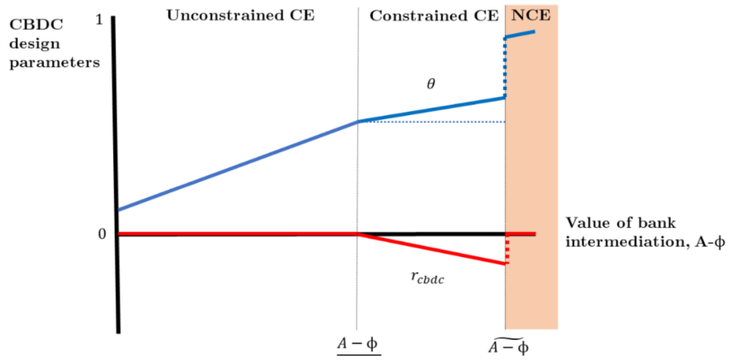


Figure 3. Optimal Interest-bearing CBDC design. Source: Designing Central Bank Digital Currencies. IMF Working Paper.

From the aggregate welfare perspective —summing up the utility of all households—, the introduction of an optimally-designed CBDC increases net welfare, but is far from being a Pareto improvement since some households gain and others lose. The blue line in Figure 4 depicts the effects of a non-interest bearing CBDC, where the upward slope indicates the optimal allocation regarding CBDC users.

If we consider households with payments preferences resembling that of deposits (low i), they remain as depositors after the introduction of a CBDC. Nevertheless, since the introduction of a CBDC reduces financial intermediation, it reduces profit transfers from firms. But CBDC competition with bank deposits push deposit rates rd up, and since this latter effect dominates[7], the introduction of a CBDC enhances consumption, thereby, the welfare of all depositors.

On the other hand, households with preferences to keep holding cash (high i) become worse off. Since cash does not pay any interest, the decline in firms' profits leads to a decline in consumption and total welfare for this group of people. This is represented by both the diminishing lines in Figure 4. Moreover, were deposit users to switch to CBDC use, they would experience an increase in their welfare. Households with preferences i = θ would experience the greatest increase in welfare.

The same story applies to the red line, regarding an interest-bearing CBDC. Notwithstanding, a negative CBDC rate would increase deposits and financial intermediation, increasing firms' profits and benefiting all households, but hurting deposit users with diminishing deposit rates.

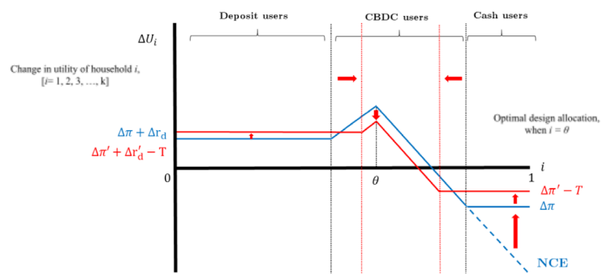


Figure 4. Distributional effects of CBDC. Source: *Designing Central Bank Digital Currencies*. IMF Working Paper.

Conclusions: The Optimal Design For Zimbabwe and Venezuela

Two key design features determine the issuance of a CBDC: the degree of similarity to cash, and whether it is interest-bearing. Barrdear and Kumhof (2015) also show in their model on the macroeconomic effects of CBDCs that this new type of money can, indeed, coexist with other monies and would not require the withdrawal of cash altogether. A CBDC-financed acquisition of government bonds could help lower a government's defaultable debt, therefore, lowering credit risk and leading to lower interest rates on the debt. Since the interest rate on government debt has major effects on the economy-wide interest rate structure, it leads to, ceteris paribus, lower borrowing interest rates which fuels households' spending, contributing to economic growth by pushing the aggregate demand line upwards in the multiplier model.

7. Refer to the paper about this model for the whole empirical analysis.

It is the rate on bank deposits, instead of the policy rate, that determines the level of borrowing costs for firms and households; therefore, accounting for the marginal costs of the funding for the entire banking system, narrowing the spread between the interest rate on government bonds and on bank deposits through the introduction and withdrawal of a CBDC, which could bring back economic stability. If real deposit interest rates were to diminish with the implementation of a CBDC-regime, this would result in higher aggregate output levels, as already mentioned.

For this reason, an interest-bearing CBDC might turn out to be more efficient in inflationary jurisdictions such as those like Zimbabwe or Venezuela. The introduction of CBDCs can also increase liquidity levels by cutting economy-wide transaction costs and increasing monetary transaction balances —the sum of CBDC transactions and bank deposits. Lower transaction costs would reduce the barriers to entry into the deposits market for new payment service providers, which would have to deal with the current commercial banks. This would provide a new channel for research and innovation in payment technologies, fostering overall competition and lowering prices for customers, thereby increasing net welfare. The discovery and adoption of new technologies could further lower costs and prices.

It is also claimed that a CBDC could be more efficient than traditional QE. In an scenario of plummeting interest rates to nearly zero or to negative levels, non-bank buyers from the private sector can help provide stimulus along with Central Banks by buying government bonds and other securities faster in the absence of an intermediary such as a commercial bank. A reduction in the complexity of purchasing financial assets would make the financial system more efficient and resilient, and therefore would help to reduce governments' debt burden more rapidly. This is an important point to consider in developing countries facing huge deficits and lacking access to funding.

According to the model explained before, this specific design of CBDC would reduce firms' profits as a result of declining intermediation —e.g. letting powerful commercial banks in at second place— but it would increase competition between service providers provided this system was not fully centralised by monetary authorities. Increasing deposit rates would be appealing for depositors who might rethink their confidence in the currency and the whole system. Therefore, it would not only intensify a more resilient banking system in Zimbabwe and Venezuela, but would also lay out the foundation of a new research paradigm in new digital payment technologies in both countries.

Now that we understand the most suitable type of CBDC for the case study of the chosen developing countries, one may wonder the actual feasibility of non-interest bearing in these countries. In Part III of this paper, I will delve more into this matter, with my main focus being on the competitive environment and the service providers of this new public digital money.

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Joe Biden: https://twitter.com/joebiden/status/1339582371557883906

Greta Thunberg: https://twitter.com/GretaThunberg/status/1355102756240023552

Elon Musk: https://twitter.com/elonmusk/status/1061367825724522497

Bjorn Lomborg: https://twitter.com/BjornLomborg/status/1363120426596016130

Sammy Wilson: https://twitter.com/eastantrimmp/status/917730746604969984

Patrick Moore: It seems that the tweet was deleted

Donald Tump: Account deleted

Paul Musgrave: https://twitter.com/profmusgrave/status/1366507481141239813

Eugene Gu: https://twitter.com/eugenegu/status/1366754319609995267

Matt Goodwin: https://twitter.com/GoodwinMJ/status/1364294361001902087

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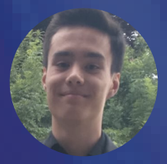

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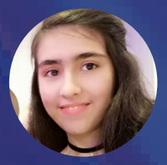

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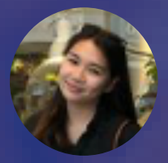

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