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equilibrium



IN THIS ISSUE

US-China Trade War • Economics of Reparations • Venezuela's Resource Curse • More

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Mission Statement: In Berkeley Economic Review, we envision a platform for the recognition of quality undergraduate research and writing. Our organization exists to provide a forum for students to voice their views on current economic issues and ultimately to foster a community of aspiring economists.

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FROM THE EDITORS' DESK

Dear BER Reader,

On behalf of the 65 members of the Berkeley Economic Review in our Research & Editorial, Peer Review, Layout & Design, External Affairs, Web Development, and Executive teams, we are proud to present the third issue of *Equilibrium*.

Equilibrium is the voice of UC Berkeley's best young and upcoming economists. Our articles run the gamut from the US-China Trade War to the Economics of Reparations. Each article in this issue has been carefully selected to demonstrate refined forms of argumentation using both quantitative and qualitative economic arguments.

Our staff, comprising of Berkeley students from all walks of life, has come together to engage in constructive discussions about issues faced by all corners of the world. Akin to the Crisis in the Aegean, the world is plagued by dilemmas that require economic solutions. Political phenomenon such as China's repressive policies in Xinjiang often stem from economic incentives leading to the persecution of minorities for profit.

In our quest to find economic solutions to political issues, we observe patterns such as the resource curse faced by developing nations. These patterns help us deepen our understanding of the relationship between economics and politics. Economics, however, has the unique multidisciplinary quality which touches upon all forms of industries. As you, the reader, immerse yourself in this magazine, you will come across topics such as the economics of Venezuela's resource curse and the economics of the streaming industry.

BER aspires to provide our readers a global perspective for a range of worldly economic phenomenon. We hope to advance our infectious passion for economics through *Equilibrium*. In this global spirit, we present the third edition of *Equilibrium*.

Best,
Vinay Maruri and Vatsal Bajaj
Editors-in-Chief, Berkeley Economic Review

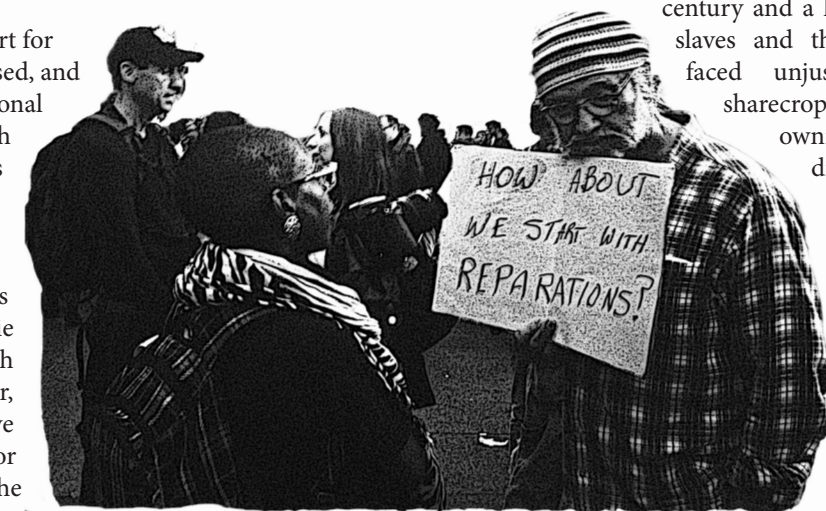


The Economics of Reparations

By Raina Zhao

During every Congress that has convened since 1989, H.R. 40 has been introduced to the House of Representatives, but it has never even been debated on the House floor. Originally sponsored by Representative John Conyers, H.R. 40 is a bill about reparations for descendants of African American slaves. H.R. 40 does not delineate any material policy to implement reparations. Rather, the bill only moves to establish a federal commission investigating the history of slavery and possible remedies. Even so, it has never been successful.

Unlike in years past, however, public support for reparations has increased, and a historic congressional hearing on June 19th of this year to discuss H.R. 40 received significant media and public attention. Now, prominent Congress Members like Bernie Sanders, Elizabeth Warren, Cory Booker, and Kamala Harris have all shown support for the bill. As some of the above Congressmembers running for president in the 2020 election, such as Harris and Warren, have also floated possible reparations programs in their platforms, the likelihood of legislative action is greater than ever.



The Legacy of Slavery and Racial Wealth Gap

The need for some measures to address the Black-White wealth gap is clear. Past research on the topic indicates the current state of economic inequality across racial lines is shocking: the Federal Reserve found that the median Black

household has ten times less wealth than the median white household. Currently, Black Americans hold less than 2% of the nation's wealth, despite being 12-13% of the U.S. population.

Several factors have contributed to these disparities, but most, if not all, are traced back to the devastating effects of slavery. When emancipation after the Civil War occurred in 1865, General Sherman famously promised reparations in the form of "40 acres and a mule" for every freed slave, but such a program never came to fruition. Instead, in the century and a half since then, former slaves and their descendants have faced unjust compensation in sharecropping, exclusion from owning property through discriminatory mortgage practices, redlining, and employment discrimination.

Black wealth did accumulate in some areas of the nation, like the Greenwood neighborhood in Tulsa, Oklahoma. Greenwood was predominantly African American, and home to a number of wealthy Black-owned businesses like that of O.W. Gurley, a landowner who sold land exclusively to Black buyers, and J. B. Stratford, a hotelier. Greenwood became increasingly affluent, as the number of Black business-owners, attorneys, and bankers grew, and became known as the "Black Wall Street." Most of the money in Greenwood was circulated around the neighborhood itself, rather than being spent outside on white businesses. Greenwood's success soon drew the attention of the white residents living in the surrounding areas. From May 31st to June 1st, 1921, a mob of around 1,500 armed whites, some given weapons by city officials, rioted in the neighborhood. They looted property, burning



more than 1,256 homes and leaving more than 8,000 formerly wealthy residents homeless. The Tulsa Riot Race Massacre illustrated how barriers to financial success continued to exist for Black Americans even after accruing wealth.

For many Black descendants of slaves, it has been extraordinarily difficult to amass wealth like their white counterparts. Inequitable economic prospects continue to plague Black Americans even generations after the first emancipated slaves. Low wealth at the onset results in little generational transfer of wealth, with the average Black inheritance being 35% of the value of the average white inheritance. As young Black Americans graduate college, their wealth actually declines on average, as they are more likely than white college graduates to support their parents financially. These factors, among many others, perpetuate the cycle of wealth disparity that started at slavery.

The question now is whether reparations would feasibly and effectively remedy these institutional inequalities, and on whom the onus falls upon to pay for the policy.

What would reparations look like?

Currently, there is no consensus on the details of a reparations plan. Most of the Democratic Presidential candidates, barring Marianne Williamson, do not advocate for direct payments of cash. In fact, Professor William Darity, an economist at Duke University who has been

one of the foremost academics advocating for reparations, found that a lump sum payment could actually increase the relative income of non-Black producers as Black Americans gain more purchasing power and consume non-Black goods, leading to an absolute decline in Black income as a whole. Darity has stressed the importance of programs fostering longevity in financial prosperity, such as a public trust fund giving out grants for asset acquisition like homeownership or higher education.

“For many Black descendants of slaves, it has been extraordinarily difficult to amass wealth like their white counterparts.”

Another suggestion, championed by Democratic presidential candidate Cory Booker, is a baby bond, or savings issued to every infant at birth (Booker proposes a universal bond, not restricted to Black Americans, making his platform less of a purely reparations policy).

Such a bond could be liquidated once the child reaches adulthood, when it could be used for college costs or other expensive endeavors.

Considering how racial income inequality is the primary driver of racial wealth inequality, programs like subsidized

higher education to encourage higher incomes for Black Americans may have a significant positive impact on the wealth gap. However, others have argued that government benefits locked for specific purposes are overly paternalistic. An increase in the disposable income of Black Americans would allow for better quality of life as it opens access to higher quality everyday goods, such as healthier food and better healthcare. The freedom to spend a lump sum would also arguably afford more personal dignity to descendants of slaves who have already faced excessive institutional injustices.

With reparations programs, however, also comes the question of how to define their recipients. Professor Darity has argued that reparations should only be restricted to the descendants of slaves, a proposal heartily endorsed by grassroots organizations like American Descendants of Slavery. However, information about ancestry is still not universally ready to be tracked. Furthermore, Pan-African activists have objected to the exclusion of other Black Americans. Activist Nkechi Taifa stated to the Washington Post, “It’s extremely difficult to separate classes of black people ... the idea that unless you can actually trace your family directly to a slave that you haven’t been subject to the legacy of slavery is a bunch of hogwash.”

The population of Black immigrants to the United States has risen, comprising 8.7% of the Black population. Many Black immigrants come from the Caribbean, which also has a history of slavery. Quantifying reparations recipients will significantly impact how much the government must spend in total to fund such benefits, which brings us to the most ready and vocal argument in opposition to reparations. Who will pay for such an expensive policy?

Costs and Payers

Experts have a wide range of estimates for the exact amount owed to descendants of slaves. Thomas Craemer from the University of Connecticut, for example, placed the total amount at \$5.9-14.2 trillion (in 2009 dollars), while Jason Hickel argued that unpaid slave labor from 1619-1865 equaled up to \$97 trillion total.

Regardless, with the U.S. federal budget being \$4.1 trillion in 2018 (\$1.3 trillion of which is discretionary spending), there needs to be a viable way to pay for a robust reparations program. Lawyer Willie E. Gary argued in favor of suing white Southern families who historically benefitted from slavery, while others have suggested a tax on all households in the top 1% of wealth. Unsurprisingly, these proposals are likely to meet with backlash, especially from Americans who have not historically participated in slavery and feel they should not be penalized for a sin they did not commit. Other methods include government bonds to raise revenue,

“Quantifying reparations recipients will significantly impact how much the government must spend in total to fund such benefits, which brings us to the most ready and vocal argument in opposition to reparations.”

which may phase out the costs of reparations with future returns to the payer.

Despite the punitive aspects of these proposals, however, the American economy as a whole stands to gain from abolishing the racial wealth gap. The racial wealth gap makes for substantial losses in the national GDP as Black Americans consume and invest far less than they would contribute to the economy if they had a larger share of the nation’s wealth. McKinsey reported that the racial wealth gap will cost the US economy between \$1 trillion to \$1.5 trillion between 2019 and 2028; in other words, closing the racial wealth gap could increase the projected GDP in 2028 by 4-6%.

While the costs and gains of reparations mean that everyone in the United States is a stakeholder, reparations remains a moral issue singularly centered on the experiences of African Americans. The United States cannot reconcile with such an ugly history of racial oppression and brutality without fully addressing it, particularly when such a history still pervades multiple aspects of modern American society. As author Chuck Collins argued to CNN, “People say, ‘slavery was so long ago’ or ‘my family didn’t own slaves.’ But the key thing to understand is that ... the legacy of slavery ... created uncompensated wealth for ... white society as a whole. Immigrants with European heritage directly and indirectly benefited from this system of white supremacy. The past is very much in the present.” With the attention on reparations increasing in both the political and public sphere, the question of recompense for slavery, and more broadly, racial justice as a whole, is here to stay until a satisfactory answer is found. ■

"IN THE LONG RUN WE ARE ALL DEAD"

AN ECONOMIC ARGUMENT FOR CLIMATE ACTION

By Vasanth Kumar

Fall 2019 Essay Contest Winner

"The climate crisis has become a pressing issue not only in the United States, but also internationally. The concept of economic growth has recently been put into question by Greta Thunberg's recent remarks at the United Nations. Is eternal economic growth a 'fairy tale?' What is the role of environmental responsibility in economic growth?"

In response to the widespread inaction by world governments facing the Great Depression, John Keynes used the titular quote to chastise economists who believed the market would always self-correct in the long run without intervention. Keynes' challenge of this belief would set the foundation for governments to actively influence economic growth in the short run through fiscal and monetary policy. Ninety years later, his logic has been warped to justify inaction in an entirely separate crisis facing the world's governments today: climate change. Ignoring devastated environments and communities, rising sea levels, and the irreversible alteration of the global climate, there are those who decry the effect of climate policy on short-run economic growth. And yet, pitting climate action against growth is not only myopic, but nonsensical, and a more accurate comparison requires a much more nuanced interpretation of economic growth.

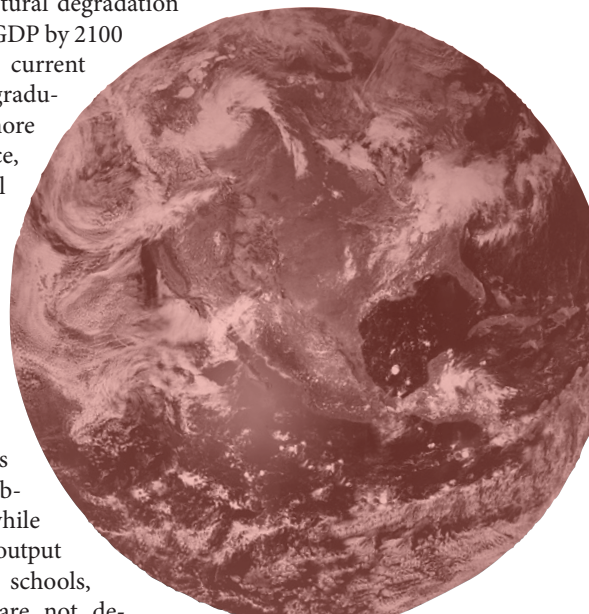
Far too often, the debate on climate change has been measured against the short run understanding of growth: when faced with carbon pricing or green technology subsidies, pundits prophesize spikes in fossil fuel prices, supply-side inflation, and recession. In a way, they are correct: the implementation of a carbon tax today would cause rising oil and gas costs that would inevitably be passed onto the consumer. One need only look towards the current political turmoil in Ecuador, Chile, and Lebanon, all sparked by planned hikes in prices.

Regardless, this argument falls short on two points. First, short-run economic growth and climate action are not necessarily mutually exclusive. Private investment in green infrastructure, with support from world governments through legislative and financial backing, has the potential to be a boon for economic growth, sponsoring environmentally conscious developments in agriculture, energy, and transportation while employing thousands worldwide. Since 2010, 50% of private investment in infrastructure has been in renewable energy, an indication that concerns of short run degrowth largely ignore the role that green technology has already played in feeding growth over the past ten years.

However, the more critical flaw in this claim is that the argument for climate action is, by virtue, irrelevant to discussions of short run economic growth; rather, it is motivated by the aim to ensure long run growth decades in the future. Today,

regions with stable economic growth are capable of such because they foster the development of human and physical capital: their workers attend schools as children, acquire technical skills through higher education, can travel to work easily, and live in relative security and safety. Combined, these factors ensure the consistent discovery of novel ideas, technology, and resources, the fuel that drives economic growth. However, with greater force and frequency of extreme weather events, heat waves, irregularity in precipitation and growing seasons, and degradation of coastal regions, the stable environment designed to maximize growth will collapse from unmitigated climate change. As more workers evacuate from wildfires or die from heatstroke, as more businesses are destroyed by increasingly frequent floods, as more grocery stores are left empty by deficient crop yields, the potential for individuals to develop new technologies and products is supplanted by the immediate need to survive: quantitative predictions estimate the impact of this infrastructural degradation at a loss of 10-12% of global GDP by 2100 if emissions continue at the current rate. As this ominous world gradually becomes the reality for more members of the labor force, human and physical capital erodes, and the engine behind growth breaks down.

Decrying the short-run impacts of a price on carbon is akin to arguing that spending federal funds on education, transportation infrastructure, or defense is impractical because each absorbs billions of dollars while contributing zero economic output in the short run. However, schools, roads, and military bases are not designed for immediate gains: they are long term initiatives, designed to cultivate human and physical capital that will contribute to stable economic growth decades from now. The same is true of climate action: it is an investment in future economic growth. By limiting short run economic growth now, governments ensure that tomorrow's economy will have the necessary infrastructure for capital to flourish, not deteriorate from climate impacts. In the end, "eternal" economic growth is possible, but it is entirely dependent on our willingness to address climate change by reforming energy production, agriculture, and transportation. And when global leaders prioritize short-run growth fueled by fossil fuel emissions and environmental degradation, they are condemning future generations to a world of less innovation, less trade, and less economic growth. ■



THE ECONOMICS DRIVING THE STREAMING INDUSTRY

By Konnor von Emster

"Mommy, did TV shows really only come out once a week?"

In a few decades, this may be the question of children around the world.

Streaming entertainment caught the world by storm, just like VCRs and DVRs did when they were first introduced. Streaming Video On Demand (SVOD), as streaming is formally known, is uprooting many of cable TV's major networks. It has spawned internet movements such as the self-proclaimed "cord cutters," who are committed to solely using SVOD instead of cable TV. But what are the reasons behind streaming's widespread appeal, and why has its popularity increased dramatically in recent years?

What is SVOD?

Streaming Video On Demand (SVOD), commonly known as streaming, provides content such as TV shows, movies, and sports through websites or apps. Notable examples include Netflix, Hulu, HBO Go, and Amazon Prime Video, to name a few. Streaming appeals to many because it allows users to watch wherever and whenever they want, as long as there is a stable Internet connection (although some streaming services even allow downloadable content). This represents a notable departure from cable TV, which only comes in the form of live TV and recorded content via a cable box. Another perk is that many streaming services are ad-less, and provide a lot of instant content for cheap prices. Cable averages to \$107 per month, whereas Netflix, a popular streaming service, charges only \$12.99 per month for their standard plan. Even Youtube TV offers cable services for \$50 per month. These cost savings add up for people looking to watch TV casually, without much of a desire for particular primetime shows or sports.

The beginning: Netflix

Netflix started its life as a DVD rental company. Offering the same services as Blockbuster, it was able to cut overhead by providing its services online and by mail. In 2007, Netflix launched its next innovation by offering one of the first web platforms for SVOD. This venture into streaming has since propelled the company to stratospheric heights, allowing its valuation to be in excess of \$100B. Netflix's streaming service was modest at first, with a simple interface and few shows, but has since grown dramatically. Hulu introduced streaming



shortly after in 2008, focusing more on TV shows than Netflix.

At first, both Hulu and Netflix began by licensing other networks' content, gathering a wide variety of B-rated movies and TV shows. This type of service is often referred to as a "clearinghouse" for other networks' content. Just as clearinghouses in finance facilitate collection and movement of securities, the streaming clearinghouses facilitate the collection of various media to entertain consumers. While networks were often hesitant to give up rights to popular content, clearinghouses capitalized on the fact that people would settle for less popular shows at a lower price. Cult classics such as "The Office" and "Friends" gained popularity, and now account for over 10% of all content watched on Netflix alone.

Departure from Cable

With the advent of Netflix, many people realized they could substitute the utility derived from cable television with that of these streaming services. While few have replaced cable entirely, Netflix's introduction of iOS and Android apps in 2010 made the service more portable than ever, and significantly more accessible compared to cable TV. This competition is evident as cable prices have remained relatively stagnant, only rising 1% from 2017 to 2018.

The rise of Netflix was aided by technological advancements, such as improvements in Internet speeds and an explosion of mobile devices. Internet speed increases cut loading times, making streaming a more reliable source of entertainment. During that same time period, the number of mobile devices owned by Americans

skyrocketed, allowing for easier use of common streaming apps. In the absence of detailed viewer data, which remains a corporate secret, Netflix's stock prices are indicative of its success. Its stock price increase in late 2009 signaled an increase in investor confidence in the streaming business and an expansion in streaming demand as a whole.

In another large departure from tradition, Netflix transitioned to becoming a part clearinghouse and part production company. To run the clearinghouse model, Netflix had to license all of its content from third parties, which ate into its profit margins. The rights were entirely owned by the third party production firms, who could therefore price shop among different streaming services. As Netflix did not hold a patent on streaming technology, their profits were being competed away by other streaming services entering the industry. This made implementing in-house production a viable substitute for licensing content from production companies. The launch of the critically acclaimed shows "House of Cards" and "Orange is the New Black" in 2013 signaled this change, and exemplified the potential of a non-network production company.

An advantage of this approach is that it keeps people subscribed to the streaming service, even if some of their favorite shows move somewhere else. Production companies often have exclusive control over the content they create, which means if enough people are interested in it, it will differentiate their product. This type of competition, known as monopolistic competition, occurs when firms can differentiate their products from one another but there are no barriers to entering the industry or copying another business' model. Therefore, firms can only run short term positive profits until they are competed away. This production model is

differentiated from the clearinghouse model in which the services provided are relatively homogenous and therefore closer to perfect competition. Streaming services used production to their advantage, just as many cable networks do on a regular basis. Many streaming companies that began as clearinghouses took the same route Netflix did; notable cases include Amazon Prime Video with their introduction of "Transparent" in 2014 and Hulu Originals with "The Handmaid's Tale" in 2017.

“As Netflix did not hold a patent on streaming technology, their profits were being competed away by other streaming services entering the industry.”

An Explosion

Over 110 different streaming services currently exist, offering sports, live TV, movies, international TV and many more options. This explosion can be explained by the very low barriers to entry around streaming. All a streaming service requires is content, either created or licensed, servers to deliver the content, and a user interface to interact with the consumer. The first mover advantage—competitive advantage for entering the industry before other firms—for companies like Netflix was very low. Every traditional TV network has the resources to create their own streaming service, and many have. These networks include big names such as Disney, NBC Universal, and Warner Bros, who all plan to create streaming services in the next few years. Disney, along with many other networks, is working to pull its content from competing streaming services, with the hope of driving customers toward its own. This move hurts the clearinghouse model that companies like Hulu and Netflix were built on, as Disney owns huge franchises such as Marvel and Star Wars. Up to 20% of Netflix's content could be lost to those three companies' streaming services alone, which will result in major disruptions in Netflix's consumer base.

This has even brought very non-traditional, mega cap (>\$100B in market capitalization) contenders to the market such as Amazon, Apple, and Google. Amazon, built as a mere online retailer in the early 2000s, has expanded its reach into many other fields including retail stores, devices such as their Echo line, and video streaming with a mix of clearinghouse and original

content. Google, previously known exclusively for their search engine, has expanded their reach to offer a suite of web-based apps, devices, healthcare research, and of course, streaming services through Youtube Premium and Youtube TV. Apple, famous for its device ecosystem, will launch Apple TV+, its "all originals" streaming service, on November 1st of 2019, completely foregoing the clearinghouse model many services have kept in place.

Most of these new streaming services offer both clearinghouse and original content, although vastly more focused on the latter. This strategy is likely to keep customers on their site and watch their shows, as well as promote customer retention. There are also network effects that companies capitalize on, such as viewers recruiting their friends to watch the same shows, requiring these friends to also subscribe to the streaming service the shows are provided on.

“All a streaming service requires is content, either created or licensed, servers to deliver the content, and a user interface to interact with the consumer.”

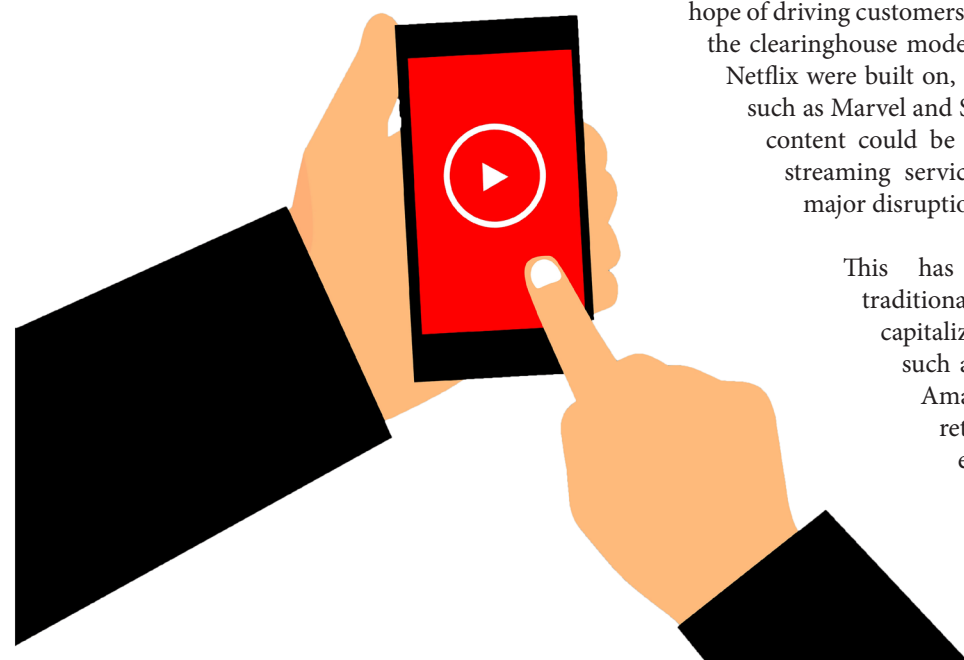
In this way, there is a sort of convergent evolution of tech companies trying to capture people into their digital ecosystems. Devices, services, and streaming all join forces to capture a large segment of the market. Companies can even make it harder to stream and use content across devices, often by creating competing services. Many companies offer package deals to keep customers fully invested in the ecosystem, similar to the bundling options offered by cable and telecommunications companies.

The Future

No one knows exactly what the future holds for the streaming industry. At the moment the fragmented mix of clearinghouse and original content is confusing for companies and consumers alike. Additionally, with many traditional networks and cable companies playing catch up to match the staggering profits of streaming services, the field can be expected to change drastically in the next couple of years.

Part of the reason it is hard to predict the future of streaming is that consumers' preferences are currently unknown. Viewers may prefer the clearinghouse approach, which would then encourage companies to cross-pollinate TV shows with one another. People may begin to subscribe to multiple streaming services, handpicking those with the hottest shows or the most content. Alternatively, consumers may find online cable most attractive. In this new era, companies will likely need to adapt quickly to consumer preferences to stay competitive, and consistently introduce new products to strip competitors of their customers.

For streaming to survive, internet speeds must also rise to keep up with data-heavy demands of streaming. Fortunately, internet service providers are already fully prepared. Speedtest.net reports in their global index that 170 out of the 176 countries measured have average speeds that meet Netflix's Internet connection speed recommendations of 5 MB/s. Cable may become an outdated technology, such as VCR and Cathode Ray Tube Television. However, it is ultimately up to the consumer to decide what matches their needs and preferences, be it cable or SVOD. ■



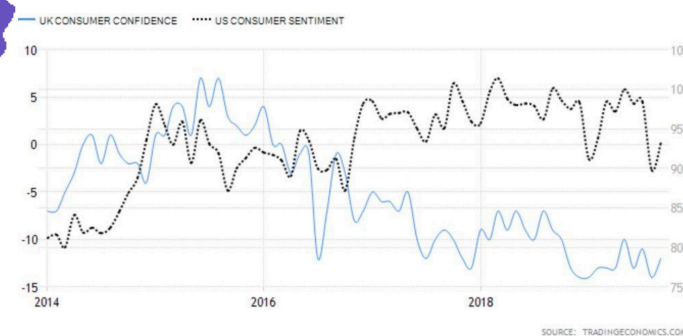
US-CHINA TRADE WAR:

An Analysis of Its Effect on the US Consumer Sentiment

BY GRACE JANG

Two international affairs have disrupted the world economy over the past couple of years. The first is Britain's decision to leave the European Union (Brexit), which has been lagging since the June 2016 referendum and will remain inconclusive until the end of this month. The other is the US-China trade war, which has escalated into an endless succession of tit-for-tat trade restrictions that began last June. These events impact not only the stock market and trade industry, but also people's daily lives as they learn to cope with the fluctuating prices of foreign currency, imported goods, and even homes. For economists, these two parallel events provide an excellent context for studying the relationship between international affairs and national economies, specifically for exploring answers to a question that trails these events: what are the effects of shifting foreign relations on economic activities within a country?

Economics isn't just about concrete figures like cost and profit, but also about the behavior of economic agents; consumer and investor sentiments strongly drive their decision-making, which in turn has profound impacts on economic variables such as supply and demand. Intuitively, Brexit and the US-China trade war are comparable in that they have both affected consumer sentiment in the UK and the US respectively, with UK consumer confidence hitting its five-year low fuelled by Brexit uncertainty and US consumer confidence showing its largest monthly decline in 6 years triggered by trade-war fears. Facing such large-



scale and prolonged international events, consumers tend to—or, at least in theory—should feel less certain about the overall state of the economy. This leads to uncertainty about financial prospects, and consumers may become reluctant to engage in such transactions until the situation clears up.

Accordingly, if we take a look at consumer sentiment in the UK, we observe a strong downward trend during our period of interest. The UK's Consumer Confidence Index (CCI) has largely been decreasing since around May 2015, when the legal basis of a referendum on EU membership was established and spelled trouble ahead for the British people.

Counterintuitively, though, the US displays a relatively upbeat pattern of positive sentiment even when we consider the large monthly fall in August 2019. US consumer sentiment has been going through rises and falls since mid-2018, when President Donald Trump and Chairman Xi Jinping demonstrated their intentions by implementing the first tariffs specifically targeting the opposing country. Nevertheless, according to a report by the University of Michigan that conducts the monthly consumer sentiment surveys, consumers have felt "rising levels of economic uncertainty," and a near record one-third of them negatively mentioned trade policies last month when asked to explain in their own words the factors underlying their economic expectations. Considering that trade policies are the single largest component of the trade war, this suggests that trade policies as part of the US-China trade war are negatively affecting consumer sentiment.

We have a curious discrepancy here: economic theory informs us that the uncertainty resulting from the trade war should negatively influence consumer confidence, and consumers largely demonstrate this in their response to surveys, yet the overall consumer sentiment trend in the US has remained relatively positive. This puzzling situation in the US merits further investigation, and hence will be the focus of the rest of our article. To examine more closely whether the US-China trade war actually affects US consumer sentiment, we test several linear regression models using consumer sentiment data and news articles since January 2018.

THE MODEL

On the left-hand side of our models, we have either monthly US consumer sentiment index point or percentage change in consumer sentiment from the previous month. On the right-hand side, we use independent variables that represent various components of the trade war: import-restricting policies (i.e., trade policies implemented by the US or China that reduce Chinese imports into the US), export-restricting policies, import-restricting announcements (i.e., official announcements by the US or Chinese leadership of plans to reduce Chinese imports into the US), export-restricting announcements, and relations (mostly trade talks, but also

includes friendly gestures on the US's or China's side). A few of our models use independent variables that combine these variables into broader categories: for example, the import variable refers to import-restricting policies or announcements, and the trade variable refers to policies or announcements that restrict either imports or exports. Furthermore, in some of our models, independent variables are indicator variables that take the value of 1 if such events happened in a particular month and 0 if otherwise; in others, independent variables are quantitative variables which denote the number of such events that happened in a particular month.

Our models are specified as follows:

Model 1: consumer sentiment = $\beta_0 + \beta_1$ *import policies + β_2 *export policies + β_3 *import announcements + β_4 *export announcements + β_5 *relations + ϵ

Model 2: % Δ consumer sentiment = $\beta_0 + \beta_1$ *import policies + β_2 *export policies + β_3 *import announcements + β_4 *export announcements + β_5 *relations + ϵ

Model 3: consumer sentiment = $\beta_0 + \beta_1$ *frequency of import policies + β_2 *freq-export-policies + β_3 *freq-import-announcements + β_4 *freq-export-announcements + β_5 *freq-relations + ϵ

Model 4: % Δ consumer sentiment = $\beta_0 + \beta_1$ *freq-import-policies + β_2 *freq-export-policies + β_3 *freq-import-announcements + β_4 *freq-export-announcements + β_5 *freq-relations + ϵ

Model 5: consumer sentiment = $\beta_0 + \beta_1$ *freq-import + β_2 *freq-export + β_3 *freq-relations + ϵ

Model 6: % Δ consumer sentiment = $\beta_0 + \beta_1$ *freq-import + β_2 *freq-export + β_3 *freq-relations + ϵ

Model 7: consumer sentiment = $\beta_0 + \beta_1$ *freq-trade + β_2 *freq-relations + ϵ

THE RESULTS

According to our regression results, policies that restrict exports (such as the US's ban on exports to specific Chinese companies and China's tariff on US exports) have significantly negative effects on the US consumer sentiment. Column (1) in Table 1 shows that the coefficient on export policies is -0.446, meaning that consumer sentiment was on average 0.446 index points lower in the months during which at least one export-restricting policy was implemented than in the months during which no such policy occurred. This negative effect becomes more severe when export-restricting policies happen more frequently in a given month. Column (3) of Table 1 indicates that consumer sentiment decreases by 0.408 index points on average for each additional export-restricting policy implementation. In addition, export-restricting policies have an even more pronounced effect on the monthly percentage change of US consumer sentiment. The effects are significant at the 5% level or highly significant at the 1% level as shown in Table 1, which means that these coefficients are likely to have arisen from an actual effect rather than mere chance.

From these results, we can infer that Americans' concerns over the economic impacts of their country's trade war with China have more to do with a potential decline in exports than with a potential decline in imports. This aligns with the popular belief that exports increase the national GDP whereas imports have a mixed effect on the national GDP. This also may explain why US consumer sentiment hasn't shown a strong downward trend over the past year; the announcement and implementation of import-restricting policies may have somewhat neutralized the negative effect of export-restricting policy implementation. Moreover, the sizeable effects of export-restricting policies on the monthly percentage change of US consumer sentiment suggest that consumer sentiment is very sensitive to export-restricting policies and shifts dramatically over time depending on whether, and how many, export-restricting policies were implemented in a particular month.

Next, turning to the relations variable, we find that trade talks or other events with a positive connotation for the US-China

relations have a significantly negative effect on US consumer sentiment that becomes more pronounced as such events become more frequent. Column (1) in Table 1 shows that US consumer sentiment was on average 0.505 index points lower in the months during which such events happened than in the months during which no such event happened. Columns (3), (5), and (7) reveal that US consumer sentiment rises by about 0.5 index points for every one more incidence

of relations-improving event, regardless of which categories of independent variables we use in our models. This may seem surprising, since improvements in bilateral relations should make consumers feel better. But these regression results seem to suggest that consumers take trade talks as signalling future changes in trade policy. Indeed, consumers are averse to unpredictability more than they are enthusiastic for potentially positive changes.

Table 1.

Indicator variables	(1) Index points	(2) % Δ	Frequency	(3) Index points	(4) % Δ
Import policies	0.057	0.286	Import policies	-0.108	0.190
Export policies	-0.446*	-0.705**	Export policies	-0.408*	-0.662***
Import announcements	0.221	-0.025	Import announcements	0.173	0.097
Export announcements	0.217	0.153	Export announcements	0.161	0.059
Relations	-0.505**	-0.208	Relations	-0.521**	-0.184

*p < 0.10, **p < 0.05, ***p < 0.01

Table 2.

Frequency	(5) Index points	(6) % Δ	(7) Index points
Import-related	0.069	0.245	NA
Export-related	-0.134	-0.513**	NA
Trade-related	NA	NA	-0.051
Relations	-0.525**	-0.218	-0.51**

*p < 0.10, **p < 0.05, ***p < 0.01

CONCLUSION

Overall, export-restricting policies like tariffs and relations-improving events like trade talks seem to be detrimental to US consumer sentiment; their coefficients are consistently significant and negative across our seven models. On the other hand, the lack of statistical significance of import-restricting policies and announcements as well as of export-restricting announcements suggests that US consumers are less concerned about a drop in imports than they are with a fall in exports, and they are less affected by the rhetoric of their leaders than they are by the actual implementation of economic policy.

Our analysis helps characterize the recent pattern of US consumer sentiment in response to ongoing hostilities with

China, and, more importantly, how US consumers generally react to changes in international diplomacy and policy. Optimistic US consumer sentiment, contrasting with that of the UK in response to Brexit, does not mean that American consumers are unaffected by their country's trade dispute with China. Worsening foreign relations and the subsequent implementation of protectionist policies have serious repercussions for consumer behavior, which in turn signifies powerful implications extending beyond the national economy. The American consumer is a key player in the global economy at large, and state leaders should carefully consider this fact as they proceed with negotiations – the outcomes of their deliberations will almost certainly have deep and far-reaching impact. ■

PERSECUTION for PROFIT

The situation seems like something out of an Orwellian dystopia. The Xinjiang region of China has been transformed into a modern police state as Xi Jinping's government significantly increased its security presence in the region. The predominantly Muslim Uighur population has been subject to tactics of repression like an ongoing online surveillance system, bans on religious practices such as veiling faces and keeping long beards, and arrests on nonsensical charges without due process. Organizations like the Human Rights Watch have estimated that up to a million Uighurs are incarcerated in "re-education camps." While such numbers have not been verified, the slew of firsthand accounts from Uighur survivors are both concerning and damning.

Although tensions between Xinjiang and Beijing have always existed due to tensions between the Uighur and Han ethnic groups, the Chinese government has significantly strengthened its control over Xinjiang in the past few years. President Xi Jinping's administration has claimed that its actions are in response to the threat of terrorism in the Xinjiang region. The Chinese government has used violent separatist groups like the East Turkestan Islamic Movement to point to a larger problem with terrorism in the region, especially in the wake of events like the 2009 mass riots that broke out in Urumqi, which killed 194 people and injured thousands more. To address these concerns, Beijing has progressively strengthened its security presence over the last decade. In 2010, domestic security spending in Xinjiang increased by 90%.

The situation has only heightened in the past few years, with reports of the mass internment camps coming to light in 2018. The Communist Party's desire to exact ideological control over the entire nation, like some analysts have suggested, does not fully explain why Beijing has suddenly intensified its efforts in Xinjiang. According to Uighur activist Rushan Abbas, "This has everything to do with the Xi Jinping's signature project, the Belt and Road Initiative,



China's Economic Strategy in Xinjiang

By Raina Zhao

because the Uighur land is in the heart of the most key point of Xi Jinping's signature project."

China's Belt and Road Initiative (BRI) is an expansive plan that aims to create an open economic zone in Eurasia and the Middle East, echoing the interconnectedness of the historical Silk Road. Xi hopes to build a massive collection of infrastructure projects including railways, energy pipelines, highways, and border crossings to bolster trade between China and its neighbors. Because of the scope of BRI, the project stands to have far-reaching effects not only on the Chinese economy, but also on the Eurasian region as a whole, as it will connect at least 65 countries collectively representing 30% of global nominal GDP.

Xinjiang is a critical location along this new Silk Road. Key routes of the BRI run straight through the region. For example, the China-Pakistan Economic Corridor runs through Xinjiang to link China to the Pakistani port of Gwadar. China Daily, a state-run paper, acknowledges that the region is "a crucial gateway for the Belt and Road Initiative ... Its land border with seven countries means it is best placed to expand China's trade and ties not only with these neighboring nations, but also with Europe and beyond." The same article notes that almost all trade from

"Xinjiang is a critical location along this new Silk Road."

Central Asia passes through Xinjiang, and that Beijing hopes to create a transportation and commercial hub there in the future.

Beijing thus has a vested interest in eliminating unrest in Xinjiang. As of May 2019, China has already spent over \$200 billion on Belt and Road projects, and the projected gains from the BRI are also significant. A World Bank study found that BRI transportation infrastructure could increase global exports by 6.3%, while partnering states along the economic corridor could see up to a 10% increase in exports.

Considering the amount Beijing has already spent to kickstart the BRI, the Chinese government has strong



incentives to secure returns on its investments. Bloomberg noted that "concerns about lawlessness in Xinjiang could chill investment," both from foreign companies and risk-averse Chinese banks. Any violence in Xinjiang that potentially interferes with the construction of BRI projects is off-putting to financial backers. As an unnamed Chinese financier communicated to a Lowy Institute report, "I prefer to invest in places like Canada and Australia, where I can get safe and decent returns. However, where I have been ordered to invest in [BRI] countries, I will only allocate the minimum amount." Such fears extend to the unstable Xinjiang. China worries that terrorism in nearby states like Syria and Qatar could aggravate separatist groups in Xinjiang, hindering BRI projects. The government's actions against the Uighur population could be a preemptive strike to protect its economic investments.

Are the Uighurs simply an obstacle for Beijing's projects then? Rebecca Warren of RealClearDefense posits that the Belt and Road Initiative projects in Xinjiang actually aim to increase the livelihoods of the Uighurs residing there, with the goal of dissuading extremism and separatist violence. In Xi Jinping's address to the 19th National Congress of the Communist Party of China in 2017, he vowed to "devote more energy to speeding up the development of old revolutionary base areas, areas with large ethnic minority populations, border areas, and poor areas." The Belt and Road Initiative could be a means to actualize that priority. Peter Cai from the Lowy Institute argues that "the regional development aspect of [the Belt and Road Initiative] is perhaps one of China's most important economic policy objectives." If successful, Xi's administration believes it can quell the dissatisfaction that spurred the 2009 riots and avoid similar events. As Lu Shuling, the former Chinese ambassador to Islamabad, stated, "The best medicine to address the terrorism problem is through tackling the incubator of terrorism, namely poverty."

If Beijing intends to improve the Uighurs' livelihood through the BRI, the initiative may generate the same concerns as past development projects. In 1999, the Chinese government launched an initiative called the Great Leap West to modernize and enrich Xinjiang in order to better integrate the Uighurs into Chinese society. The Great

Leap West introduced a slew of infrastructure projects and investments into Xinjiang, with the central government spending around one hundred billion renminbi in just the first year. On paper, the policy was a success. Xinjiang's GDP has skyrocketed since 2000 and aggregate wages have increased by 470%.

If the BRI were simply a continuation of past economic policies regarding Xinjiang, why the sudden crackdown in the past few years? The twisted irony of repressing the Uighurs for the purpose of helping them cannot be rationalized, though a closer examination of Great Leap West policies may reveal an explanation. Xinjiang's past economic growth does not apply equally to the Uighur and Han populations. As Xinjiang modernized, an influx of Han workers migrated to the region in search of the increasing job opportunities. While Hans were only 7% of the Xinjiang population in 1949, that number increased to over 40% by 2010. This migration of Hans explains a significant portion of Xinjiang's recorded economic growth. The average income for a Han was 1,141 RMB (161.24 USD as of 10/21/2019) per month in 2011, while the average Uighur earned 892 RMB per month. Unsurprisingly, ethnic profiling has been observed in hiring practices.

Xinjiang's development also involves extraction of its natural resources. When such resources are extracted, however, the Uighurs receive almost no benefits from their region's own wealth. Xinjiang's reserves of natural gas, coal, and other fossil resources represent over 20% of China's total energy reserves, making it the largest fossil fuel source in the country. China's coal consumption has risen significantly in the past two decades and it has been a net importer of coal since 2009 to satisfy this high demand. Access to Xinjiang's energy resources are vital to China's rapid industrialization, but means that only 2% of Xinjiang's oil remains in the region. The rest services the wealthy Han-dominated urban centers on the east coast via the Xinjiang-Shanghai pipeline.

The logic of a short-term crackdown on Uighur rights with the long-term goal of economic development to prevent terrorism is paradoxical. As Weiwen Yin of Texas A&M University found, the increase in economic performance from the Great Leap West had a positive correlation with the probability of terrorist attacks—precisely because unequal economic gains across ethnic lines spawned grievances among the Uighur population. Beijing's current tactics of repression are likely to generate even more discontent among the Uighurs. The approach is counterproductive if the Chinese government's goal is truly to foster regional development as an anti-extremism measure. The more pernicious possibility is that the BRI, and all the limits on Uighur freedoms accompanying it, was always designed to serve the Han majority. Either possibility comes at a significant human cost that the international community cannot ignore. ■

Prior to the 1980s, Venezuela was hailed as the richest country in South America. Now, some four decades later, it's on the brink of total collapse. Despite its abundance in oil—dubbed 'black gold'—which promised a bright future for the country's economy, Venezuelans today are surviving on foreign aid. It's bound to go in the history books as a classic case of the "resource curse": the tendency of resource-rich countries to have unstable economies and undemocratic institutions. Today, Venezuela faces the triple burden of economic, humanitarian, and political crises that show little hope of resolving themselves.

Nicolas Maduro, the president of Venezuela and a member of the United Socialist Party, has continued the socialist regime established by his predecessor and mentor Hugo Chavez since his election to power in 2012. In 2018 he began his second six-year term, following an election which has been widely claimed as fraudulent by his two opposition parties, the international community, and independent watchdogs like Freedom House. Reacting to the irregularities of that election, Venezuela's opposition-led legislative body, the National Assembly, declared Maduro a usurper in January of 2019. In addition, the parliament referenced constitutional article 233 and declared its own president, Juan Guaido, as interim head of state and demanded a rerun of the elections.

Venezuela's Resource Curse

By Nanditha Nair

The country has since reached a gridlock—one which has not been solved by the participation of a divided international community. Guaido has garnered the support of over 50 countries, including and most importantly, that of the United States. Since January, the Trump administration has tightened restrictions of access to US financial markets as well as trade sanctions on Venezuelan state companies, which fund the Maduro regime. This is a continuation of sanctions established during the Bush and Obama regimes, which have supported opposition parties in favor of Chavez and Maduro. The US also placed sanctions on international actors, such as the Russian Evrofinance Mosnarbank, which have been affiliated with the Venezuelan state oil company PdVSA. Guaido has also won the support of most of South American countries, increasingly putting the country in a position of political and

economic isolation. These measures have compounded over 20 years of continued economic mismanagement, resulting in the lowest national oil production volumes in decades.

However, Guaido's claim to the presidency has hardly been substantiated. Since January, Guaido has mobilised Venezuelans from disillusioned slums into protests. But the government has responded in kind through anti-riot crackdowns that have resulted in over 100 deaths, as well as by organising counter-protests in favor of Maduro. Furthermore, Guaido's efforts to spark a military coup have been fruitless, attracting only a few low-level dissidents while top leaders remained loyal to Maduro. In effect, Maduro remains in control of Venezuela's key institutions, including the Supreme Court. The de facto president has rejected Guaido's presidency, and echoing Chavez's fears of US interference in Venezuelan politics, has called

Guaido a "US puppet." In addition to domestic control, Maduro is backed by Russia, China, and a few other countries. They have been key players in supporting the Maduro regime, vetoing a US draft resolution at the UN Security Council calling for re-elections in February. Russia, which has a history of investment in PdVSA through its own state-owned arms and oil industries, no doubt wishes to ensure that the Maduro regime lives to repay its debts. In addition, Venezuela's geopolitical position means it is of particular interest to the European superpower, which aims to extend its influence on the South American continent. China on the other hand seems to be on the fence, and is supporting the status quo by default.

However, international support for Maduro has been mostly symbolic and the regime has not had the good fortune of having physical proximity to its allies. Surrounded by countries enforcing heavy trade sanctions, the future looks bleak for Venezuela unless the government and the opposition can reach a settlement. Mediation efforts facilitated by Norway have fallen apart, with the government and legislature failing to arrive at a compromise between the demands for relaxed sanctions and free elections. As the stalemate continues, so does the suffering of the country's population of 32 million, of which about 90 percent are living below the poverty line—a statistic that has been increasing steadily since Maduro's rise to power.





People walk by a small square with an oil pump in one of the access roads to the Central University of Venezuela, Caracas (Getty) | Source: The Independent

Since the time of Chavez's rule, known as Venezuela's supposed golden age, the country has periodically faced severe shortages of basic consumer goods. Following the plummet in oil prices in 2014, the situation has only worsened, with the country's economy going into a tailspin. In addition to the scarcity of food and water, inflation—which has remained at around 10 million percent over the past year—has left most Venezuelans scarcely able to afford one meal a day. An ever-increasing shortage of medicine and healthcare professionals has been accompanied by the return of malaria, diphtheria, and measles, with fatality rates increasing by the year. These conditions have sparked a refugee and migrant crisis in the region, with over 4 million Venezuelans fleeing into neighbouring countries, according to the UNHCR.

Venezuelans have Hugo Chavez and the expensive policies of his "Bolivarian Revolution" to thank for its current state. Chavez implemented a number of socialist reforms during his term, making healthcare, education, and housing more affordable. To fund these changes, he siphoned profits liberally from the PdVSA. While his measures were popular with the masses and Venezuela's GDP continued to rise throughout his presidency, the expensive socialist regime neglected to maintain the capital-intensive oil industry on which its economy was so dependent. With little resources left behind, the PdVSA neglected to sufficiently reinvest in the discovery and drilling of new oil wells, which, while

it is a crucial aspect of maintaining production volumes in any oil industry, was and is even more imperative for the Venezuelan case owing to its geological peculiarities. Chavez's policy changes did not occur without resistance from within the PdVSA, but he paved his way to complete control through rounds of mass firings. This resulted in a massive loss of technical expertise, which spectators believe will take decades to rebuild.

In retrospect, the current crisis seems to have been inevitable for an economy propped up on a single price-sensitive industry. Adding to this mix a healthy serving of corruption and a fair share of political repression, it's clear to see that the crisis in Venezuela has been a long time coming. According to Deputy of the National Assembly, Juan Andres Mejia, the revival of the Venezuelan economy depends on the replacement of the 2001 Hydrocarbon Laws implemented under Chavez with new efforts to foster private sector growth. In addition, reparations of essential infrastructures and a temporary reliance on food imports, at least while the agricultural industry is being restored, are the first plans of action. But with the military firmly in Maduro's hands, how long this crisis will take to resolve and stabilize will depend on how willing both parties are in negotiating a settlement, and how capable international actors are in facilitating those discussions. ■

THE EUROPEAN PROJECT: CRISIS IN THE AEGEAN

BY HOWARD YAN



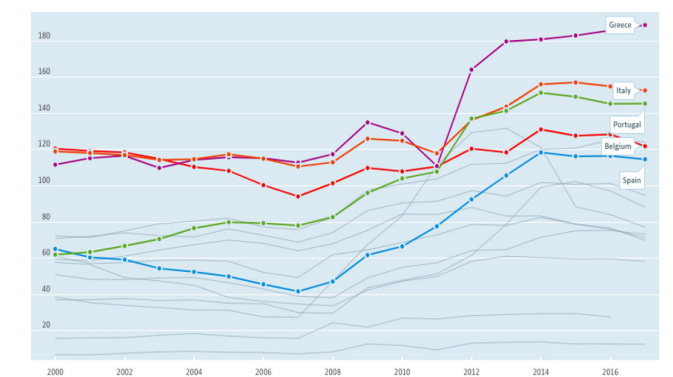
Divided and crippled, the great powers of Europe struggled to rebuild after the second World War. Following foreign aid from the US in the form of the Marshall Plan, the countries of Western Europe interwove regional interests to avoid more bloodshed, and after several trade agreements, the European Economic Community (EEC) was born on March 25th, 1957. Under the EEC, economic stability was achieved through common agricultural policy and fixed currency exchange rates. After unstable oil prices weakened currency exchange controls, the European Monetary System was launched. After a decade of success, the countries formally crafted and ratified the Maastricht Treaty, establishing the European Union (EU) and its monetary counterpart, the Eurozone, in January of 1999. While not all EU countries are part of the Eurozone, the latter remains the world's largest single market. The world watched with interest as an unprecedented project unfolded, and looked on as the poster child of a post-war paradigm took form.

The Dawn of a New Era

After the historic cash changeover of 2002, when European countries traded their currencies for the newly minted euro, most believed a new era arose. With one monetary union, previous trade barriers were removed and inspection processes were streamlined, facilitating the flow of goods and services across borders. With one common monetary policy set by the European Central Bank (ECB), prices stabilized and financial markets became more interwoven. As regulations were standardized, business sentiment improved, evidenced by rising cross-border financial flows following the euro's debut in 1999. Deeper integration gave the euro reputability as a reserve currency, and unified trade interests afforded the Eurozone nations and EU members greater say over global trade policies, notably against the United States. With a collective economic output of \$18.7 trillion, a tangible sign of European unity solidified.

A Crisis Hits

However, the matrimonial bliss following a continent-wide honeymoon was short-lived. The Global Financial Crisis of 2007-2008 magnified the structural weaknesses of the Eurozone project as public spending shot past 5% of GDP, social welfare and education budgets were slashed, and debt as a percentage of GDP soared. The worst afflicted were the Southern European economies: Spain, Italy, Greece and Portugal, who would go on to see debt surpass 100% of GDP and witness double digit unemployment. Interestingly, the only nation to avoid the brunt of the impact was the continent's financial Goliath, Germany. While Ireland, Spain, and France enacted spending cuts and borrowed heavily, Germany's borrowing only slightly increased, and output recovered dramatically after two years. This miraculous recovery earned Germany praise for its prudent management, and Southern European countries scorn for their loose policies.



European Debt to GDP Ratios

European Debt | From: Foundation for Economic Education

Particularly inundated by criticism was Greece, which found itself with the highest Eurozone unemployment at the time. Currently standing at over 20%, the Hellenic Republic has seen several bailouts by the EU and the IMF to the tune of \$330 billion, or around 180% of GDP. This crisis had well-laid groundwork before EU membership.

A Precocious Climate

After seven years of military rule from 1967-74, Greece elected a new government which promised to steer the country in the image of the working class. To that end, it spiked government spending, creating a bloated public sector and severe inflationary pressure. To allay concerns, generous welfare payouts under the administration of the Panhellenic Socialist Movement were disseminated, only to produce budget deficits above 3% per year. The party, concerned with bolstering political support, then reduced incentive to work by relaxing retirement ages to 58 for men and below 50 for women. This soon resulted in lower employment and an ever-growing financial burden for young Greeks entering the labor force. The overall sentiment began to dim, and many wondered if Greece would be left to the mercy of international creditors.

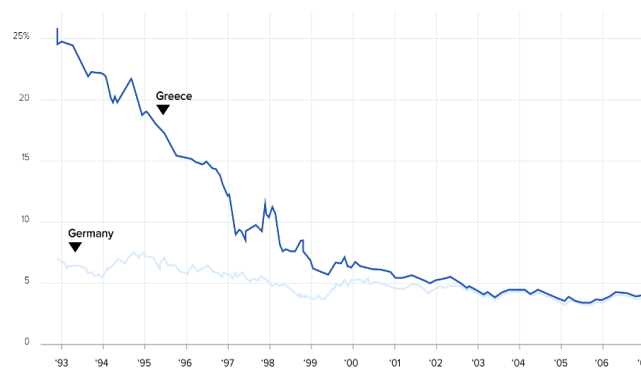
Unsurprisingly to speculators, productivity plunged and the government took an even more drastic step by devaluing the Greek drachma in 1983, cutting deeply into household purchasing power. This was a misinformed policy, especially for a country heavily dependent on imports of raw materials. Subsequently, manufacturing slid and the government became desperate for a semblance of normalcy. An increasingly insolvent country was forced to accept outside help and accede to external demands.

Ode to Europe

Alarmed by increasingly unsustainable debt, the Greek government resolved to fix its financial woes by making a bid to join the EU. Wary leaders reluctantly accepted Greek membership, and Greece, for its part, implemented budget cuts to remain in line with treaty obligations. Investors regained confidence as the euro presented less volatility. The government, for its part, took advantage of lower interest rates to borrow yet again, producing rapid GDP growth. Unfortunately, the facade soon dissipated and budget deficits widened further to a staggering 12.7% by 2009. Investors subsequently demanded higher returns on government debt, rendering repayment virtually impossible on financial instruments that were downgraded to near-junk status. When it became clear repayment was out of the question, Greece found itself locked out of international markets, forcing it to accept bailout programs from the Troika—the IMF, the European Central Bank, and the European Commission—in exchange for harsh austerity measures. Spending cuts fueled mass protests, and though the measures fi-

nally ended in 2018, the country has not fully recovered, and still remains on the brink of recession.

Greek and German Government Bond Rates



Greek Government Bond Rates | From: The European Commission

After contracting by 25% during the debt crisis, the Greek economy registered a weak 1.9% expansion rate in 2018. That is despite the ECB restarting its quantitative easing (QE) program last month, as interest rates tumbled to -0.5%. Foreign Direct Investment (FDI) growth halved in 2018, and wage growth has remained stagnant. While cash restrictions have been lifted and minimum wages have been hiked, firms have struggled to accommodate and comply with higher taxes, which followed after years of failed government policies and resentment from an increasingly distrustful public.

An Ephemeral Comeback

Whether or not the Greek Isles return to solvency is contingent on future policies. Years of mismanagement have fundamentally altered the tax code, and business sentiment remains volatile as global economic trends, including the US-China trade conflict, weigh on overall growth. The Eurozone area's low inflation and high debt rates have left many economies struggling to foot the bill for an aging population. Combined with yet another Brexit delay, the future of the Union, including that of Greece, is increasingly nebulous. After a new election in 2019 saw a pro-business government elected, one can only observe as the cradle of Western civilization regains its footing. Nevertheless, optimism is not altogether unmerited; Greece is on point to recover its losses by 2033 and remains one of the Eurozone's fastest growing economies. Only time will tell if the collective efforts of the Greek people overcome ingrained structural deficits and return Greece to the path of steady recovery. ■

Published Undergraduate Research

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Assessing Whether People's Locations Predict Attitudes Towards a US Federal Minimum Wage Increase

The United States federal minimum wage has not increased since 2009, and the debate regarding whether the federal minimum wage should increase continues to intensify. The field of literature on attitudes towards the federal minimum wage has typically examined the breakdown of such attitudes only based on a few variables such as political affiliation, gender and race. Using Pew Research Center survey data from 2013-2016 and state-level economic data, this examination investigates whether a person's general location (rural or urban) and the economic conditions of the state that one resides in can have an influence on the person's perspective towards a federal minimum wage increase, while controlling for the person's political ideology, race, gender, income, education, and generation. This research uncovers substantial variation in individual-level minimum wage attitudes based on state-level economic conditions, suggesting the public may be more satisfied with minimum wage policy solutions that vary by state.

Saleel Huprikar, University of Pennsylvania

The Impact of the Introduction of the UK National Living Wage on the Employment Probabilities of Low-Wage Workers

This paper adopts a difference-in-difference methodology first employed by Linnerman (1982) to determine how the 2016 UK National Living Wage has affected subsequent employment probabilities of those low wages. Longitudinal data has been sourced from four consecutive Labour Force Surveys straddling the implementation date (1st April 2016) of the new minimum in order to determine this effect. Estimates suggest there are negative effects on employment for those on low wages that are statistically significant from zero and increasing with the duration of time analysed. Regional tests present evidence that regions of medium incidence of low pay are the worst affected areas while sex tests conclude men are more adversely affected than women, although these results lack statistical significance.

Brian O'Connor, University of Nottingham

The Impact of Knowledge Economy Factors on Total Factor Productivity: Evidence from the Asian Leaders

This study provides an insightful examination of the contribution of the four pillars of the knowledge economy to Total Factor Productivity (TFP) improvements in a panel of six leading Asian knowledge-based economies — Hong Kong, Japan, Singapore, Republic of Korea, Malaysia and Thailand — over the period 1996-2017. Based on a panel ARDL-PMG model, the results appear relatively fragile. Nevertheless, establishing upon the most recurrent relationships, it appears that domestic innovation, education levels and access to ICT are important drivers of TFP enhancements.

Laure Fleury, Maastricht University

First-degree Price Discrimination and Quality Customisation Under Data Protection Regulations

In response to privacy and ethical concerns, data protection laws such as General Data Protection Regulations (GDPR) have now been put in place and ought to have an impact on the industries that are closely associated with price and quality customisation. Consumers now have a say in their personal data and can legally opt out of data-oriented personalisation schemes by discretion. In this paper, I develop a Hotelling-styled spatial model to explore the interaction between the regulations and the industry in a duopolistic setting. In different scenarios, I show such legally binding options to opt out might either not increase consumer surplus or increase consumer surplus at the cost of social welfare.

Tao Chen, University College London

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