

VOLUME I, ISSUE III

ACROSS THE SPECTRUM OF SOCIOECONOMICS

insights from global research network
striving to find solutions to world
issues through innovative studies

January 2021 Publication
TO LEARN MORE: SOCIEOECONLABS.ORG



International
Socioeconomics
Laboratory

Dear reader,

Modern society suffers no shortage of issues, whether they came about as a result of the ongoing pandemic or have been deep-rooted within the fibers of our civilization. Rightfully so, there has been much attention drawn to the issues that pertain to the fields of medicine and biology, however the same cannot be said for a field such as socioeconomics.

How often do you see journals or publications on the topic of socioeconomics? The answer, I presume, is not often. The field, despite its widespread application and importance, is highly overlooked. Most researchers are able to find a way to address these issues on their own; social issues and economic issues. However, when the bridge is drawn between the two, to many, the field remains relatively unexplored.

The longer these socioeconomic issues remain rooted in society, the worse the implications. As it covers such a vast audience, any delays in attempting to address the issues becomes detrimental. Our markets, our businesses, and our people are all susceptible to adversity. In spite of this, however, there have been recent efforts made to tackle the field of socioeconomics in order to present plausible solutions.

Enter the International Socioeconomics Laboratory (ISL).

As many of us turn a new leaf in 2021, we cannot afford to let society's issues escape our minds. Throughout the three publications of our journal *Across the Spectrum of Socioeconomics*, ISL has conducted extensive research regarding many of the prevalent socioeconomic issues that exist and have used their findings to draw sufficient conclusions and create incentives for the proper policies to be implemented. Within the field of socioeconomics, the journal you are about to read focuses on four major topics; health, education, equality, and community.

Within this journal you will find eight papers, some of which are on the following, but are not limited to: the Australian retirement plan, current corporate monopolies, online learning, and mental health crisis.

As we continue to grow and develop our network of researchers, we will continue to bring light to the bridge between the fields of social science and economics in order to foster a society of individuals to go beyond passive activism and make tangible change to build a sustainable future; that, is the beauty, of the field of socioeconomics.

We shall continue to provide you with extensive, non-partisan research for your benefit and the betterment of society.

Sincerely,
Afran Ahmed
Vice President, *Across the Spectrum of Socioeconomics*

Table of Contents

SOCIAL SCIENCE PUBLICATIONS

How has online learning affected student engagement in elementary school in the United States?	4
How did the Pandemic Exacerbate the Mental Health Crisis Across the Nation?	26
How has Gentrification Affected Several of the Largest Neighborhoods in Queens?	42
The Implications of Climate Change on Indigenous People	59

ECONOMICS PUBLICATIONS

An In-Depth Analysis of The Australian Retirement Plan	81
Current Corporate Monopolies	93
Nationalized Healthcare vs. Privatized Healthcare	103
Minimum Wage	112

Across the Spectrum of Socioeconomics is a publication of the International Socioeconomics Laboratory.

© 2021 International Socioeconomics Laboratory, All rights reserved.

How has online learning affected student engagement in elementary school in the United States?

Afran Ahmed, Kristen Wang, Mehadi Chowdhury, Tatyana Cruz, Esha Iftikhar

Affiliation: International Socioeconomics Laboratory™

ABSTRACT

The transition from in-person to remote instruction has proven to have adverse effects on the learning ability of all students, however the issues seem to be most prevalent amongst younger, elementary school students. They fail to understand or recognize ways they can adapt or adjust compared to their older counterparts. This study was conducted to see where elementary school students have struggled by analyzing the degree to which they struggled in several issues that would be prominent. Data was collected through a series of interviews with the parents of these elementary students (N = 38) as the idea was that it would yield more sincere results when a personal factor was incorporated. Results indicate that remote learning has proven to be difficult for the majority of parents and their students, and on both sides as well. The students have struggled to remain motivated to complete work, while the parents found difficulty in balancing their work life and their child's school life. This study serves as an indicator that there must be adjustments made to the current digital classroom, as the implications of the current system can prove to be detrimental to the learning curve of younger students and well-being of adults.

Categories: Education, Online Learning, COVID-19

Key Words: Motivation, Engagement, Students

LITERATURE REVIEW

Given the circumstances put forth by the onset of the COVID-19 pandemic, several facilities and institutions have had to search for ways to properly adapt. One such institution is the education institution. Most, if not all schools have adopted some form of a blended learning model, or an entirely remote model altogether. However, a plethora of issues stem from the transition to online learning. A major deficit with the online learning model is the inability to effectively translate face-to-face learning into the digital classroom. While the demand for digital learning increases as the effects of COVID-19 continue to be exacerbated, the training teachers receive for teaching online has failed to keep up with the demand (Kenzig, 2015). Time and money appear to be the largest contributors to the deficiency in online learning training, however regardless of whatever the cause may be, it cannot be denied that it results in the online education failing to be as effective or maintain similar levels of quality (Kenzig, 2015). Kenzig, a professor--of Health, Human Services, and Science--herself, also finds that it becomes difficult to uphold interaction and engagement within the digital classroom. When instruction takes place in person, it is relatively simple to keep engagement levels ample; some methods would include engaging in in-depth debate or discussions. However, the same cannot be said for online learning. It is difficult to hold people accountable or determine whether or not they are actively listening and participating online as opposed to if these discussions took place in person. More often than not, students may face technological barriers that hinder their ability to be engaged, or may turn off their cameras, rendering their teachers unable to gauge the student's participation level. Additionally, student-instructor interactions must be absolutely ideal for it to be effective at all. Teachers recorded struggles regarding these types of interactions, as when they attempted to directly translate their course design to the remote model, the students' performance saw declines that would not be seen if they were learning in the classroom (Kenzig, 2015). The students simply could not learn the same way from pre-recorded lessons as they could if they were learning in real-time, where they could ask questions in real time if they were experiencing any trouble.

Evidently, online learning suffers from several shortcomings. However, Kenzig's study appeared to focus primarily on the learning experience of instructors with students of higher education. Older students have more experience with learning as a whole and despite the struggles they may face, they are able to accommodate for these struggles.

They receive a health class in high school and as they get older, they receive ways of coping with mental health issues and other conflicts they face in their learning. Older students are better able to identify the way in which they learn such as, visually or auditory, but younger children depend more on their parents or guardians and their teachers to support them and identify their preferred learning habits. Thus, for elementary school students, issues with online learning are heightened. Elementary school students are far younger and far less experienced with the education system and as a result, may not be able to adapt in the same way older students can, if at all. One major issue elementary school students face is the lack of interaction. A follow up survey to a study done by Burdina, Krapotkina, and Nasyrova found that a major concern with online learning among elementary school students was the lack of socialization (Burdina et al., 2019). Socialization is especially important in younger children as it is a major facilitator of their social and emotional developmental abilities, yet they are void of it. A potential solution proposed was partial cyber socialization, however, the strategy is likely to be ineffective given that elementary school students struggle to navigate the digital classroom on their own due to the complexities that come with technology.

This lack of socialization for elementary school students due to the transition to online learning has led to an increase in mental and emotional harm as they experience more stress, anxiety and fear in these unprecedented times (Singh, 2020). These children, now more than ever, need access to mental health care to address this increase, however, not all children have equal access to these resources. Minorities prior to the pandemic had less access to mental health resources due to cultural and financial barriers. The cultural barrier that prevented some minority children from accessing mental health care is the stigma of it being a sign of weakness to reach for help (Wong et al., 2017). Financially, minority children were not able to access mental health care resources as their families were unable to afford the cost of it, since there is a large wealth gap between minorities and their white counterparts (Chow, Jaffee and Snowden, 2003). Due to these barriers, minorities had to rely on schools to provide them with adequate mental health resources. However, the budget cuts and the transition to online learning has led to schools being unable to provide such resources on the same scale or quality as before (Hoffman and Miller, 2020). In addition to minority children not having equal access to mental health care resources during the pandemic, minority children are experiencing more stress and emotional harm than their white counterparts, as they often have immigrant parents who are not ELL (English Language Learners). As a result, minority children must serve the

role of translators for their parents. This responsibility imposes high expectations and pressure on young children, which impacts their mental health negatively (Macfie et al., 2005), and is further amplified with the massive, unfamiliar changes the pandemic has brought. Therefore, minority children have been disproportionately affected by the pandemic in terms of mental and emotional health.

The sudden transition to online learning has not only affected elementary students' mental and emotional health, but is bound to affect their academic adjustment, performance, and motivation. Universally, teachers have a tremendous impact on their students' academic career and identity. Especially for elementary school students, who are adjusting and beginning to form their attitudes about school, teachers can leave a lasting impression on students' perception of school (Valiente, Parker, and Swanson et.al, 2019). For instance, if a teacher is emotionally supportive towards the student, the student may perceive school as a secure and positive environment in which they will feel comfortable engaging in class activities, fulfilling their role as a student, interacting with peers, and learning (Valiente, Parker, and Swanson et.al, 2019). Furthermore, close, non-conflictual relationships between teachers and early elementary school students have been linked to many positive outcomes, such as reducing the risk of poor adjustment, longitudinal academic achievement in math and reading, (Valiente, Parker, Swanson et. al., 2019); encouraging students' intrinsic motivation and self- concept for reading (Guay, Stupinsky, Boivin, et.al, 2019); and encouraging students' autonomous motivation to complete their homework (Katz, Kaplan, and Gueta, 2010). Studies have also found that teacher evaluations and judgements of students' aptitude have are positively correlated to students' grades (Kreigbaum, Steinmayr, and Spinath, 2019): in a separate study where mathematics teachers were asked to estimate 4th grade students' performances on an applied mathematics test, students who were underestimated by their teachers were maladaptive in motivation to improve than overestimated students, on a test administered one year later (Zhou and Urhahne, 2013). However, amidst the COVID-19 pandemic, it may be challenging for elementary students to develop a close relationship with their teachers, as demonstrated by the difficulty of communicating with teachers during online learning (see Figure 1). As previously mentioned, elementary school students who feel close with their teacher are more likely to engage in class (Valiente, Parker, and Swanson et.al, 2019), but again, since developing a student-teacher relationship during the pandemic may be more difficult, keeping students engaged in class may also be difficult. A solution to helping children stay focused and motivated is their parents' supervision

and involvement during their child's remote learning. Associations between parental involvement and childrens' academic achievement have been prevalent in literature; for example, parental involvement in their child's academics have been positively correlated to achievement motivation, task persistence, and high vocabulary range during preschool and kindergarten (Fan and Chen, 2001), socioemotional development and achievement later in elementary school (Izzo et.al, 1999), and literary growth (Dearing et.al, 2006). However, this is not a reality for many parents, especially minority parents. In the U.S., about 39% of African American, 32% of Latino, and 36% of American Indian youth under 18 live in poverty, which is double the rate of poverty of non-Latino Whites and Asians at 14% (American Psychological Association, 2017). As a consequence, the parents of those ethnic minority youth have to work multiple jobs to support their families, so they cannot supervise their child during remote classes. Moreover, disadvantaged schools are underfunded and spend less on teachers and other programs than advantaged schools (U.S. Department of Education, 2011). Nonetheless, although low-SES (socioeconomic status), ethnic minority elementary school students have limited resources that could help contribute to their emotional, behavioral, and academic access, teachers could still have a huge impact on their success.

As stated, parents of ethnic minority youth may not be able to support their child as much as non-minority families. Minority elementary school students and children of immigrant parents are more dependent on their teachers and guardians causing them to struggle more with online school as those they were dependent on are less present in their lives due to the barriers of online learning. There have been various impacts of switching from in-person to remote learning on both parents or guardians and students as collected through a poll by Gallup. Scores may not equal 100 due to rounding. The poll demonstrated that 45%, the majority, of students and parents feel that there has been a significant impact from being separated from classmates and teachers and 44% of both students and families believe that the child's attention span and motivation has taken a major toll on their learning due to remote learning. Sitting before a computer with little to no socialization with those beyond the walls of their homes has caused students to lose motivation or the desire to complete their school work. However, there is also a lack of aid within the homes of young children. The poll reveals that 45% of parents can not aid their child in schoolwork and support them in their learning very well due to the time and work their own job takes up. This emphasizes the lack of care students at home may get when they are isolated from both their peers and teachers, but also from their parents in

their own homes. And lastly, 44% of parents state that it has been a major challenge trying to teach their children in a way they are able to understand the content. These statistics reveal that parents are not equipped to support their children as teachers were when there was in-person learning. Not only does this affect the academic performance of students, but also their mental and emotional health. To make online learning more difficult, along with the emotional stress and lack of development elementary school children are blocked from, students and parents face technical issues with remote learning devices or the internet and inability to access educational resources to better support their child.

A large population of students learning online is certainly an unprecedented situation. Since the evolution of technology, no event before the COVID-19 pandemic had provided such an opportunity. Because of how recent the pandemic is, very few studies have examined how online learning has affected students' (both minority and non-minority, but in particular minority) engagement in elementary school in the U.S. We hypothesize that a) online learning has negatively affected student engagement in elementary school, and even more so amongst minority children in the United States by seeing a decrease in motivation levels and increase in negative behavioral conduct, which could be accompanied by b) an increase in homework struggle and an increase in turning on their cameras, and could be due to c) increase in technology barriers, difficult of parents understanding their childrens' distinct learning styles, and difficulty of parents helping and supervising their children during remote learning.

Remote learning challenges

How much of a challenge have each of the following been in terms of remote/distance learning for your (oldest/youngest) child?

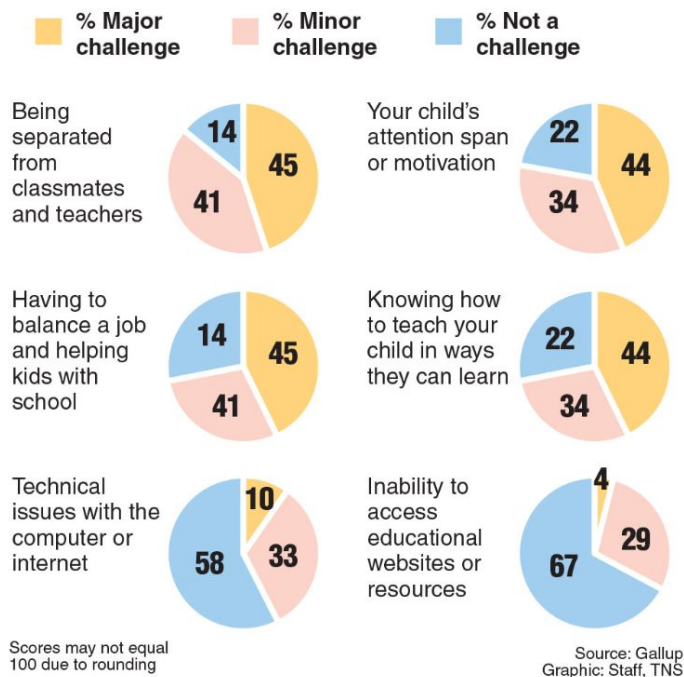


Figure 1: Charts depicting the degree of difficulty (major, minor, or not a challenge) parents have had with several remote learning challenges of parent's responses regarding several remote learning challenges. Sourced from Tribune Content Agency Graphics. *Amid Pandemic, Families Cope with New Demands of Online Learning*

MATERIALS & METHODS

In order to test our hypotheses, we made use of both interview and archival data. For interview data, we spoke with parents and older siblings who reside with younger students enrolled in elementary school to see the level of engagement displayed by the student. Before asking questions specifically about how students are affected by online learning, the demographic of the interviewees was collected. Ethnicity, race, grade, and location was asked about each student to compare how socio-economic issues of

elementary school students affect their remote learning. These specific questions we asked are the following:

- 1. Do you face technical issues with your remote learning device or internet? How often?**
- 2. Are you familiar with the learning style of your student or the best way they can learn and able to use that to support them?**
- 3. Are you able to balance your job and your other responsibilities with helping your student with online learning?**
- 4. Have you noticed any difference in your child's attention span? Motivation?**
- 5. What does your child do with their free time?**
- 6. Do they struggle to complete homework?**
- 7. Have you noticed any behavioral differences in your child during online learning (or blended) compared to in-person? (ex: difficulty with focusing, less desire to do work, more moody, etc.)**
- 8. How do the teachers at school support your child's learning? (ex: office hours, 1-1 discussions with you, videos/visually)**
- 9. Does your child struggle with unmuting themselves or turning on their camera? Why is that?**
- 10. Anything else you would like to share that would aid us in our research?**

The aforementioned questions were asked in order to assess the levels of performance in elementary students prior to and after the pandemic. Some questions were based on qualitative measures of engagement, such as attention span or motivation, while others tried to draw a comparison between learning in person as opposed to remotely. We interviewed 38 participants and recorded their answers to the questions and made conclusions regarding online learning through their answers. Using their responses, we compiled them and organized them into categories based on what the questions were asking. The categories are the following: Technological Difficulties, Method of Learning, Work-School Balance, Motivation and Attention Span, Homework Struggle, and Behavioral Change. For some of the categories, we omitted a couple of responses as they were ambiguous and did not necessarily fall into a certain answer we were looking for. We then compared individual interviewee's responses to each question to see if any

parallels could be drawn, which would further enhance our hypothesis that online learning has caused a drop in learner engagement amongst elementary school students.

RESULTS

Tech Problems

Of the 38 participants interviewed, 18 of them indicated that they did not experience technology issues, while 15 experienced problems occasionally, and 5 experienced major problems with technology. When taking a look at individual responses, most of the participants that did experience these issues indicated them being a result of poor connection/internet provider or a slow device. The frequency of the technological issues seemed to occur quite frequently throughout each week, with participants saying they experience issues anywhere between 1-3 times a week. In terms of issues with cameras, 28 of the participants said that there was not actually any struggle when it came to turning on cameras; however, for the 10 that did say there were camera struggles, they attributed to the age and shyness of the child.

Method of Learning

When analyzing whether or not the parents were familiar with their child's method of learning (Kinesthetic, Visual, Auditory), the results were as follows; 19 parents reported that their child's primary method of learning is one of the three aforementioned methods, 11 reported that they were not familiar with their child's primary method of learning, and 8 of them reported that they are somewhat knowledgeable on what works best for their child and/or are helping them develop a preferred method of learning. There seems to be many struggles amongst auditory and kinesthetic learners; as these learners learn best from either hearing or working hands-on with information, the transition to remote learning most certainly has served to be a difficult task. There does not seem to be much of an issue with students who learn visually, as the digital classroom meets these standards quite well.

Work-School Balance

Inspection of participants' ability to balance their own work on top of helping their child's academic needs indicates that only 8 of the 38 participants are able to effectively balance their work and their child's school, while 24 indicated that they cannot reasonably find a balance; 6 respondents indicated that they are able to somewhat find a balance but often find it difficult to do so. In fact, the degree of difficulty has made it so that some parents have had to stop working in order to be able to cater towards their child's school needs; some of the respondents now only have one parent working, while the other stays at home to accommodate. For other individuals, they must bring their child to their work in order to be able to look out for them.

Motivation and Attention Span

Most respondents were in consensus that their child has experienced decreases in motivation and attention span. Only 1 out of the 38 interviewees indicated that their child's motivation and attention span has improved with online learning, while 23 indicated that they saw drops in attention and motivation. 4 participants indicated that there was no change. The remaining 10 interviewees gave responses that were too ambiguous to classify into whether or not there was an increase or decrease in attention span. Most parents indicated that their children are unable to stay in front of the screen for prolonged periods of time, translating to an inability to remain focused or inclined to do work.

Homework Struggle

The interviewees' responses indicated that there was no general consensus regarding whether or not their children struggled with completing homework assignments after transitioning into a remote learning system. 17 parents indicated that their children did not struggle with homework, while 12 indicated their child did struggle and 9 indicated that their children occasionally found themselves struggling with homework. The reason behind the struggle seemed to do with subjects the children were not proficient in and/or whenever projects were assigned.

Behavioral Change

When it came to changes in behavior as a result of switching to a remote system, nearly all interviewees signified that their children underwent a change in behavior, and for the worse. 35 out of the 38 answers reflected a negative change in behavior. The most common change in behavior seemed to be that their child became more moody and/or defiant. The children had also been less inclined to do work or felt overwhelming amounts of stress due to the amount of work on top of not being able to interact with friends.

Additional Information Provided

Overall, there were mixed responses about remote learning. The majority of interviewees who provided additional information found that the structure of remote learning was disorderly, disastrous, and a struggle. The main concerns of participants include financing remote learning assistance, socializing their young children due to lack of in-person contact with peers, managing childrens' mental health challenges (i.e. stress and feelings of moodiness), and helping their children effectively learn. However, some parents do like remote learning and feel that it is good training for them.

Demographics of 38 Interviewees

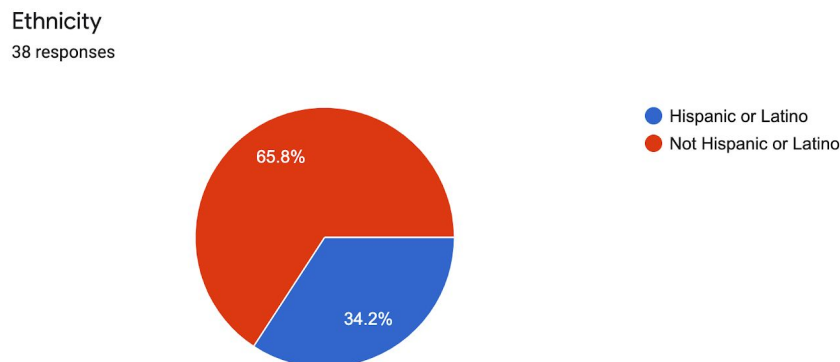


Figure 2: Ethnic breakdown of the participants in the interview.

Grade
 38 responses

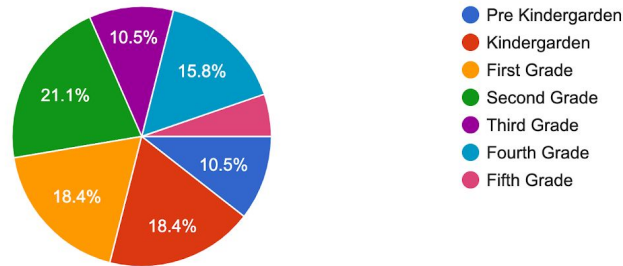


Figure 3: Breakdown of the grade level of the elementary school respondents.

Questions and Summary of Results for 38 Interviewees

<p><i>Question 1:</i> Do you face technical issues with your remote learning device or internet? How often?</p>	<p>18/38 responses don't have problems with technology 14/38 responses have problems occasionally with technology 5/37 responses have major problems with technology</p>	
<p><i>Question 2:</i> Are you familiar with the learning style of your student or the best way they can learn and able to use that to support them?</p>	<p>18/38 responses know their child's best way of learning 11/38 responses don't know their child's best way of learning 8/38 responses sort of know their child's best way of learning or are trying their best in finding it</p>	<p>Note: Though lots of parents said they know the child's best way of learning, a good chunk of those responses talked about it being in-person learning with a teacher.</p>
<p><i>Question 3:</i> Are you able to balance your job and your other responsibilities with helping</p>	<p>8/38 responses can balance work and helping their child learning</p>	<p>Note: Those who responded they can help their child learn had to do</p>

<p>your student with online learning?</p>	<p>24/38 responses cannot balance work and helping their child learn 5/38 responses are in the middle ground and find it challenging sometimes</p>	<p>so at the cost of one of the parents quitting their job to parent full-time.</p>
<p><i>Question 4:</i> Have you noticed any difference in your child's attention span? Motivation?</p>	<p>1/38 responses state that the motivation of the child has gone up due to remote learning 22/38 responses state that the motivation and attention span of the children have gone down during remote learning 4/38 responses state that their has been no change in their child</p>	<p>Note: Some of these responses will not be 37 as some responses were ambiguous in the change. Though these responses leaned towards a negative response based on the context of the other answer.</p>
<p><i>Question 5:</i> What does your child do with their free time?</p>	<p>Responses:</p> <ul style="list-style-type: none"> - Play video games - lego building - use devices (iPad, TV) - Read - Tutoring - Play sport - Homework - Draw - etc. 	<p>Note: A positive of remote learning is that young children are able to delve deeper into their hobbies and pursue what they want. However, this depends on the school and grade, for other students spend their free time doing school work and isolating themselves from family and friends.</p>
<p><i>Question 6:</i> Do they [the students] struggle to complete homework?</p>	<p>17/38 responses state their child does not struggle with the homework given from school</p>	<p>Note: Some responses noted that the struggle homework was either</p>

	<p>11/38 responses state their children does struggle with the homework given almost all the time</p> <p>9/38 responses state their children struggle occasionally but not too often with the homework given</p>	<p>subjects they were bad at or when the teachers gave projects.</p>
<p><i>Question 7:</i> Have you noticed any behavioral differences in your child during online learning (or blended) compared to in-person? (ex: difficulty with focusing, less desire to do work, more moody, etc.)</p>	<p>35/38 responses state that there has been a negative change in their child's behavior</p> <p>3/38 responses state no change</p>	
<p><i>Question 8:</i> How do the teachers at school support your child's learning? (ex: office hours, 1-1 discussions with you, videos/visually)</p>	<p>Teacher support:</p> <ul style="list-style-type: none"> - Check-ins with parent through video call, email, Class Dojo, phone calls - office hours with students 	<p>Note:</p> <p>A few interviewees mentioned there is not much interaction</p>
<p><i>Question 9:</i> Does your child struggle with unmuting themselves or turning on their camera? Why is that?</p>	<p>28/38 responses state that their children have no struggles turning on camera or unmuting microphone.</p> <p>9/38 responses state their children do struggle with turning on camera or unmuting microphone</p>	<p>Note:</p> <p>Responses where children were struggling to turn on the camera or unmuting microphone may have had something to do with age or shyness.</p>

<p><i>Question 10:</i> Anything else you would like to share that would aid us in our research?</p>	<p>Positives of remote learning:</p> <ul style="list-style-type: none"> - best training for parents - learning new skills such as how to use a computer or tablet <p>Negatives of remote learning:</p> <ul style="list-style-type: none"> - behavioral and psychological changes in students such as increased moodiness and stress - some students NEED face-to-face learning - not everyone is able to adapt quickly to the new style - lack of organization and structure in learning - increased frustration and impatience in teachers - not enough engaging activities - Never enough time for class to interact - struggle with using google classroom - distractions during online learning and background noise - lack of community - anxiety in being social in-person after being online for extended 	<p>Note:</p> <p>Many interviewees feel that if remote learning was more structured and done well, it could be a huge positive for both students and parents. Concerns parents have are financial, social, and academic.</p>
---	---	---

	<p>amount of time</p> <ul style="list-style-type: none"> - scheduling issues for parent to be with child as they learn - sitting in front of a screen for most of the day is damaging for children - struggle with paying for remote learning assistance 	
--	---	--

DISCUSSION

The main purpose of our study was to examine the effects of the transition from in-person to remote, online learning, as a consequence of the COVID-19 pandemic, on minority students’ engagement in elementary school in the U.S. By analyzing variables such as work-school balance (amount of parental difficulty supervising their children during remote classes), method of learning (amount of difficulty understanding childrens’ learning styles), technology problems (amount of difficulty with technology), motivation and attention span (level engagement, motivation, and attention), homework struggle (amount of difficulty students find homework to complete), and behavioral change in elementary school minority students, this study provided insight on how significant of a toll the pandemic has taken on those who are just beginning school. Additionally, this study theorizes the impact the challenges racial minorities more frequently experience- such as low socioeconomic status- may have on child engagement during this time of remote learning.

As hypothesized, there certainly was a decrease in student engagement amongst elementary school students when it came to the transition to the remote learning system. The variables that were particularly significant in our study include work-school balance, motivation/attention span, and behavioral change. To reiterate our results, 24/38 participants, composed of parents or older siblings of elementary school students,

indicated that they could not reasonably find a balance between working and helping out their children with remote learning; some have had to accommodate this by leaving work or bringing their children to their workplaces. In addition, 23/38 participants saw decreases in their childrens' attention spans, particularly decreased focus and ability to do work or stay in front of their screens prolongedly. 35/38 participants noticed negative changes in their childrens' behavior, including defiance, stress, and moodiness. These results are particularly important because previous research has suggested that teacher support/proximity and/or parental involvement positively correlates with student achievement, motivation and engagement (Fan and Chen, 2001; Valiente, Parker, and Swanson et.al, 2019). However, due to the inability of full, in-person teacher supervision of students during the COVID-19 pandemic, parents have had to take on the responsibility of both caregiver and teacher. The plethora of parent responses indicating that they struggle managing both work and child remote learning suggests that low-income families may have to sacrifice meeting their childrens' academic and motivational needs in order to support their families. As the American Psychological Association states, minorities, especially Non-white Hispanics and African Americans, constitute a majority of those of low socioeconomic status (American Psychological Association, 2017); according to our demographic figures, a total of 21% of our participants were minorities (American Indian/Alaskan Native, Asian, Latino, Black, and Mexican). Our results, which saw decreases in motivation/attention spans and increases in negative changes of behavior in minority students in elementary school, thus could be attributed to lack of or minimal parental involvement in child learning, due to parents trying to make ends meet. Exceptions to this may be if parents are making accommodations for their childrens' remote learning, such as leaving work or bringing children to their workplaces, as some participants indicated.

As with all studies, there exists limitations within ours as well. While our study reached a diverse demographic population, most of the participants were concentrated in either the White or Hispanic population; our samples for Black/African American and Asian students are likely not enough to be able to generalize results for their respective populations. Additionally, interviewee responses may have been biased given their knowledge of being interviewed; they may have answered in ways that would skew the data in favor of what the researchers wanted to see. The final limitation that may have existed within our study could arguably be the sample size. If we were able to conduct the study over a longer period of time, we may have been able to garner more responses,

allowing us to strengthen our findings and provide further support/refutations for our hypotheses. However, given that the data was collected through a question and answer interview format, the data may have been sufficient given that it has become increasingly difficult to schedule interviews with the ongoing pandemic. Additionally, giving the participants the benefit of the doubt, the interview format would generally yield more sincere results since it gives the participants free reign on what they are able to answer. Despite the limitations within our study the topic of minority elementary school student engagement is important to explore as the pandemic continues because there are numerous studies done on the impacts of engagement pertaining to the general population, but there appears to be a gap on exploring the connections between race and this engagement. This study was aimed to help close this gap as much as possible since any amount of data collected on this topic would help make future improvements to address the problems that come with online learning.

There are several future implications that can stem from our study. One such implication includes making adjustments to the current remote learning platform to make it more amicable for elementary students; having hardly any experience with actual school on top of now having to learn it all through unfamiliar platforms only exacerbates the problem, and seems to be an issue that only the education system themselves can improve on. This is especially apparent given that most parents are unable to make adjustments/improvements themselves as they must also be able to focus on their work as well. Possible methods include adjustments to the curriculum to accommodate more for the social and emotional needs for the children. It may be feasible to do so by implementing these aspects of development within the learning environment instead of making it incredibly work intensive.

On the other side, improvements can be made by focusing on teachers. Teachers have been found to suffer from stress and pressure and it has had adverse effects on their ability to teach in the digital setting (Makarenko & Andrews, 2017). A learning environment in which both the students and teacher are struggling to adapt fosters an environment where it becomes increasingly difficult and maybe even near impossible to learn effectively. It may very well be beneficial to enlist some system that is able to take into account the mental health and well-being of teachers in order to ensure they are able to give their best. Since the classroom is now digital, it may be possible to pair teachers together; having anywhere between 2-3 teachers in a classroom as opposed to 1 would

allow for the teachers to be able to look out for one another and aid one another in the difficult setting. It may also make creating lesson plans that are more friendly towards the students achievable when there is more than one point of view being imposed.

Other researchers can take our study and keep the variables more or less the same, but work on having ample samples amongst all populations in order to be able to generalize results and have more concrete findings. They may also look to use the same questions, however make them measurable in a quantitative way in order to run statistical tests like the ANOVA test; for example, they would be able to see whether there is a significant difference between whether one specific racial/ethnic group struggles with one aspect of remote learning more than the others. If any statistically significant differences are shown, further inspection can be done to find any sort of association as to why the results are the way that they are. Attaining any data regarding the issue of online learning engagement of elementary school students has an incentive to be heavily focused on; as we continue to tread through a pandemic, there are no clear indicators as to when the education system can transition back to a consistent in-person system. Until then, elementary school students will continue to struggle to adjust and adapt given that there is an undetermined amount of time as to when they will be allowed to go back. A student's elementary school years are where they should be becoming accustomed to the way education operates, and because they are being deprived of the legitimate experience, their foundation for understanding will continue to be substandard and pushed back.

We would like to thank and acknowledge those who participated in the surveys we sent out, all of the authors of the papers we have cited and any researchers who are working on related topics regarding the impacts of online learning on students.

REFERENCES

- Burdina G. M., Krapotkina I. E., Nasyrova, L. G. (2019) Distance Learning in Elementary School Classrooms: An Emerging Framework for Contemporary Practice, *International Journal of Instruction*, 12(1), pp. 1-16
- Chow, J. C., Jaffee, K., & Snowden, L. (2003). Racial/ethnic disparities in the use of mental health services in poverty areas. *American journal of public health*, 93(5), 792–797
- El Nokali, N., Bachman, H., & Votruba-Drzal, E. (2010). Parent Involvement and Children's Academic and Social Development in Elementary School. *Child Development*, 81(3), 988-1005.
- Hoffman, J. A., & Miller, E. A. (2020). Addressing the Consequences of School Closure Due to COVID-19 on Children's Physical and Mental Well-Being. *World medical & health policy*, 10.1002/wmh3.365. Advance online publication.
- Katz, I., Kaplan, A., & Gueta, G. (2010). Students' Needs, Teachers' Support, and Motivation for Doing Homework: A Cross-Sectional Study. *The Journal of Experimental Education*, 78(2), 246-267.
- Kenzig, M. (2015). Lost in Translation: Adapting a Face-to-Face Course Into an Online Learning Experience. *Health Promotion Practice*, 16(5), 625-628.
- Macfie, J., McElwain, N. L., Houts, R. M., & Cox, M. J. (2005). Intergenerational transmission of role reversal between parent and child: dyadic and family systems internal working models. *Attachment & human development*, 7(1), 51–65.
- Makarenko, E. & Andrews, J. J. W. (2017) “An Empirical Review of the Mental Health and Well-Being of Online Instructors.” *The Journal of Educational Thought (JET) / Revue De La Pensée Éducative*, 50(2,3), 182–199.

Singh, S., Roy, D., Sinha, K., Parveen, S., Sharma, G., & Joshi, G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry research*, 293, 113429.

Tribune Content Agency Graphics (2020) *Amid Pandemic, Families Cope with New Demands of Online Learning* [Chart]

Wong, E. C., Collins, R. L., Cerully, J., Seelam, R., & Roth, B. (2017). Racial and Ethnic Differences in Mental Illness Stigma and Discrimination Among Californians Experiencing Mental Health Challenges. *Rand health quarterly*, 6(2), 6.

Zhou, J., & Urhahne, D. (2013). Teacher judgment, student motivation, and the mediating effect of attributions. *European Journal of Psychology of Education*, 28(2), 275-295.

How did the Pandemic Exacerbate the Mental Health Crisis Across the Nation?

Tasmia Afrin, Aarushi Kaushal, Sudiptha Paul, Afran Ahmed

Affiliation: International Socioeconomics Laboratory™

ABSTRACT

Surrounded by stigma and misconception, mental health is often overlooked - when someone does experience mental health concerns, those concerns become much more drastic due to the lack of immediate addressal. With consequences that are serious, even when resources are directly available, the question becomes to what extent are these concerns exacerbated as a result of the pandemic, given that the pandemic has cut many individuals off from various resources. We conducted a survey to gauge the degree to which individuals were suffering from mental health concerns prior to the pandemic, and during the pandemic in order to draw a comparison to conclude whether or not increases in mental health issues can be attributed to the pandemic. Results showed that for most of the younger respondents, this certainly was the case; mental health issues were most certainly exacerbated due to the pandemic, with many respondents associating the increase with the heightened feelings of disconnection from their social circles as a direct result of their inability to see friends, loved ones, or even coworkers. The study provided an incentive to see how much connection and disconnection can affect someone's mental health. While it may be apparent from our study alone that a disconnect from one's peers may prompt an increase in mental health concerns, future studies ought to be conducted to see whether this conclusion can be proven otherwise or if other fascinating and insightful results can be found.

Categories: Mental Health, COVID-19

Key Words: Stress, Depression, IEP

LITERATURE REVIEW

Many individuals were hit hard by the COVID-19 pandemic - especially those who suffer from depression. The inability to interact with peers and friends has greatly diminished, as it has become increasingly difficult to go outside given the severity, prevalence, and negative implications of the virus. Given that many individuals turn to friends and family as a means of uplifting themselves and their feelings, it is only natural to expect that there would be a sharp decline in one's ability to maintain the same levels of happiness that they had had prior to the pandemic. Household situations have changed drastically as increased unemployment rates, remote learning, and a decline in job opportunities led to more people spending large amounts of time at home.

Mental health is largely overlooked in everyday life. Stigma surrounds mental health because most people denounce it as just being some sort of disability or mental condition. As a result, people who struggle with mental health often bottle up the emotions and struggles they experience - this bottling up increases the likelihood of the ramifications of mental health issues being much more severe. As much as 66% of studies indicated that adolescents demonstrated negative attitudes towards individuals that have mental health problems, and 1 in 5 had displayed actual/intended stigmatizing behavior ($I^2 \geq 95\%$). Not only that, but one-third of youth displayed a lack of knowledge of mental health problems (Gaiha S. et al., 2020). This society fosters an environment in which it almost appears as taboo to talk about mental health, which can often prove to be a rather ineffective way of dealing with mental health concerns. When it feels as though an individual cannot openly share the pain they are experiencing, they must resort to telling friends or family. However, even then, there exists the fear of being turned away by the aforementioned parties in fear of the idea that they would be disappointed or perceive the individual differently. Additionally, individuals may feel uncomfortable sharing their mental health concerns with trained professionals, as they have not developed any sort of connection with this professional and would not have done so until several meetings or sessions. Consequently, the circle of people to reach out to narrows. With a circle this small developing when people are able to openly interact with one another in person, the question becomes; to what extent has the pandemic exacerbated these mental health problems faced by individuals?

The United States in particular suffers from some of the worst consequences of the COVID-19 pandemic, with a staggering 24.3 million cases and roughly 402,000 deaths (Centers for Disease Control and Prevention, 2020). The pandemic may be very stressful for people as fear and anxiety about a new disease and what the future has in store for our world can be incredibly overwhelming. This pandemic has strengthened already prevalent issues such as alarming rates of food insecurity, unemployment, and social interactions (Afrin, T., 2020). The inability to interact for one to interact with their peers and friends has greatly diminished as it has become increasingly more difficult to go outside given the severity and widespread impact of the virus. Given that many individuals turn to friends and family as a means of uplifting themselves and their feelings, it is only natural to expect that there would be a sharp decline in one's ability to maintain the same levels of happiness that had been felt prior to the pandemic.

INTRODUCTION & BACKGROUND

All across the country, individuals have suffered greatly from the devastating blow that is the COVID-19 pandemic. The challenges faced by Americans during this time are multifaceted and have taken an incredible toll on the mental health of thousands of people across the nation. In particular, adolescents have reported that their mental health has worsened over the course of the pandemic. According to the World Health Organization, the adolescent age group encompasses all individuals who are between the ages of ten and nineteen years old. For our purposes, we will be examining adolescents in more of the 'teenage' phase of their life, which we have defined for our research as being in the age range of twelve to eighteen years.

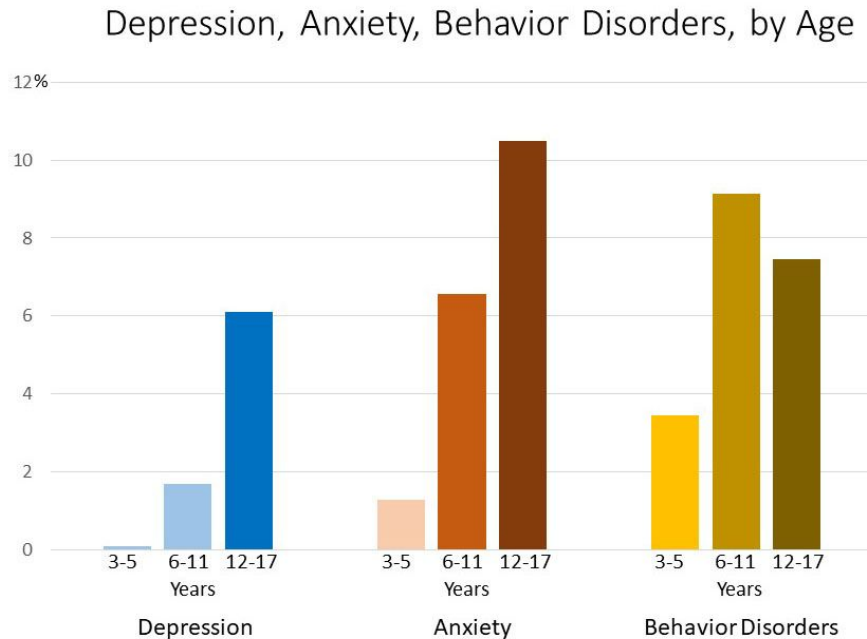
It likely comes as no surprise that poor mental health has ravaged more adolescent lives than we can imagine. With the many changes and "finding-of-the-self" periods that occur in these years of our lives, it is not difficult to imagine that adolescents may have a hard time coping with various transitions. No longer old enough to be considered a child, but not yet old enough to be considered a young adult, most of the members of the adolescent age group are lost somewhere in between childhood and adulthood and are unable to claim a spot on either side of the spectrum. This can often lead to bouts of confusion and questioning in their lives, which in turn can develop into depression. According to the

National Institute of Mental Health (NIMH), approximately 3.2 million adolescents (aged 12-17) report at least one major depressive episode in their teenage years. When this number is compared to the roughly 21.05 million adolescents in the USA, it is quite shocking to see that close to fifteen percent of the adolescent population in America has been significantly affected by depression at some point in their life.

The NIMH also reports that 71% of the adolescents affected by depression have experienced severe impairments in their daily lives due to their symptoms. This translates to an estimated 2,272,000 adolescents who have experienced severe impairment as a direct result of depression. These statistics in themselves present a worrying truth: adolescents in America are being seriously impacted by symptoms of depression. Imagine, then, how much worse these symptoms may have become when the pandemic abruptly changed the world as we knew it. The majority of adolescents in the U.S. are students, all of whom were deprived of the ability to physically go into school. While this may have been beneficial for reasons such as getting extra sleep or feeling comfortable at home, adolescents no longer had access to the essential ability to see their friends and peers in person. This lack of physical interaction may have more of an impact on mental health than one may think; as students fall into the monotonous cycle of virtual learning, they have little to look forward to, as they can no longer see their friends or engage in school extracurriculars in person. Furthermore, school often provided an escape to those who may have difficult family or housing conditions. Factors such as lack of food availability, abusive households, and the struggle to focus on school combined with the many other stressors of both normal and pandemic life, are enough to make any adolescent struggle to cope with challenges and take proper care of their mental health (Afrin, T., 2020).

Another mental health issue that affects a wide range of adolescents both in the US and across the world is anxiety and anxiety-related disorders, which are often closely tied with symptoms of depression. According to the Centers for Disease Control (CDC), about 3 in 4 children between the ages of three and seventeen with depression also have some form of anxiety, which constitutes to about 73.8% of these individuals (Centers for Disease Control and Prevention, 2020). Furthermore, nearly 1 in 2 individuals aged 3-17 with depression also have behavior problems (47.2%). These statistics effectively prove a very strong correlation between depression and anxiety in adolescents. The CDC also

reports that those aged 12-17 have the highest rates of both anxiety and depression in the age group of 3-17.



(CDC Children's Mental Health- <https://www.cdc.gov/childrensmentalhealth/images/Depression-Anxiety-Behavior-Disorders-chart.jpg>)

Experts at the CDC report that rates of depression and anxiety amongst youth have constantly been increasing over the past decade or so, and these increases were taking place *before* the world was struck by the coronavirus pandemic. It is difficult to imagine how much worse these anxiety symptoms may have gotten in adolescents who had no choice but to be cooped up all day in their homes with their eyes glued to a computer screen. The pandemic certainly shook up the world and struck us all hard, but the adverse consequences caused by COVID-19 for those in their adolescent years have been particularly devastating on the mental health of teenagers who are just beginning to find their way in the world.

MATERIAL & METHODS

In order to test our hypotheses, we conducted an anonymous survey in which we asked a series of questions that attempted to gauge the feelings of numerous people. The survey was broken up into parts, starting with questions that overlooked the respondent's background. These were asked in the beginning of the survey to understand the age, grade level, and location of the participants. We asked if they were from New York in order to have the accurate sample size of individuals from a set area. This would strengthen our evidence of how the mental health of these people from this state has been affected by the ongoing pandemic. The survey then asked for the participants to describe the changes, if any, to their stress level that they had experienced since March 2020. This was measured on a 1-5 scale where increasing numbers correlated with increasing stress levels (1- reduced significantly, 2- reduced a little, 3- no change, 4- increased a little, 5- increased significantly). In order to capture a more accurate picture of these increases or decreases of stress, the following questions were related to how this change took place. It was collected through an open-ended questionnaire asking participants how their stress levels changed over time since March 2020. In the space provided, they were expected to answer by describing the trends over the various months that followed the start of quarantine.

Additionally, a question asked for the participants to associate the change in their stress levels to the COVID-19 pandemic. Adolescents were the main participants of the survey as online school and remote learning was a topic we wanted to explore. This is because our research has shown that education plays a major role in depression and anxiety among individuals. The next set of questions in the survey examined whether online school has been more stressful than in-person school and whether the home/school workload has increased since the pandemic began for the respondents. We also included a question regarding learning disabilities or having an IEP to ensure that many education measures were accounted for. This type of question was asked through the format of being able to choose the answer that applied best to the participant. If they chose the first or second choices for the previous question, we asked a follow up question regarding if their symptoms began before or after the pandemic started (For our research purposes, "after the pandemic started" would be after the lockdowns of March 2020). Lastly, we asked one final question that was open-ended about whether or not these participants had

anything they wanted to add to their responses about depression/anxiety symptoms or their stress levels.

The survey allowed us to collect an adequate amount of data to effectively assess how COVID-19 has impacted individuals and their mental health. The variety in the questions focused on different factors that would play a role in the way in which an individual suffers from symptoms of depression or anxiety. Prior research was conducted and analyzed in order to administer this survey to the best of our ability. We researched the top factors leading to increased levels of depression, anxiety and stress among individuals due to COVID-19 as well as the multitude of coping mechanisms that can be implemented to an individual's life in order to combat these symptoms (Miranda D. et al., 2020). The conducted survey was established through the use of social media outreach, email, and text/phone calls. This allowed for a variety of different answers and participants.

Various resources were used to compile accurate and effective data and statistics for analysis. This includes archival data as well as demographic data from psychiatric journals, medical blogs, mental health entries, etc. The study selection was conducted through the search of all databases and reviewing studies based on the eligibility criteria, reading abstracts, analyzing titles, and reading through select texts and references. The framework for the data extraction was from all of the compiled research from the studies conducted by certified authors and mental health professionals. This was then implemented into our survey, which was sent out to a broad audience through various social media and outreach channels. The principles measures utilized in the primary studies included levels of significance (p-values), percentages, means and standard deviations. Ultimately, a plethora of websites and accounts were used to assess the different symptoms of depression/anxiety in the population, levels of stigmatization and coping mechanisms applied during COVID-19. Studies were excluded if results indicated that participants were inaccurately representing levels of stress and symptoms of mental illnesses.

RESULTS AND DATA ANALYSIS

Following analysis of every single one of our graphs that were derived from answers to our online survey, we found that the pandemic itself was indeed a major stressor when it came to the exacerbation of the mental-health crisis. Results demonstrated that changes in stress levels from the beginning of the pandemic to the present were usually extreme. Figure 1 details how most respondents found that their stress levels had increased either a little or quite a bit. 36% of the respondents reported drastic increases in their stress levels since March 2020. This only adds onto conclusive evidence that the pandemic itself, along with its cross impacts of family death, mourning, and the move to remote learning, was most certainly a key player in the mental-health-issues epidemic. The majority of our respondents displayed in Figure 2 ranged from ages 15-17, with an overwhelming majority (76%) of our respondents being aged 16.

When asked specifically about how their stress levels changed over the course of the year, respondents also saw fluctuations in their stress levels. One respondent reported that “From March to June my stress levels were neutral and it was around May with the increase of cases that made me feel overwhelmed. From July to early September my stress levels decreased and around late September to early December my stress levels continued to increase. Currently from December to January my stress level has been neutral.” Here we see that fluctuations in stress were also common for many members of the youth population. It may have been a possibility that these fluctuations came from time periods in which these people were grieving for the loss of life within their families or accepting reality within a strenuous pandemic.

How would you describe any change in your stress level since March 2020? (1- reduced significantly, 2- reduced a little, 3- no change, 4- increased a little, 5- increased significantly)
25 responses

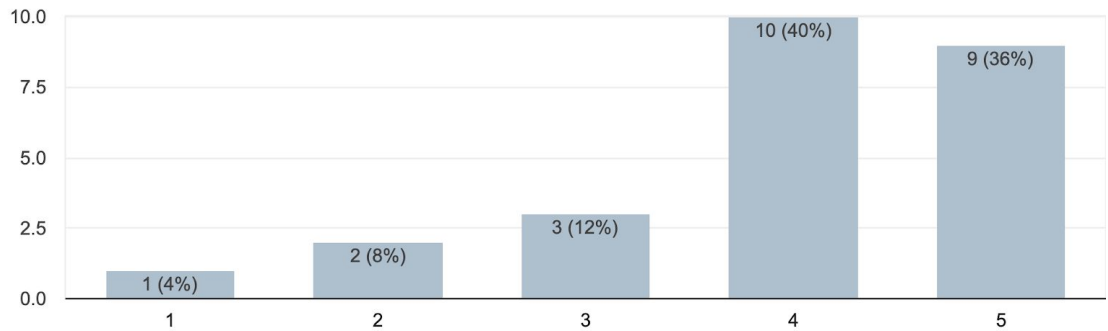


Figure 1: Bar graph above displays whether or not stress levels changed since March 2020, students had to pick from choices 1-5, each number representing a drastic positive change, negative change or neutral change.

Online school has been more stressful for me than in-person school was.

25 responses

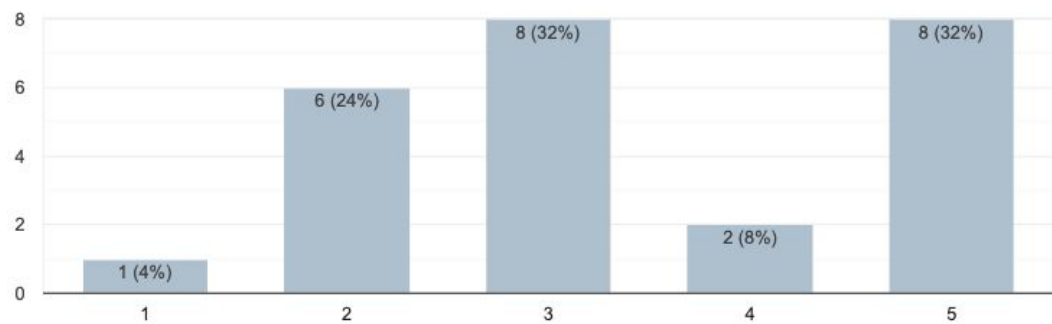


Figure 2: Bar graph above displays a choice between 1-5 for whether or not online school has been more stressful or not. The increase in numbers shows progressive increase in stress changes.

My home and/or school workload has increased since the pandemic began.

25 responses

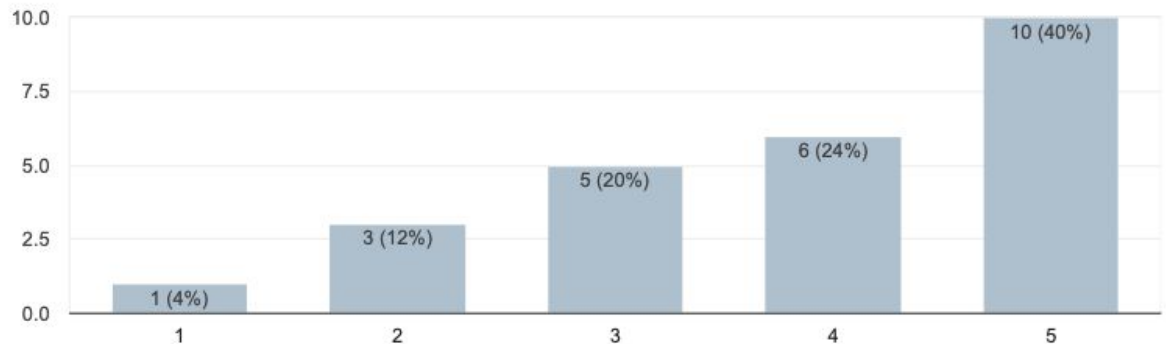


Figure 3: The bar graph above displays the results of whether or not respondents saw an increase in workload since the pandemic began.

A potential issue with our data is that it does not account for people of older generations to gain insight into how stress may have negatively impacted their lives and well beings. Still, our data indicates that the pandemic had a negatively impactful role on the mental health of students. Another sample of data was derived from the works of International Socioeconomics Laboratory (ISL) through a survey that assessed the psychological impacts of social media on the mental health wellbeing of participants. There were 85 participants ranging from the ages of 12 to 20, however only one participant was 12 years old and majority of the participants were 16 years old (63.5%). Participants were not given any incentives to complete the survey. All participants resided in the United States, with the majority living in New York City (91.6%). Three participants indicated that they lived in California, Long Island, and Westchester County.

When asked about ethnicity, 61.9% identified as Asian, 20.2% identified as White or Caucasian, 8.3% identified as Mixed, 4.8% identified as Hispanic or Latino, 3.6% identified as Black or African American, and 1.2% identified as American Indian or

Alaska Native. The data highlights the diversity of respondents in order to provide different perspectives as well as varying effects of those impacted by mental illnesses. One of the indirect impacts of the pandemic that has also had a drastic effect on mental health has been, the arrival of online school. Figure 3 indicates how 32% of students felt that online classes and school was far more stressful than in-person school was. Figure 4 displays evidence that 64% of respondents had their workload increase either drastically or in small amounts since the beginning of the pandemic. This could be attributed to changes in grade levels or possibly the take-on of different extracurricular activities.



Figure 4: The circle graph shows the percentages of the values for whether or not respondents have been or believe they were diagnosed with depression or any other mental illness.

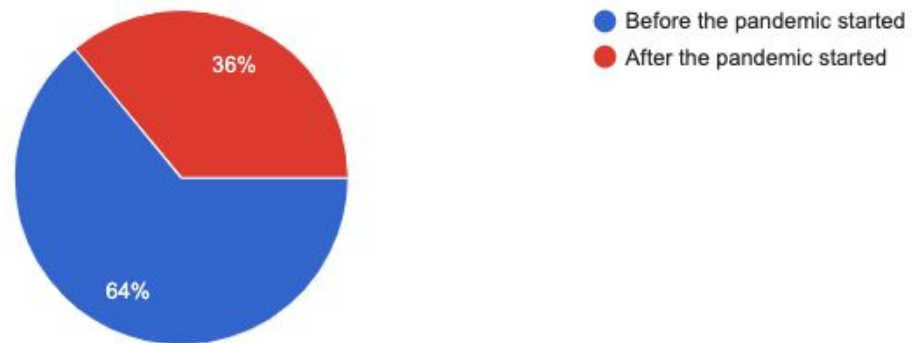


Figure 5: The circle graph above displays answers to if symptoms for our respondents began after or before the pandemic.

However, the pandemic has made both of these more difficult to acknowledge and address. 56% of the respondents believe they have or have been diagnosed with clinical depression. 36% of respondents found that their symptoms increased or started after the pandemic. One respondent explained that “Due to the COVID-19 pandemic, finding ways to cope with depression and anxiety is overwhelming as many such as myself are forced to stay in households who don’t believe in mental illnesses”. With access to mental-health resources effectively cut off for thousands of people by the pandemic, especially minority or low-income groups, it would be no surprise to see that the pandemic has played a critical role in the exacerbation of the country’s mental health crisis. With this taken into consideration, students would only sink further into a cycle of ongoing depression highlighting the negative consequences the pandemic has had on the mental-wellbeing of kids throughout the country.

DISCUSSION

Understanding the key issues behind one’s study is fundamental to developing and furthering scientific understanding - that is no different for our study. One key issue with our study was the lack of a broad variety of age groups to take data from surveys upon. This was already established in the results section, where detailing whether or not different age groups have seen different levels of exacerbation of mental health could have a substantial effect on the reliability of our claims. Our effective claims are backed

up with substantial evidence, yet by leaving out age groups that often bear different responsibilities and different stressors, we close off understanding a different page of the story of this pandemic. Adding onto the issue of sample size, we did not actually focus on key stressors from certain races as that was not the primary goal of our study. However, if we expanded upon routing to discover whether issues such as tiger parenting or cultural variances had an effect on mental health, it could have also provided a new light to our study. Our results also cannot account for the different financial and family situations of participants and how that affects their access to technology and a scholarly environment. To add on, the results were only adolescents in New York and/or receiving a New York State education. This means it is likely that not many schools or schools with varying education quality are represented in this data. This results in a lack of variation within our testing group. During this time of COVID-19, it became more difficult to conduct in-person surveys with not only anonymous answers - had we been able to derive personal struggles from our stories, the problem of the pandemic could have really been framed differently. How one responds to stress during the pandemic can depend on their background, their social support from family or friends, their financial situation, their health and emotional background, and the community they live in, amongst other factors.

It was hypothesized that the pandemic would indeed cause a major and largely negative impact on the lives of many of these young adolescents, and this claim was proven by the data that we collected. Figures 1 and 2 both show how the pandemic drastically increased depression levels and mental health issues in teenagers. It was an expected result in the study, as the pandemic shut people off from the key resources needed for the mitigation of mental health issues and contributing factors such as loneliness, being exposed to few people, and staring at the screen all day. Since struggling with mental health is considered taboo for many, adolescents have also struggled with finding help and positive coping mechanisms, and have been dealing with a lack of understanding and/or consideration from those around them. The inadequacy of available resources and materials in households prevents individuals from receiving the best treatment possible for their personal situations.

Furthermore, due to the COVID-19 pandemic, it was noted that increased time spent in homes has led to a disconnect from in-person relationships. Many adolescents have turned to social media in an attempt to cope with their constant battle with depression and anxiety. Although this measure initially was meant to be a deterrent to depression, there

were clear negative psychological effects of social media that have shown that it takes a toll on the well-being of teens in particular. Depression diagnoses in the past several decades have been on the rise. However, social media use, specifically excessive social media use, was only seen as a suggested cause of a decrease in the standard teen psychological well-being. Potential causes of this downturn include the decreased amount of face-to-face interpersonal interactions, addiction-like behaviors regarding social media influences, social pressures arising as a result of comparisons, stereotypes, etc, and possibly a social media contagion effect that simply worsens the aforementioned conditions. The overarching intent of the research is to utilize coherent and efficient questioning to provide an accurate analysis on how mental health illnesses such as depression and anxiety have been enhanced by COVID-19; this included social media and boundaries as well as adjustments to online learning. An issue with such a widespread survey that incorporated a population of individuals (mainly teens) is that traces of partiality or other external factors that may impact the reliability of our results may be present, such as a lack of honesty, a misunderstanding of the questions, or even just a natural reluctance to share information regarding mental health through this type of platform.

Discontent and the rise of poor mental health throughout the pandemic can also be traced back to the stress and workload from schools and the pandemic itself. A significant amount of participants have reported having increased school workloads since March and as the next school year began as well. The adolescents interviewed have also agreed that they can associate their change in stress level with coronavirus pandemic with varying levels of intensity. As schools were unaware of how to handle the rapid transition into online learning, most students say that they had mutual stress for the most part during the months between March and June, where the school year continued to take place. As the year progressed, there was more leniency and forgiveness for students because of the challenges that the pandemic presented, given how well students could perform and how schools could help in an attempt to reduce stress and consequences. With the return to school and the attempts to have online learning resemble a normal year, stress levels have only worsened all over again, and in many cases, become even greater than those of the 2019-2020 school year, given the increased workload and the new situation students needed to adjust to. Sitting in front of a screen in the same location for hours on end has shown to create a disconnect from others among peers, teachers, and even friends. The

lack of changing environments, social interaction, and motivated peers continues to leave adolescents in new situations bound to stress them out.

Mental-health is an often overlooked part of society that generations over time have had harder and harder times dealing with. In an era of modern technology fusing with a deadly pandemic, the mental-health crisis has never been clearer. The unique cross impacts caused by the COVID-19 pandemic brought upon symptoms of depression, anxiety and overwhelming stress to many members of the younger generations. While limited, the coping mechanisms developed throughout the duration of the pandemic have proven to be useful in creating an alternate world in which people can immerse themselves into. In future studies there should be a greater emphasis on understanding how older generations were affected by the pandemic. A possible longitudinal study to reference and see how different races mentally reacted to the pandemic and the after effects of attempting to recover from the stress due to the pandemic is also in line. There can also be an increased time interval to allow for more responses to be collected from the participants. The location could also be expanded such that the data would be gathered from a multitude of areas in order to broaden the horizons of our research. In sum, our hypothesis was proven to be correct and it established that the pandemic played a significant role in the exacerbation of the mental-health crises and the rise in mental health issues in the last year.

REFERENCES

Afrin, T. (2020). The Endless Hunger Rates in the U.S: Poverty's Crime

Center for Disease Control and Prevention (2020) Anxiety and depression in children: Get the facts.

Center for Disease Control and Prevention. (2020). COVID-19 Data from the National Center for Health Statistics.

Center for Disease Control and Prevention (n.d) Depression, Anxiety, Behavior Disorders, By Age <https://www.cdc.gov/childrensmentalhealth/images/Depression-Anxiety-Behavior-Disorders-chart.jpg>

Center for Disease Control and Prevention (n.d). Major Depression. [https://www.nimh.nih.gov/health/statistics/major-depression.shtml#:~:text=An%20estimated%203.2%20million%20adolescents,compared%20to%20males%20\(6.8%25\).](https://www.nimh.nih.gov/health/statistics/major-depression.shtml#:~:text=An%20estimated%203.2%20million%20adolescents,compared%20to%20males%20(6.8%25).)

Center for Disease Control and Prevention (2020). "Mental Health and Coping During COVID-19."

Cullen, W., Gulati, G., Kelly, B.D. (2020), Mental health in the COVID-19 pandemic, *QJM: An International Journal of Medicine*, 113(5), 311–312

Gaiha, S.M., Salisbury, T. T., Koschorke, M, Raman, U., Petticrew, M. (2020) Stigma associated with mental health problems among young people in India: a systematic review of magnitude, manifestations and recommendations. *BMC Psychiatry* 20, 538

Miranda, D. M., Athanasio, B. S., Oliveria, A. C. S., Simoes-Silva, A. C. (2020). "How Is COVID-19 Pandemic Impacting Mental Health of Children and Adolescents?" *International Journal of Disaster Risk Reduction*, Elsevier.

Pfefferbaum, B., North, C. S. (2020) "Mental Health and the Covid-19 Pandemic: NEJM." *New England Journal of Medicine*,

Sharp, J. (2020). "Coping with the Coronavirus Pandemic for People With Anxiety Disorders." *Harvard Health Blog*, Harvard Medical School.

How has Gentrification Affected Several of the Largest Neighborhoods in Queens?

Yusuke Kobuse, Afran Ahmed, Toby Chen, Kristina Lian, Jolly Zheng

Affiliation: International Socioeconomics Laboratory™

ABSTRACT

The need to address gentrification in an area like Queens, New York proves to be rather imminent. Given the racial and ethnic diversity of Queens, the social implications of gentrification can be severe to the community; these communities were built by lower class citizens and/or immigrants, and to have them be gentrified would mean that soon enough, the people already living within the area will be unable to afford the luxuries and real estate they are used to. As such, we conducted a study to see the rates of gentrification amongst some of Queens' largest neighborhoods on the basis of changes in the real estate market, household income, and demographic breakdown of these locations. Our findings show that there were significant increases in household income and real estate prices that signified gentrification was occurring within the area. However, our findings were not concrete enough to show that demographic change insinuates gentrification. Given these findings, future studies can look to identify rates of gentrifications amongst the Queens neighborhoods not talked about in this paper or other neighborhoods in general, as well as examining the role that demographics play into gentrification more in-depth to see to what extent changes need to be made in general or to the process/speed of gentrification as a whole.

Categories: Gentrification, Race/Ethnicity, Sociology

Key Words: Queens, Real Estate, Income

LITERATURE REVIEW

Gentrification

Though the definition of the term is frequently disputed, most individuals associate *gentrification* with the process in which there is an increase in investment and renewal made to low-income neighborhoods by the middle-upper class (Hwang, 2016). While the idea of improving upon a community does not seem like it would pose an issue, most of the communities that are gentrified are home to racial and ethnic minorities who settle for these lower-income neighborhoods given that their economic status may not be able to keep up with more expensive areas. Additionally, the racial and ethnic minorities who are present in gentrified areas were residing within the area prior to any sort of gentrification. They were able to help stabilize communities that previously experienced deindustrialization and suburbanization through establishing businesses accordingly, taking into account affordability as it relates to the neighborhood residents' income (Hwang, 2016).

The link between gentrification and racial attitude becomes more imminent when taking into account that most gentrifiers do so in order to avoid living in homogenous communities in which there is a high presence of racial and ethnic minorities, such as African Americans, Asians, and Hispanic/Latinx (Hwang, 2016). The study conducted by Hwang in 2016 tested several hypotheses, in which most of them ended up being proven correct. Some of the major findings include that predominantly Asian neighborhoods were more likely to experience gentrification than neighborhoods with less Asian presence and that both neighborhoods in which there is an ample presence of Asians and neighborhoods with an ample presence of Hispanics were more likely to experience gentrification than neighborhoods with an ample presence of African Americans (there was no difference amongst white neighborhoods). While the study done by Hwang identified key aspects of gentrification as it relates to race in major cities, one city that was not covered was New York.

Queens

New York City inhabits over 8.3 million individuals coming from an array of cultural backgrounds (Census, 2019). With a racial demographic of 42.7% white, 29.1% of Hispanic or Latinx, 24.3% black or African American, and 14.1% Asian, New York City (NYC) is home to the most diverse people across the nations. The median income per individual and household in NYC is \$32,320 and \$63,998, respectively (Census, 2019). The demographics further differentiates when looking into the five sections NYC is split into being boroughs. New York City has five boroughs being Brooklyn, Manhattan, Queens, Staten Island, and The Bronx.

Queens is located on the easternmost side of New York City. It is right next to Brooklyn and is connected to Manhattan through multiple bridges like the Manhattan Bridge. Compared to the other boroughs, Queens is by far the largest in terms of land area, stretching over 178 square miles (NY Government). In 2017, it was crowned as the “most ethnically diverse urban area on the planet,” with at least a hundred thirty eight different languages spoken by the inhabitants in Queens (Koyfman, 2017). It is also the second most populated borough, behind Brooklyn having 2.59 million inhabitants, with 2.287 million inhabitants. Within Queens itself, people are further divided into neighborhoods in which they more closely associate with compared to borough or the city (NY Government). Queens is home to a variety of landmarks ranging from parks to sport stadiums to even airports. Queens holds the largest park in the city being Flushing Meadows Park which is also in close proximity to both the US Open tennis tournament and New York Mets baseball stadium. Queens also inhabits two of the most used airports in the city being John F. Kennedy International Airport and LaGuardia Airport.

In this paper, we will analyze gentrification in Queens neighborhoods specifically. Hwang’s findings exemplifying the link between gentrification and race are important to understand when analyzing several of Queens’ neighborhoods, as Queens is considered to be the most racially and ethnically diverse community in the state. For example, neighborhoods like Elmhurst and Corona have racial presences of the following: 54% Latino, 4% African American 5% White, and 35% Asians (U.S. Census Bureau, 2019). With racial/ethnic demographic breakdowns like this, the effects of gentrification on Queens neighborhoods could certainly spell adversity.

Now that it has been identified that Queens County is susceptible to gentrification on the basis of its racial/ethnic breakdown, it is important to take a look at the rate of gentrification among some of the several larger neighborhoods in Queens. These include Astoria, Elmhurst/Corona, Flushing/Whitestone, Long Island City (LIC), and Woodside/Sunnyside. These neighborhoods were further looked into three main categories which are dependent on the location. On the map of Queens, NY, Corona/Elmhurst is located more in the middle. Meanwhile, Astoria, Long Island City (LIC) and Woodside/Sunnyside are located on the upper left of Queens. On the opposite side, Flushing/Whitestone are located more on the upper right of Queens. From looking at the geographical location of these neighborhoods, further understanding of potential trends can be improved.

As such, these neighborhoods were the central focus of this paper, and directly relate to our hypotheses. We hypothesized that these Queens neighborhoods will have become more susceptible to gentrification over the years given Queens' racial/ethnic background. In order to test this hypothesis, we analyzed the real estate, household income, and demographics of these neighborhoods, as they serve as vital indicators of whether or not gentrification has occurred within an area. They are all factors one would see change as it relates to gentrification.

METHODS & MATERIALS

In order to test our hypotheses, we conducted archival research regarding gentrification rates in several of Queens' largest neighborhoods. We researched the following neighborhoods: Astoria, Elmhurst/Corona, Woodside/Sunnyside, Long Island City (LIC), and Flushing/Whitestone. To label a neighborhood as one that has been gentrified or in the process of being gentrified, they must hit the following criterias: increase in household income, increase in property value (entailing housing, buildings etc,) and change in racial/ethnic demographics. The aforementioned serve as adequate criteria for measuring gentrification in neighborhoods for the following reasons:

Real Estate

Real estate refers to the market that encompasses housing and other properties/buildings. It serves as an indicator for the gentrification of a neighborhood because gentrification refers to investments made to lower income neighborhoods; these investments include improved infrastructure and bolstered market prices, including the real estate market. If the value of real estate and housing increases in a neighborhood from previous years, that means there must have been some sort of improvement made to the area that would constitute for the increase in value. The same goes for other properties and buildings; improved infrastructure of a neighborhood would allow for more resources to be allocated to that neighborhood, which would translate to more well-funded, strong-founded properties and buildings.

In order to use the real estate market as a measure of gentrification within these Queens neighborhoods, we compared the price of housing and other buildings over the years as it relates to the modern day. If the price increased, that would indicate that some sort of gentrification has occurred.

Household Income

Household refers to the gross income of all household members in a family. Household income is crucial in determining whether a neighborhood is gentrified as can be concluded from the definition of gentrification itself. As previously mentioned, gentrification is primarily initiated by the middle-upper class. The communities that are often gentrified are those of low-income. The change in prevalent socioeconomic status of those living in these neighborhoods would lead to an increase in household income. Therefore if a neighborhood is undergoing gentrification or has undergone gentrification, there would be significant increase in household income over time.

In order to compare household income for each neighborhood, we used the census to record and evaluate change in household incomes. We decided to look at the data available for us which are typically one to three years apart.

Demographics

Demographics also serve as a sign that gentrification has occurred in a neighborhood. Gentrified neighborhoods appeal more towards higher income families as opposed to lower income families. The reason is that when gentrification occurs in a neighborhood, the value of the markets in the neighborhood increase, and may increase to a point where it becomes difficult to afford some of these markets for a lower income family. It would appeal more so to higher income families because they get to reside and make use of a market that is well-priced relative to the income they make. Given the structure of the current job market, minorities (with the exception of Asians) often are subject to lower paying jobs and wage gaps; ungentrified neighborhoods would appeal to them because it would be more affordable relative to their income. For example, Black/African American individuals make median weekly earnings of \$813

Hispanics make \$785, Whites make \$1,008, and Asians make \$1,392 (Bureau of Labor Statistics, 2020). With that being said, if there is a change in racial/ethnic diversity within a neighborhood, it may be a sign of gentrification. A decrease in racial/ethnic diversity construes the idea that gentrification must have occurred; the minority groups would be more likely to move out and be displaced if the markets increase in price. As such, we analyzed the racial/ethnic breakdown of the several Queens neighborhoods to see if we can identify any decreases or even increases in population that would allow us to gauge any sort of gentrification.

In order to look over the changes in racial/ethnic demographics, we will once again turn to the census as well as numerous other archival results from surveys. Similarly to the household income, we once again record and evaluate the change in racial and ethnic demographics in the particular neighborhood. With these records, we will be analyzing potential trends that are occurring in each neighborhood.

DATA & ANALYSIS

Astoria

Real Estate

Prices for real estate in this neighborhood saw an average increase trend towards one bedroom and two bedrooms, with a 3.9% increase and 4.3% increase respectively. Meanwhile, studios saw a 1.0% decrease in 2019 compared to 2018 prices. This data was taken from real estate that had been listed under \$10,000 so any percentage in price change may have drastic effects that we must take into account. For studios, one bedroom, and two bedroom houses, the mean prices were \$1896, \$2196, and \$2553 per month, respectively (M.N.S. Real Estate, 2019). The prices from 2018 went up by approximately \$82 and \$105 respectively for one bedroom and two bedrooms, while studios saw a decrease in prices by \$18. According to the Queens rental market report, the data is recorded monthly and shared with landlords to adjust prices accordingly. The increase in prices from 2018 to 2019 may indicate plans for refurbishment and renovating houses in the future, showing that gentrification indeed is occurring in Astoria.

Household Income

The median household income for Astoria, NY 2018 is \$68,560 (Furman Center, 2019). 2016 data shows the median household income at \$58,275 (City Data). An increase of over \$10,000 in median household income is a very significant difference for a span of only two years. From the rise in median household income from 2016 to 2018, we can assume that the median household income would increase at a similar rate for onwards from 2018. A large increase in median household income is extremely common during the process of gentrification. The drastic increase in median household income in Astoria, NY may indicate signs of the start of gentrification and/or the process of gentrification in this neighborhood already.

Demographics

In 2018, there were about 160,871 people in Astoria, with 14.2% of the population identified as Asian, 8.2% identified as black, 24.4% identified as Hispanic, and 49.8% identified as white (Furman Center). In 2019, The numbers were as follows: 15% identified as Asian, 5% identified as Black, 27% as Hispanic, and 50% as White. Other groups were not included as the percentage was not greater than 1% (Census Reporter, 2019). The Asian population saw an increase of approximately 7% while the Black population saw a decrease of 3.2%. The Hispanic population saw an increase of 3% while the White population stayed relatively the same. The diversity of the neighborhood can be seen diminishing while larger population groups seem to overwhelm the rest. This change in diversity may be something that leads towards gentrification but cannot be proven by our current data.

Elmhurst/Corona

Real Estate

Real estate and housing prices have seen an increase throughout the years in Corona, Queens. Sometimes around 2015, Elmhurst and Corona saw its median household rent drop to around \$1,500; in 2019, this number has increased to approximately \$1,610. If an increase in \$100 is not convincing enough, the average rent price in 2006 for Corona, Queens was \$1,370. What we see is a sizable increase in the price for rent over the years, implying that investments and improvements must have been made to the housing in the area in order to uphold the need for these increased rent prices. This translates to the fact that there must have been some sort of gentrification implications with respect to these increases in rent.

Household Income

The median household income in Corona/Elmhurst was \$54,250 in 2018 (Furman Center), while in 2019 it was \$67,143. The majority (74%) of the population has a household income of less than \$100,000 dollars while the remaining 26% make more than that. The increase just in one year is substantial. This increase can lead and is pointing towards gentrification. Such influx cannot be possible unless this certain

neighborhood's population changed with respect to people with higher wages moving into and lower income people moving out due to not being able to afford or were rent burdened. These are effects of gentrification and such sudden change points at the rapid pace of it in this neighborhood.

Demographics

According to the data from the Furman Center, in 2018, Corona/Emhurst ,Queens consisted of: 32.8% Identified as Asian, 4.2% identified as black, 54.3% identified as Hispanic and 5.7% identified as white. Compared to the data taken from the 2019 ACS : 35% identified as Asian, 4% identified as black, 54% identified as Hispanic and 5% identified as White. The time gap between the 2018 and 2019 data collection is not large to have a significant difference between each one as observed comparing the data. However, we see that the Asian population increased by around 2%. Other than that, the data has stayed the same so it is hard to conclude anything from it, including if gentrification has been affected by the demographics.

Flushing/Whitestone

Real Estate

Prices for real estate in this neighbourhood has been on an upward climb for one bedroom, and studio apartments, with a 1.8% increase and a 1.2% increase respectively. However, we see that two bedroom estates lost value, seeing a 4.6% decrease. Looking at the actual prices, we see that the median cost of a 1 family house has increased from \$670,290 in 2018, to \$898,890 in 2019. The prices from 2 family housing has also increased from \$374,910 in 2018, to \$518,330 in 2019. This aligns with the aforementioned trend of housing in flushing going on an upward curve. However, although housing prices have been steadily increasing, Flushing is the only neighborhood in Queens where the average rent has fallen from \$2,085 in 2018 to \$2,065 in 2019. Although this is the case, the slight deviation does not take away from the increasing real estate prices in the area. The significant change in the real estate prices in the area allude more towards the idea that there has been gentrification within the area more so than the \$20 decrease in average rent since 2018 to 2019.

Household Income

For the 90,000+ households in Flushing/Whitestone as of 2019, the median household income was \$54,933, with a margin of error of around \$6,000. Majority of the population had a household income over \$50,000, with 7% making over \$200,000. However, in 2016, the household income had been substantially less, hovering around \$48,457 for Flushing (City Data). There is a clear increase in price over the years, which can very well be a sign of gentrification. Higher income families must have moved into the area of Flushing whilst lower income families were displaced due to the fact that they may not have been as likely to be able to afford and keep up with the growing markets and prices in the neighborhoods as a result of improvements and investments being made into the neighborhood. When considering the margin of error on the lower end as well, the price would still be slightly above what it was during 2016, and substantially higher when considering the margin of error on the higher end. The change in household income can very well serve as a significant indicator of gentrification in Flushing/Whitestone.

Demographics

In 2019, the racial/ethnic breakdown for Flushing/Whitestone is as follows: 56% Asian, 24% White, 16% Hispanic, 2% Black, and around 1% mixed. There has been an increase of 2.5%, 0.1%, and 0.7% for the Asian, White and Black communities respectively from 2018. The Hispanic population has dropped by around 4% from 2018. Given these increases and decreases in these populations, gentrification implications can be deduced. The populations that saw an increase, Asians and Whites, make significantly higher in terms of income compared to their Hispanic and African American counterparts (\$1,008 and \$1,392 compared to \$785 and \$813, respectively). What we see here is a decrease in Hispanics, who make the lowest income of the four racial/ethnic groups; this implies that the infrastructure in Flushing/Whitestone may have been improved, or enough investments may have been made in the neighborhood to displace Hispanics from the community, as their incomes may not have met the new standard of pricings and markets within the area. Therefore, there may have been gentrification occurring that is identifiable based on demographics alone.

Long Island City (LIC)

Real Estate

Compared to the rest of the neighborhoods, the average price for rent in LIC has increased astronomically. As of 2019, the mean prices for studios, one bedroom, and two bedroom houses have increased by 5.6%, 6.2%, and 5.8%, respectively, since 2018. To really understand how substantial these price increases are, we must consider the actual prices themselves. For studios, one bedroom, and two bedroom houses, the mean prices were \$2,644, \$3,255, and \$4,291 per month, respectively (M.N.S. Real Estate, 2019). This means that since 2018, the prices for each of the three types of housing have gone up by approximately \$150, \$200, and \$250 dollars, respectively. The increase in rent can more often than not be attributed to the improvement of building and housing infrastructure; higher quality housing demands higher pricing. This certainly serves as an indication that the gentrification has been occurring in LIC.

Household Income

In 2016, the median household income in LIC was approximately \$59,464 (City Data, n.d). In 2019, the median household income for LIC was approximately \$79,180 (U.S. Census, 2019). The price increase from 2016 to 2019 is substantial. This increase in household income can be linked to higher rates of gentrification. This means that over the years, there has been a recent influx of higher-earning individuals in LIC compared to previous years, meaning there must have been some sort of displacement where lower-income families got pushed out of LIC. Higher incomes constitute the ability to afford increased prices in the market and other properties, which is an aspect of gentrification. Given that the change in household income is approximately \$20,000, this can give us insight on the rate at which the gentrification is occurring. A change that dramatic would constitute for a much higher rate in gentrification than if it had been a few thousand dollars.

Demographics

In 2017, the racial/ethnic breakdown of LIC was the following: 43.1% White, 25.8% Hispanic, 17.8% Asian, 5.4% Black/African American, 2.5% Native Hawaiian, 1.2%

American Indian/Alaskan Native, 2.6% 2 or more races, and 1.6% indicated other (City Data, 2017). While LIC may not be as diverse as a neighborhood like Corona, Queens, there is still dispersiveness amongst race/ethnicity. In 2019, the racial/ethnic breakdown was approximately 50% white, 5% Black/African American, 15% Asian, 27% Hispanic, 3% 2 or more races, while the population for other, American Indian/Alaskan Native, and Native Hawaiian were small enough to the point where they could not constitute a percentage (Census Reporter, 2019). What we can see is a clear loss of diversity within LIC; the percentage of White individuals saw an increase, while the other races/ethnicities saw a substantial decrease with the exception of Hispanics. However, these findings alone are not sufficient enough to identify whether or gentrification has occurred; while the percentage of African Americans in the area has decreased, the percentage of Hispanics has also increased, and so the increase and decrease both support and refute the idea that gentrification is occurring in LIC. Race/ethnicity alone is not a sufficient indicator for this neighborhood specifically.

Woodside/Sunnyside

Real Estate

The real estate market for Woodside has been increasing steadily year after year. In 2018, the median sales price was \$405,000, in 2019, that rose to around \$410,000 and in 2020, it continued to rise to around \$420,000. Data from median sale price, price/Sqft, number of transactions, all indicate an increase in prices with a 34%, 54%, and 30% respectively from 2019. The rent prices in woodside for 1 bedroom, 2 bedroom, 3 bedroom, and 4 bedroom houses have also been increasing at a steady rate year over year, with a 5%, 8%, 8%, and 38% increase respectively. However, studio apartments have decreased by around 8% from 2019, with a median rent of only \$1,550 in 2020. These increases in sales and rent prices certainly can allude to the gentrifying of Woodside in more recent years. The increase in property value and rent is a significant indicator of gentrification within the area as it implies there must have been some sort of infrastructural improvement and investment within the neighborhood in order for the prices to jump as much as it did.

Household Income

In 2018, the median household income of Sunnyside/Woodside was \$72,240 (Furman Center, 2019). It is important to note this as household income may fluctuate depending on the amount of people in a particular household. However, there were no reports done on the average person per household in 2018. In 2019, the average person per household was 2.5 people. The median household income of Sunnyside/Woodside is \$80,913 (Census Reporter, 2019.). The household income goes across a fairly large range of under \$50K, \$50K-\$100K and \$100K-200K. In fact for each section, there is approximately 30% of households fitting into the income, being 32%, 27%, 28% respectively (Census Reporter, 2019.) The range in household income, as well as the spread percentage in each group sheds light on the issue of increased prices for rent ,as well as following affordability. Not to mention the \$8000 increase in household income average in one year is quite notable. This may suggest gentrification occurring at a higher rate, although the household income group of under \$50k is the majority in the Woodside/Sunnyside neighborhood with 32%, the top group making around \$100k-\$200k makes up 28%. Rent increase will make it hard for those with low incomes to afford, increasing gentrification so although not apparent as other neighborhoods, changes in Woodside/Sunnyside going forward should be noted.

Demographics

In 2018, the ethnic/racial breakdown for Sunnyside/Woodside was as follows: 40% Asian, 1.5% Black/African American, 27.3% Hispanic, and 28.7% White (Census Reporter, 2019). In the time frame of only a singular year, there appears to be a decrease in the number of some minorities. Meanwhile, there is an increase for others. The ethnic/racial breakdown for Sunny side in 2019 was as follows: 37% Asian, 29% Hispanic, 28% White, 3% mixed, 2% Black, and 1% other (Furman Center, 2019). From the comparison, we were able to note the decrease in percentage of Asians and Whites of 3% and 0.3% respectively. On the contrary, there was an increase in both Blacks/African Americans and Hispanics of 0.5% and 1.7% respectively. The changes found were extremely small and slight. Given the decrease in Whites and Asians and increases in African Americans and Hispanics, this implies that the rate of gentrification in Sunnyside/Woodside may be rather stable. However because of the characteristics of

these changes, we concluded that demographics were not a sufficient indicator, especially when only compared over a singular year.

DISCUSSION

Our findings support our hypothesis that over the years, several of Queens' largest neighborhoods have been experiencing some sort of gentrification. The most imperative indicators for the increase in gentrification were the real estate market and household income within the areas more so than the demographics. While the demographic change certainly can indicate whether or not an area is experiencing gentrification, most of the demographic changes that we were able to find for each neighborhood were either not significant or enough or there was enough change that some of the changes end up counteracting each other. The changes may have been insignificant because significant changes of demographics occur over long periods of time. In this case, the comparisons were nearly all made only over a period of a year, causing only small differences, thereby difficulty in having significance.

In all the neighborhoods we analyzed, there was an increase in the real estate market and prices across all aspects, with the exception of rent prices in Flushing/Whitestone. These increases in the real estate market prices indicate that there were structural improvements and investments made to these neighborhoods in order for these prices to increase the way that they did; thus, indicators of gentrification within the areas. Across all the neighborhoods, the household income also saw an increase, implying some sort of gentrification was occurring; higher income families must have been moving in while lower income families were being displaced due to their abilities to keep up with and afford the growing markets and prices.

As aforementioned, the increments by which the racial/ethnic diversity of these neighborhoods changed alone was not enough to tell us whether the neighborhoods had been gentrified. There were both increases and decreases amongst higher earning and lower earning individuals as per their race/ethnicity, so a concrete conclusion could not be drawn regarding race and ethnicity. Although, it certainly still may be a possibility if looked into a different neighborhood where the degree of dispersion is much larger.

Queens upholds its identity as the most diverse urban location on the planet, and as such it's no surprise that the diversity is for the most part upheld in its largest neighborhoods.

However, despite the maintenance of its diversity, this can still mean trouble for Queens residents. With investments and improvements being made at such drastic rates within several of Queens' neighborhoods, many of its residents that cannot keep up with these increases will find themselves to be at risk of being displaced and in extreme cases, nowhere to go. Gentrification does not always need to have a negative connotation; in the big picture, improvements to infrastructure can certainly bolster a location's prosperity and credibility. However, the issue stems from the fact that oftentimes those who are at risk of being gentrified cannot keep up with the gentrification because they are not provided with the resources or aid to do so.

Like with all studies, there exists limitations within ours as well. Our study only accounts for several of Queens' larger neighborhoods, which means that we were unable to look into some of the other Queens neighborhoods which are large in their own right. This could mean that the validity of our hypothesis is subject to change. The findings of gentrification as it relates to income, real estate, and demographics for other Queens' neighborhoods could either support the notion that Queens is being rapidly gentrified or that the rate of gentrification is relatively stable if not decreasing. In addition, another limitation is the margin errors that exist in many data points. When comparing the demographics and household incomes, a margin of error of over 10 percent was noted. A high margin error invalidates any large difference as a high margin of error may mean the data points collected may have been a result of chances. To add on, another limitation is the use of two different sources when comparing the household incomes and demographics. Because the census is only done every decade, results from the same source can not be done. There may be a few differences and discrepancies between the way Furman Center and the census is collected, which can potentially invalidate the claims found and made.

Our study can have several future implications. Given our findings of what is seemingly a rapidly gentrifying Queens, researchers can look to see the rate of gentrification in other neighborhoods as well. Brooklyn, NY is an excellent place to start, as it shares many of the same characteristics as Queens and has sometimes been argued to experience gentrification at a much higher rate than Queens. A future study could also look at

gentrification of Queens on a much larger scale, meaning encompassing several other Queens neighborhoods aside from the ones we covered. Naturally speaking however the studies can extend far beyond Brooklyn as well and address any neighborhoods that appear to be gentrifying or at risk of gentrifying. It may also be helpful to do a year-by-year analysis of gentrification to truly get concrete rates of gentrification, as our study compares distinct time periods and may not necessarily always track the year-by-year rate of gentrification in these neighborhoods. There is also the display of the imminent need to act in favor of those who draw the short end of the stick when it comes to gentrification. The diversity within Queens is subject to being lost if gentrification continues at its current rate while supplies and aid are either stagnant or not being allocated at all to the people who are forced to be at risk of displacement. With that being said, another study could be done honing more in on racial/ethnic implications of gentrification, both whether they serve as indicators of gentrification or the effects it may have on them as well.

REFERENCES

Census Reporter (2019) NYC-Queens Community District 4--Elmhurst & South Corona PUMA, NY *ACS 2019*

Census Reporter (2019) NYC-Queens Community District 7--Flushing, Murray Hill & Whitestone PUMA, NY *ACS 2019*

City Data (2016, 2017) Long Island City (LIC)

Hwang, J. (2016). Pioneers of Gentrification: Transformation in Global Neighborhoods in Urban America in the Late Twentieth Century. *Demography*, 53(1), 189-213.

Koyfman, S. (2017) The Languages Of Queens: Diversity Capital Of The World

MNS (2019) *Queens year end market report 2019 PDF*

NYU Furman Center (2019), Astoria QN01 *State of the City 2019*

NYU Furman Center (2019), Elmhurst/Corona QN04 *State of the City 2019*

NYU Furman Center (2019), Flushing/Whitestone QN07 *State of the City 2019*

NYU Furman Center (2019), Woodside/Sunnyside QN02 *State of the City 2019*

U.S. Census Bureau (2019) New York City, New York

Zumper (2021) Average Rent in Woodside, New York, NY Rent Prices

The Implications of Climate Change on Indigenous People

Kristen Wang, Reinesse Wong, Naima Shahzad, Sukie Zhang, Afran Ahmed

Affiliation: International Socioeconomics Laboratory™

ABSTRACT

The effects of climate change can prove to be catastrophic to the environment as a whole as well as the very people living on it. In fact, the two are closely related. As the environment suffers, so do the people. Melting ice caps and changes in global temperatures lead to the submergence of territories and destruction of sea life as well as heat waves/ice ages and arrival of invasive species, respectively. Though the effects of climate change extend to all, indigenous people are disproportionately affected. Climate change terrorizes their lands and living capabilities, as the relocation of indigenous people can prove to be detrimental; their lifestyles are heavily catered towards the geographical location they reside in. This paper examines the previous and current legislation put in place pertaining to climate justice for indigenous people and analyzed whether or not they have been effective thus far. We looked at the social, economic, and physical impacts that the legislations have had on the indigenous people and whether or not there was sufficient aid for the people, or if they would be better off with the rights to their own reservations. It was found that for all the Indigenous peoples analyzed, the current legislation was not sufficient enough and for the most part had negative impacts socially, economically, and physically. Given our findings, future research conducted can pertain to other groups of indigenous people or take a look into what legislation would actually be sufficient to aid the indigenous people with their fight against climate change.

Categories: Climate, Government, Justice

Key Words: Indigenous Peoples, Legislations, Rights

LITERATURE REVIEW

Climate change generally refers to changes in global temperature as a direct result of greenhouse gas emissions. In the modern day, the global temperature has drastically been increasing, causing the upstart of several soon-to-be irreversible effects. Most people can identify the issue of rising sea levels as it relates to the melting of ice caps in the arctic regions or the increase in drought/heat wave prominence due to increasingly warm temperatures. Of course, it is not just limited to ice caps, or solely about the effect, it has on the Arctic environment. The usage of non-renewable energy resources and fossil fuels is a major facilitator in the increase in CO₂ emissions into the atmosphere. Another major contributor is deforestation, which has occurred at an ever so increasing rate. The relationship between deforestation and greenhouse gas emissions is directly proportional. Trees are known to be able to store adequate amounts of CO₂, as it is required for photosynthesis and cellular respiration. When these trees are chopped down, all the CO₂ stored in the trees is released into the atmosphere. When there is a constant release of gases into the atmosphere and a lack of trees to be able to absorb the carbon dioxide, the net emission favors a substantial increase in global temperature. Climate change has become even more of an issue due to the lack of an appropriate response. The lack of initiative pertaining to climate change only exacerbates the problem, as it lets the issues become prolonged, so much so to the point where its implications will become permanent by no later than 2030.

Although climate change negatively affects everyone, it disproportionately affects indigenous peoples. The United Nations defines indigenous people as those who have distinct social, economic, political, and cultural characteristics from dominant societies, in which those distinct traditions stem from the beginnings of ethnic origins. Indigenous peoples are significantly affected by climate change despite having the lowest rates of CO₂ emissions and participation in detrimental climate change- because their lifestyles are dependent on the use of natural resources and the environment. Additionally, climate change infringes on indigenous peoples' human rights and exacerbates the political and economic marginalization, discrimination, and general welfare risks (i.e. health issues, unemployment, and poverty) they experience. Indigenous peoples and leaders have been rightfully fighting for autonomy and regulation control of their reservation lands due to the growing risk associated with their lands in relation to climate change (Tsosie, 2007). To put the risk into perspective, consider two areas where indigenous peoples are most

prominent; the Pacific and the Arctic. Both of these groups of indigenous peoples contribute little to no greenhouse gas emissions due to the lack of industrial capacity of their respective locations, yet they still suffer the most. Indigenous peoples who reside in Pacific Islands are threatened by the rising sea levels and storms associated with climate change. If the perils associated with climate change continue it will be next to impossible for a group like the Pacific Islanders to survive without any international aid (Tsosie, 2007). Additionally, if these islands are to be drowned or eroded away before a sufficient amount of Pacific Islanders are able to relocate, it could translate to the death of a culture and tradition. The same detriment can be seen amongst indigenous peoples who reside in the Arctic. The Arctic indigenous people are just as heavily reliant on their environment for sustenance as the Pacific Islanders are. However, with the increase in global temperature, the ice caps within their area are beginning to melt; the implications of which include the loss of several animals including, but not limited to, walrus, polar bears, and caribou (Tsosie, 2007). Additionally, the environmental imbalance has given rise to invasive species within the tundras and forest, leading to a decline in vegetation and forestation.

Two United Nations conventions, the International Labour Organization Convention (ILO) and United Nations Framework Convention on Climate Change (UNFCCC), have attempted to address climate change as it relates to indigenous people. The ILO Convention #169 issued that indigenous peoples cannot be forcibly displaced from their occupied lands for any reason that is not deemed “necessary” (Tsosie, 2007). The UNFCCC has issued the Paris Agreement, in which one of the major clauses pertains to the idea that the nations must achieve global temperature levels above 1.5 degrees Celsius in relation to the Industrial Revolution. However, the UNFCCC resolutions are on a much broader scope of time and heavily dependent on the willingness of the people regarding decreasing carbon emissions into the atmosphere. However, many either fail to perceive the effects of climate change or acknowledge it but choose not to take any action. As such, we hope to draw attention to just how severe the effects of climate change, through the lens of the indigenous peoples, can be and why change has to start immediately.

Currently, there does exist efforts and legislation intended to help populations who suffer from the effects of climate change on behalf of a developing nation. Some of these initiatives include relocation policies, where people who are considered “global citizens”

in under-developing nations are to receive compensation for any harm done to their environment from the developed nations that most directly caused the damage (Tsosie, 2007). Some of these compensations can include the granting of citizenship within the developed nation responsible for the harm and they would ultimately be allowed to redistribute the benefits however they choose to. However, indigenous people are exempt from this for the most part. Indigenous identity and culture is heavily dependent on geographical location, and so there is no other place where they will be able to continue their practices and traditions (Tsosie, 2007). Climate change has proven to be rather unfavorable for indigenous peoples in particular. Within the United States specifically, there are federally recognized tribal governments that are given sovereignty over their own lands; however, this sovereignty has ended up being largely unsuccessful because of the restraints imposed on the governments by their nations classification of being “domestic dependent.” What this means is that a tribal government is subject to the jurisdiction that is linked to another tribal government. For example, the rights of Alaskan Natives were limited as a result of restrictive reading of the “Indian Country” by the Supreme Court. As such, there has been the imminent need for these federally recognized tribal governments to pass legislation and policy that aligns with federal law, tribal law, and international human rights laws (Tsosie, 2013). We hypothesized that a) indigenous people are in need of proper legislation and regulation that actively combats the harm being done to them due to climate change and b) the legislation and policies currently in place are proving to be ineffective given the current circumstances of their situation.

MATERIALS & METHODS

In order to test our hypotheses, we made use of archival data and case studies to analyze the need for climate justice and reservation rights for indigenous peoples as a result of the ongoing issue of climate change. We looked into the history and modern day issue regarding climate change for several groups of indigenous people, including the following:

- Inuit in Canada and United States
- Indigenous people in the South Dakota Indian Reservation
- Indigenous people in the Amazon Countries
- Indigenous people in East Asia

- Indigenous people in Australia/New Zealand
 - Maori
 - Aborigines
 - Torres Strait Islanders
- Lakota
- Indigenous people in West/North Africa

We looked at legislations and initiatives that have already been implemented and determined whether or not they have proven to be effective. The effectiveness of the legislation was determined on the basis of the prosperity of the indigenous people and their lands and the progression of their prosperity (from previous times to modern day). After the analysis of the legislation, we made a deeper inspection of the social, economic, and physical implications of climate change and the climate justice currently in place on the indigenous peoples. Once our research on the several indigenous groups was completed, we discussed the right of reservation land and how they should be managed and what the future for indigenous peoples looks like even if they are provided with ample rights to their land.

RESULTS

Indigenous people in North/South America

The Inuit are indigenous peoples who are native to Northern Canada and Alaska. There is currently one Indian reservation called the Metlakatla Indian Community of the Annette Island Reserve in southeastern Alaska. Beginning 1960-1970, Inuits organized an organization called Inuit Tapiriit Kanatami to advocate for land claims and self government individuals of colonization efforts. The Nunavut Act of 1993 allowed for Inuit people to gain self governance over their native lands, as they have been independently governed since December 1st, 2005 (Freeman, 2010). However environmental issues have led to a decrease in quality of life for Inuit people, as overcrowding, In 2016, 51.7% of Inuit Nunangat reported living in overcrowded conditions, compared to the 8.5% of non Inuits living in Canada. Indigenous populations in reserves have been found to have a lower quality of life. “Infant mortality rates (IMR)

vary from three to seven times the national average. Off reserves, Indigenous populations tend to have an IMR two to four times higher than the non-Indigenous population” (Burnett, 2006). In addition, studies have shown that type-2 diabetes is two to five more common in indigenous people related to historical trauma. Land reserves have also impacted indigenous peoples economically, as in comparison to non-Indigenous peoples, Indigenous peoples’ income tends to be below the Canadian average. In 2016, the median after-tax income for non-Indigenous people was \$31,144. For those who identified as First Nations, it was \$21,253, for Métis, \$29,068, and Inuit, \$23,635” (Burnett, 2006).

Native tribes in South America are found in various areas including Peru and Brazil. The Amazon rainforest in particular is home to the world’s most biodiverse environment. Indigenous land in South America has long been sought after for its potential source of materials and wealth, especially in the Amazon Rainforest. Generally, there is little information about Colombian Amazon people and their response to climate change likely due to a lack of response. The Columbian Amazon people consists of 52 ethnic groups and 10 isolated languages. Climate change has caused dry summer seasons where summer did not arrive at all in 2007 and rainy seasons were in disarray, and river floods deprived the indigenous people of food sources since young fish not yet developed were killed in flood in 2005. All these have served to fail crops from fruit trees in tubes like Nonuya, Witoto, Muinane and more who depend on them. In addition, there is a potential diminution of food supplies. Fish is the main source of protein and is one of the resources more directly hit by altered seasonality. Though manioc, the main source of carbohydrates, is a very resistant and adaptable crop, other crops that enrich and complement the diet are affected by the changing climate” (Kronik and Verner, 2010). This has been coupled by the lack of climate protection policy, which seems to affect indigneous people who rely on natural land to survive. Recently, the government’s policies seem to disregard indigenous peoples in the Amazon, viewing them as a block to economic gain. In 2019, the President of Brazil questioned the need to protect indigenous lands in favor of economic opportunity. During the rule of Brazil’s authoritarian regime, generals wanted to turn “underdeveloped, sparsely-populated region into a modern commercial powerhouse stitched together with highways, factories, and homes' ' and had no problem cutting directly through the Waimiri-Atroari people (Pagliarini, 2019). Controversy has not ended there, with the construction of the Belo Monte Dam serving as an example of an attempt to divide the Wamiri-Atroari people. The construction of the Belo Monte Dam has shown governmental struggle over

protection for indigenous people and economic opportunity. The decades long battle has ended in the Belo Monte Dam being built however has been fraught with a large amount of legal battles (Perez, 2015).

The Sioux tribe reside in a designated 2.8 million acre land in South Dakota in a reservation called Pine Ridge. In 1874, the Homestake Mine was located, where 3,636,340 troy ounces of gold were produced. However, the Lakota Sioux tribe was only sent to South Dakota after gold was extracted, leaving them with one less source of income (Dockery, n.d). Today, the Pine Ridge Indian Reservation is so severely underfunded and cared for by the government that there is an “80 to 90 percent unemployment rate with a median individual income of \$4,000 a year” (Strickland, 2016). Life inside the reservation has been disconnected from the government and support from the outside world as entrance into the community depicts images of trailers, half decaying cars, and garbage piled on lawns (Riley, 2016). The crippling economic crisis that indigenous people are facing is in part due to the government’s policies that control much of the reservation land. This land is held “in trust” by the federal government, meaning the land cannot be sold or owned by Indians, denying them property rights. Their property is micromanaged by Washington through the BIA (Bureau of Indian Affairs), or BIE. Although money has been constantly supplied and increased over the years, the economic problem in the reservation seems to be getting worse. The Crow tribe living in this reservation is broke and in debt. The land contains coal and valuable natural resources that cannot be developed by the tribes due to the fact they don't own the land. While there are fears within the tribes about development of land, the fact is that they are spiraling into economic ruin as each year passes and government inaction is not delivering the help that the tribes need.

Indigenous people in South Africa/ Southern Africa

As with many issues in social justice, the history of environmental racism in South Africa and southern Africa can be traced back to the era of colonialism by western European powers. The British showed interest in acquiring African colonies, because of the booming spice trade and increased knowledge in sea routes; these desires eventually came to fruition in 1795. However, the colony in the south was returned to the Dutch government eight years later. The British re-seized the colony again in 1806 as a means to protect their access to sea routes in light of the Napoleonic Wars (Darmofal, 2012).

From then on, Cape Town was transformed into a hub for traders and served as a layover for voyagers. It was from this surge in population that the environmental riches of southern Africa were noticed, including the proximity to the ocean providing seafood, the temperate climate, fertile land, and abundance of natural resources (Van Sittert, 2011). Slavery was the norm until 1828, however, even after its abolition, mistreatment of indigenous people continued. The influx of European settlers created land shortages and increased tension between them and native people (Darmofal, 2012). Walker (1929) explains that these settlers asserted that Europeans were predestined to possess the most fertile and temperate regions in Africa due to them being the superior race. Furthermore, it was argued that Europeans needed these lands over indigenous people because they were not accustomed to the climate or terrain. According to the theories of scientific racism, Africans were better suited to the desert conditions because of their ‘darker skin, lean bodies, and adapted sweat glands, along with more experience with the terrain and weather’. Thus, prejudices were created by these links made between race and environment. This mindset created a sharp divide in southern African society between the indigenous people and the white settlers (Walker 1929). Racial tensions culminated and became institutionalized into the apartheid regime; and despite its fall in 1994, the consequences of stereotypes and discrimination continue to inform environmental policy today.

According to Van Sittert (2011), environmental determinism and the desires of colonialists and the apartheid government has influenced the way conservation has developed in Southern Africa. It has disadvantaged indigenous people in almost all policy and decision making processes, too. A prominent example would be The Prevention of Illegal Squatting Act of 1951 which made it legal to remove native people from their homelands allowing white settlers to exorcise the natural landscapes by creating reserves and parks. Native San and Khoi people were perceived to be uncivilized, unintelligent, and as a consequence, undeserving of their land, so European settlers forcibly removed them and allowed them to either settle in other smaller plots or be provided nothing at all. ‘The San (hunter-gatherers) and Khoikhoi (pastoralists), who had inhabited the land for thousands of years hunting and gathering in a peaceable and sustainable manner, were cast away for the profit of the white man’ (Van Sittert, 2011 quoted in Darmofal, 2012). Darmofal (2012) argues that conservation became a ‘white objective’ to elevate their status: the wealthy white colonialists used the land as game farms and personal hunting grounds while enjoying the beautiful views. Apartheid government compounded colonial

law to exclude black people from these privileges. The socio-political climate during the apartheid regime lowered the status of black people ‘below faunal species’ (McDonald 2002). The displaced populations were forced to live on the food sources they could produce in the confined and arid land - particularly Namaqualand, a place considered less worthy of conservation; while the government seized the profitable lands for themselves. Such segregation left the indigenous in a remote location with an overly dense population. This led to overuse and exhaustion of the land that already had limited options for sustenance (Benjaminsen et al. 2008).

As South Africa developed, the white population began to seek ways to improve the standard of living through power and electricity. Darmofal (2012) points out how dams like Mohale dam, Cahora Bassa Dam, and the Lesotho Highlands Water Project - that were thought to be an inexpensive and respectful way of obtaining energy - resulted in catastrophic results for the environment and indigenous people. The redirection of water flow created by the dams was not beneficial to any of the rural or indigenous communities in South Africa, Lesotho, or Mozambique. Worster argues that people who have control over water and water systems have control over the masses. In smaller and rural communities, everyone has knowledge of the irrigation systems as they were local, easy to maintain, and in accordance with nature. However, complex systems designed to supply power and water to urban centers become knowledge that is only accessible to the elite. These people become the ‘managerial elite’ and possess power through their knowledge and ability to distribute or withhold valuable resources. According to Worster, these water systems almost always benefit wealthy urban dwellers and rural communities are disadvantaged (Worster 1985).

This theory can be readily applied to explain the negative effects of the Cahora Bassa Dam built on the Zambezi River in 1974 in Portuguese Mozambique. The project was seen to be a ‘civilizing mission’ that would draw indigenous people away from their farming lives and introduce them to modernity (Isaacman 2005). However, this created adverse effects. In Mozambique, a number of indigenous people were required to relocate for the construction of the dam itself and never had the opportunity to reap any of the benefits. According to Isaacman (2005), the construction of the dam was simply an exercise of soft power to let the world know of the economic advancements taking place in southern Africa. Indigenous people were seen as less valuable and so they were cleared of highland areas and hired as laborers. The company towns for the white population

were built by the indigenous laborers who themselves were housed in shacks with no amenities (Isaacman, 2005). Darmofal (2012) highlights how the Zambezi River provided to the numerous farming communities in the area including its fertile land and the natural fertilizer in its sediments. The dam disrupted the natural flood cycles meaning that there is now constant tension for unexpected flooding. Moreover, fish populations have decreased and irregular flood cycles are prevalent which means that animals typically found at watering holes have disappeared. Many were forced to relocate as a result of their ruined farmlands in a desperate attempt to revive their livelihoods. They had no choice but to move to hamlets set up and strictly regulated by the Portuguese colonialists (Isaacman, 2005). The consequences of Cahora Bassa Dam are not isolated incidents. Similarly, the Mohale Dam left indigenous people dependent on their colonial masters. Thabane argues that the indigenous people of Lesotho felt as if they were being ‘butchered and killed’ when they were displaced (Thabane 2000).

Mapfumo et al (2015) conducted a study in the rural areas of Zimbabwe to find how farming communities deal with climate change with indigenous knowledge. Indeed, they found that climate has become increasingly variable and unpredictable over the past 20 to 30 years which has made farming communities vulnerable and has made scarcity prevalent across a number of resource categories. Farmers have noticed the ‘shortening of growing season length, diminishing water resources, loss of agrobiodiversity and ecosystem services.’ Communities have depended on indigenous knowledge and local biological and geographical indicators in making strategic and operational decisions, however, this information is being undermined as climate change worsens. Unfortunately, such rural communities are receiving inadequate attention from development institutions and meteorological services. They also found no evidence to suggest that farmers have the access to opportunities that would allow them to diversify their livelihoods. Mapfumo et al find that current indigenous knowledge should be an entry point for efforts being made to build the adaptive capacity of such communities. Researchers and policymakers should take into consideration the decision-making framework of such communities to implement an effective strategy.

Scott, Oelofse, and Guy (2002) analyze environmental justice in Durban, South Africa through the prism of feminist frameworks to reveal how the negative effects are primarily borne by women. The study finds that generally, in the post-apartheid period, the issues surrounding the environment are being democratized and de-racialized, however, the

legacy of apartheid persists in how different groups of women are exposed and react to pollution. White women who are located at a distance from pollution sources also viewed the problem as something distant. The concerns that they had were individualistic with their frustrations being limited to the private and domestic sphere. In contrast, black women use the community as a medium to voice their concerns and frame the issue of the environment as a dire health concern. Scott et al argue that because the reproductive work of white women is limited to the structures of the nuclear family, their activism is also perceived as localised. On the other hand, due to the history of apartheid, black women have had ‘more access and participation to broader political structures which are relatively more empowering.’ The study reveals that women are more likely to take on a communal role than men; they are ‘more proactive and vociferous in something that affects them and their family.’ However, environmental policy and legislation is dominated by male politicians and women are largely excluded from anything above local community activism. Fick (2000) finds that women in South Africa face the dual burden of being the primary caregivers within the domestic sphere and doing income-earning work and participating in the community in the public sphere. Community activities are an extension of women’s reproductive work while community politics is a separate and independent structure which excludes women from having any decision making power in order to confine them in the roles of housewife and mother (Fick, 2000). Van Donk (2000) emphasises the importance of women’s participation in environmental matters; because of the gender roles and dual burden, they are the primary consumers of services and facilities which make up residential environments.

A White Paper on Environmental Management Policy for South Africa (1997) addressed the issues of ‘fragmented policy and ineffective legislation’, ‘ineffective enforcement and regulations’ and the persisting problem of racism. The goal for this policy was to ‘unite the people of South Africa in working towards a society where all people have sufficient food, clean air and water, decent homes and green spaces in their neighbourhoods that will enable them to live in spiritual, cultural and physical harmony with their natural surroundings.’ However, townships and bantustans - areas dominated by indigenous or people of colour - have gone through minimal improvements. There are also many informal settlements that have been disregarded by the government because they are not registered as legal residential areas. These areas are also the ones that suffer greatest from lack of electricity and amenities (Napeir, 2002). Darmofal (2012) finds that the White Paper and many other post-apartheid legislation ‘has not yet been able to implement

much progress in the most necessary places.’ McDonald finds that the environmental justice movement has a dual nature for being both a success and a failure. South Africa has been successful in sparking progressive post-apartheid discourse on climate justice; which is especially significant for a former apartheid government that cared more for wildlife than it did for black people. Simultaneously, these attempts to create broad-based environmental movements have led to its partial demise. The Environmental Justice Networking Forum (EJNF) was the primary organization that included a mix of environmentalist groups, labor unions, church associations, wilderness groups, Help End Marijuana Prohibition in South Africa society, and some corporate organizations. There was an excitement for a new political culture of inclusivity and reconciliation, however, tensions began to culminate and ideological fissures became apparent. McDonald also highlights the inequalities of resource distribution between environmental groups. Suburban-based environmental groups - that are largely white - receive large amounts of financial support and human resources to manage their projects, which mainly consist of conserving flora and fauna. Meanwhile, Township-based environmental groups - that are largely blackwork on minimum budgets without the abundance of resources like office space or equipment. They also face neighborhood crime, lack of transportation, and managerial problems which leads to ineffective implementation of action (McDonald, 2003).

However, McDonald (2003) adopts an optimistic view despite the failures of the EJNF because it has allowed for transparency and openness in political orientation. This creates a clearer direction for NGOs, governmental institutions, and activists in the future to pave the way for effective change in southern Africa.

Indigenous people in Australia/New Zealand

The Aborigines, Maori, and Torres Strait Island peoples are indigenous peoples native to Australia. They have observed many concerning and abnormal ecological changes in their environment, due to climate change, including natural disasters, rising sea levels, and warming, and are at risk of coastal erosion, flooding, and prolonged drought. As the Yuglu, a subgroup of the Aborigines, have expressed, they are worried about the amount of animal and plant resources being affected by the ecological changes (Petheram et. al, 2010). However, climate changes are not the only causes of concerns of Australian indigenous peoples; (Abate and Kronk, 2013) states, indigenous people universally share

these traits: 1) they have endured abused and subjugation by more dominant societies, thus lacking political and economic authority and being susceptible to political and economic marginalization, and 2) a unique, legal, cultural, and spiritual connection with the land. Additionally, the Yuglus have expressed frustration about the uncertainty of their land rights, as well as their diminishing traditional knowledge to teach the younger generation, due to the lacking knowledge about how important the land is and how to take care of it. (Petheram et. al, 2010) It is evident that the preservation of Australian indigenous peoples' land is very special to them, and that the effects of climate change are detrimental to their land, and consequently the indigenous peoples' health and general welfare.

In 1974, the National Parks and Wildlife Act was passed, which prohibited the destruction of an Aboriginal artifact or land. In 1990, the Native Title Acts were passed, which recognized the Aborigines and Torres Strait Islanders' "native title" (rights to land and customs they have a traditional connection with). These two acts overall protected the political and economic subjugation of the Aborigines and Torres Strait Islanders from the more dominant societies around them. Those who violated these acts, as Craig Williams did so and appeared in court for the 2007 Garrett v. Williams case faced punishments, such as jail time. (White, 2014; Beltran and Philips, 2000). In 2005, the Wild Rivers Act of 2005 was passed, which aimed to preserve the natural values of rivers. However, it was eventually repealed at the request of local Australian indigenous leaders, who argued that the conservation would deprive the indigenous peoples of economic opportunities (they should autonomously decide whether they want conservation or rather a mixture of both) and that the river 'should be given a voice.' (White, 2014) More recently, REDD+ projects, created by the United Nations, have reached the Pacific. REDD+'s aim is to reduce greenhouse emissions from deforestation and environmental degradation. However, Australian Aboriginal people find it to be a way to promote political and economic marginalization, and violate their human rights: (Doolittle, 2010)

“REDD will not benefit Indigenous Peoples, but in fact will result in more violations of our Human Rights, our Rights to our lands, territories, and resources, steal our land, cause forced evictions.... Under REDD, States and Carbon Traders will take more control over our forests.” -Statement made by the International Indigenous Peoples Forum on Climate Change (IIPFC)

The health of indigenous peoples has also been profoundly impacted by climate change. The Maori people of New Zealand associate a healthy environment with good health (Davis, 2020). Because of the environmental harm of climate change, one key objective to improving Maori health would be to lower CO₂ emissions. The Emission Trading Scheme (ETC) has been the main implementation New Zealand is using to address climate change. The point of the New Zealand ETS is that CO₂ emitters (such as large industries) have to compensate for their contribution to greenhouse gases in money, while those who reduce their CO₂ emissions are rewarded. However, the New Zealand ETS policy has been weak as greenhouse gas emissions continue to rise in New Zealand, which means that the Maori's beloved environment remains unprotected from climate change. In addition, the New Zealand ETS policy is subsidized by taxpayers, which conveys that public funds are going to support the ETS (which has been failing to aid the Maori) instead of investing in social and health services for the Maori. (Davis, 2020) New Zealand needs to find more effective ways to help the Maori and improve their health, especially after passing the Health and Disability Act of 2000- which allows Maori participation in the decision making of their health services- and Article 12 of the ICESCR- which states the right for everyone to enjoy the highest standard of mental and physical health, including, as UNDRIP mentions, indigenous peoples. (Davis, 2020) New Zealand is implementing other policies that have positive potential in improving the Maori's health while doing that in an environmentally sustainable way. One prime example is the Warm Up New Zealand: Healthy Homes Programme, which targets households with members with high health risks (i.e. children and elders), improving the energy efficiency in their homes, as well as insulation to protect against the risks of heatwaves and cold, damp housing (Davis, 2020).

Indigenous people in East Asia

The Ainu are an indigenous group that is native to Hokkaido, an island in Japan. Although there are no official census records of the Ainu people, it is estimated that there are around 24,000 of them left, spread around their native land and Honshu (Cobb, 2020). As an indigenous group, their culture is slowly dying out, with only 2 living native speakers left, it has been recognized by UNESCO as a critically endangered language

(Teryngel, 2018). While their origins are constantly up for debate, their culture goes back centuries. In the 15th Century, Japan moved into Ainu territories in order to spark their economy and trade. Eventually, this encounter led to conflicts which ended in a series of battles between 1457 and 1789. After the 1789 Battle of Kunasiri-Menasi, the Ainu fell completely under Japanese control and were forced to assimilate (Jozuka, 2019). Their unique culture was torn under Japan's government policies. The Ainu people placed heavy emphasis on nature, and the local ecosystems surrounding their land (Makino et al., 2012).

The history of the Ainu's environmental issues can be traced back to Japan's colonization of their land. The Japanese government heavily controls fishing rights, and local authorities try to prevent the Ainu people from exercising their culture (Teryngel, 2018). They have seen plenty of discrimination in Japan, as the government also implements dam projects that intrude onto their given land. In 2008, the Japanese government finally recognized the Ainu indigenous people as a distinct ethnic group (Maruyama, 2012). This arose when Japan sought consent to construct a sizable industrial dam in the Nibutani village, extremely close to many of the Ainu's homes in 1997 (Levin, 1999). This Nibutani Dam Decision ultimately stated that the Ainu were entitled to enjoy all aspects of their culture as indigenous people, as they have been in Hokkaido and its neighboring islands since time immemorial. However, by the time the court ruled this decision, the dam's construction had already finished through illegal seizure of the land. The illegal seizure not only took destroyed sacred sites and ritual grounds, but also impacted their everyday life. To them, salmon is the "fish of the god" and is ultimately vital for their traditional ceremonies, arts, and food but salmon populations are declining (Makino et al., 2012). In addition, the Hokkaido Island salmon industry is among one of the largest chum salmon fisheries in the entire world. They produce up to 100,000 tons of salmon per year, making this business a large portion of the island's economy. In general, dams heavily affect fish populations surrounding it, sometimes driving the populations to extinction. Japan's lack of protection for the environment by constructing dams affected the Ainu's overall quality of life. They have developed their culture around local ecosystems, the lack of climate justice policies and altercations of their ecosystems have resulted in destruction of their culture (Makino et al., 2012).

Much like other indigenous groups inhabiting North and South America, most of the Ainu's land, both sacred and ritual, have already been seized by Japan's government.

Since the implementation of the 1889 Hokkaido Former Aborigines Protection Act, the Ainu have been liable to policies that force them to integrate into Japan (Michaud, 2015). Environmental change has affected people around the globe, however it has hit the Ainu people deeply. Their spiritual connection with the land around them has since been lost to climate change or industrial construction. In 2018, Japan stood at the 5th largest producer of carbon dioxide emissions in the world, with 1.16 billion metric tons (Blokhin, 2020). Due to these statistics, Japan has recently introduced their national climate plan, intending to further review their policies to reduce CO₂ emissions (Leprince-Ringuet, 2020). Other than their carbon dioxide emissions, Japan has been encouraged to carry out stronger climate action plans in order to counteract the extreme climates in Japan. Specifically, these issues have a large impact on Hokkaido and neighboring islands. As an industrialized area, Hokkaido is home to fertile lowlands that contain various bodies of water. Industries such as construction and mining are also becoming more apparent in the island, these developments have ruined the environment's air and water quality. Acidification of surrounding waters and air pollution has reduced the water and air quality of rural areas in Hokkaido. Eventually impacting valuable resources that contribute to the island's overall economy and ecosystem (Case & Tidwell, 2019).

DISCUSSION

The purpose of the study was to examine the impacts government implementation of climate justice have had on indigenous people socially, economically, and physically. As hypothesized, current government legislation and action is overall insufficient or exacerbates indigenous peoples' conditions; thus better legislation is needed. For instance, despite advocating for land claims and winning self-governance, the Inuits continued to suffer a lower quality of life, worse health (including higher rates of type-2 diabetes), low income, and little compensation from dominant societies for ecological damage from industrialization. Southern American, South African, and East Asian governments have all acted in ways that do not help the indigenous peoples, but instead hurt them: most notably, these governments have prioritized industrialization and advancement- for example, the construction of dams/ water systems in East Asia and South Africa, which has inevitably resulted in extermination of the Ainu's and Southern Africa's indigenous peoples' animal/plant food sources, caused indigenous land damage (i.e. overuse of fertile land, flooding, pollution, and abnormal climate warming due

excessive CO2 emissions from industrialization). However, there are exceptions: as demonstrated by Australian government implementations, the National Parks and Wildlife Act and Native Title Act gave the Aborigines indigenous peoples and Torres Strait Islanders rights to their land, spiritual beliefs, artifacts, and customs. Regulation of these acts are demonstrated by the penalties non-indigenous infringers face for interfering with the Aborigines and Torres Islanders' land and bodies of water.

This study demonstrated that existing policies to bring climate justice to indigenous peoples are not working, which is a cause of deep concern. This is because although indigenous peoples are one of the first to feel the effect of climate change, they contribute the least to CO2 emissions and the other negative facilitators of climate change. In fact, 80% of our world's biodiversity comes from the land of our indigeneous peoples. (Amnesty International, n.d). Biodiversity- the diversity of organisms of all different species, all different habitats, and all different ecosystems- is important to our planet because simply, it helps sustain human life (Biller, 2018). However, when it is a target of abuse and subjugation, indigenous people- who also hold cultural and spiritual values in the land, are not the only demographic that is harmed.

The limitations of our studies are that the policies and legislation in our case studies were from decades prior, rendering them out-of-date. This is important because in current times, our society places a higher emphasis on climate justice and recognition of minority groups. Our examples of legislation date as far back as the mid 20th century, a period when industrialization was emphasized and climate change was not a big or heavily detected concern. Another limitation is that still, there is minimal representation of indigenous voices, so indigenous peoples' responses to implemented legislation may have not been recorded.

Applying the research that we gathered, future models of governmental policies to inspire a more positive reaction from indigenous peoples could be the representation of indigenous people while making climate justice decisions that will impact them. It is also very important for governments to implement Traditional Ecological Knowledge (TEK)- a body of knowledge, beliefs, and practices based on observations of environments and living beings' interactions with the environment, passed down over generations (Morris, 2010) - in their pursuit of alleviating climate change; as the Intergovernmental Panel on Climate Change (IPCC) said:

“[Traditional Ecological Knowledge is] an invaluable basis for developing adaptation and natural resource management strategies in response to environmental and other forms of change...indigenous or traditional knowledge may prove useful for understanding the potential of certain adaptation strategies that are cost-effective, participatory and sustainable.”

REFERENCES

- Abate, R., & Kronk, E. (2013). Commonality Among Unique Indigenous Communities: An Introduction to Climate Change and Its Impacts on Indigenous Peoples. *Tulane Environmental Law Journal*, 26(2), 179-195.
- Amnesty International (n.d) Indigenous Peoples
- Beltran, J., Phillips, A. (2000) Indigenous and Traditional Peoples and Protected Areas: Principles, Guidelines and Case Studies *World Commission on Protected Areas*
- Benjaminsen, T. A., Kepe, T., Brathen, S. (2008) “Between Global Interests and Local Needs: Conservation and Land Reform in Namaqualand South Africa.” *Africa* 78, 223-44.
- Biller, D. (2018) The Economics of Biodiversity Loss *Copenhagen Consensus Center*
- Blokhin, A. (2020) The 5 Countries That Produce the Most Carbon Dioxide (CO2) *Sustainable Investing*
- Burnett, K. (2020) Health of Indigenous Peoples in Canada. *The Canadian Encyclopedia*
- Case, M., Tidwell, A. (2019) Climate impacts threatening Japan today and tomorrow, *WWF Climate Change Programme*
- Cobb, E. (2020) Japan’s Forgotten Indigenous People
- Darmofal, D. (2012). ‘Environmental Racism in South Africa: A Sustainable Green Solution’. Student theses 2001–2013, Fordham University.
- Davis, S. L. M. (2020) The Trojan Horse: Digital Health, Human Rights, and Global Health Governance *Health and Human Rights Journal*, 22(2), 41-47
- Dockery, E. (n.d) Exploration and Development History on the Pine Ridge Reservation, *Impacts of Resource Development on American Indian Lands*

-
- Doolittle, A. (2010). The Politics of Indigeneity: Indigenous Strategies for Inclusion in Climate Change Negotiations. *Conservation and Society*, 8(4), 286-291.
- Fick, G. (2000) ‘The importance of equality to the sphere of local government’, in *Agenda* 45
- Freeman, M.A. (2020). "Inuit". *The Canadian Encyclopedia*
- Isaacman, A. (2005). “Displaced People, Displaced Energy, and Displaced Memories: The Case of Cahora Bassa, 1970-2004.” *The International Journal of African Historical Studies* 38(2), 201-238.
- Jozuka, E. (2019) Japan’s ‘vanishing’ Ainu will finally be recognized as indigenous people
- Kronik, J., Verner, D. (2010) Indigenous Peoples and Climate Change in Latin America and the Caribbean *Environment and Sustainable Development*
- Leprince-Ringuet, N. (2020) Japan’s New Climate Commitment Falls Woefully Short. Here’s How to Improve It. *World Resources Institute*
- Levin, M. (2010) Kayano et al. v. Hokkaido Expropriation Committee: ‘The Nibutani Dam Decision’ *International Legal Materials* 38(n.d), 394
- Makino, M., Sakurai, Y. (2012) Adaptation to climate-change effects on fisheries in the Shiretoko World Natural Heritage area, *Japan ICES Journal of Marine Sciences*, 69(7), 1134-1140
- Maruyama, H. (2012) Ainu Landowners’ Struggle for Justice and the Illegitimacy of the Nibutani Dam Project in Hokkaido Japan, *International Community Law Review*, 14(1), 63-80
- McDonald, D. A. (2002) *Environmental Justice in South Africa*. Cape Town: University of Cape Town Press
- McDonald, D. (2003). *Environmental Justice In South Africa*. Bibliovault OAI Repository, the University of Chicago Press.

-
- Michaud, M. (2014) Settlement into Hokkaido and its Effect on the Environment and the Ainu People *Social Sciences Review* 20(n.d), pp. 1-9
- Morris, B. (2010). INDIGENOUS KNOWLEDGE. *The Society of Malawi Journal*, 63(1),
- Napier, M. (2002) "Informal Settlement Integration, the Environment and Sustainable Livelihoods in sub-Saharan Africa." 1-9 Council for Scientific and Industrial Research University of Montreal. 1 Apr. 2012.
- Mapfumo P., Mtambanengwe, F. & Chikowo, R. (2016) Building on indigenous knowledge to strengthen the capacity of smallholder farming communities to adapt to climate change and variability in southern Africa, *Climate and Development*, 8:1, 72-82
- Pagliarini, A. (2019) What Indigenous Rights Have to Do With Fighting Climate Change
- Perez, M. S. (2015) Timeline of the Controversial Belo Monte Megadam in Brazil *American Scientist*
- Petheram, L., Zander, K. K., Campbell, B. M., High, C., Stacey, N. (2010) ‘Strange changes’: Indigenous perspectives of climate change and adaptation in NE Arnhem Land (Australia) *Global Environmental Change* 20(4), 681-692
- Riley, N. S. (2016) One Way to Help Native Americans: Property Rights *The Atlantic*
- Scott, D., Oelofse, C., & Caradee Guy. (2002). Double Trouble: Environmental Injustice in South Durban. *Agenda: Empowering Women for Gender Equity*, (52), 50-57
- Strickland, P. (2016) Life on the Pine Ridge Native American reservation *Human Rights*
- Teryngel, S. (2018) Climate Change: Indigenous People in Danger
- Thabane, M. (200). “Shifts from Old to New Social and Ecological Environments in the Lesotho Highlands Water Scheme; Relocating Residents of the Mohale Dam Area.” *Journal of Southern African Studies* 26(4): 633-654.

Tsosie, R. (2013). Climate Change and Indigenous Peoples: Comparative Models of Sovereignty. *Tulane Environmental Law Journal*, 26(2), 239-257

Tsosie, R. (2007) Indigenous People and Environmental Justice: The Impact of Climate Change *Indigenous People and Climate Change* 78(n.d.), pp. 1626-1677

Van Donk, M. (2000) ‘Local government: a strategic site of struggle for gender equality’, in Agenda 45

Van Sittert, L.(Jan-June 2011). Interview

Walker, E. (1929) “Relief and the European Settlement of South Africa.” *South African Journal of Science* 26, 100-06.

White, R. (2014). INDIGENOUS COMMUNITIES, ENVIRONMENTAL PROTECTION AND RESTORATIVE JUSTICE. *Australian Indigenous Law Review*, 18(2), 43-54.

Worster, D. (1985) . *The Flow of Power in History*. New York: Oxford University Press

An In-Depth Analysis of The Australian Retirement Plan

Ronald Fridlyand, Emily Huang, Matthew Kadaev, Ben Goroshnik, Alan Shnir

Affiliation: International Socioeconomics Laboratory™

ABSTRACT

The United States faces many problems regarding the longevity of the Social Security program. With the program entering a deficit in 2020, it has become quite clear that the program needs some dramatic changes. One of the proposed solutions to this issue is switching to a similar system to the retirement system in Australia which is known as the Superannuation Guarantee. Advocates of the system hope that this system will not only be able to fix all the longevity issues that come with Social Security, but they also claim that it will result in overall increased savings for the average retiree. On the other hand, critics of the system claim that this system would result in increases for the upper class while making lower class citizens lose out on savings. There are also many questions about how the system would even be implemented in the United States. This paper will go into detail on the Australian System and the benefits and problems that come with its implementation and compare that to the current social security system.

Key Words: Economy, US Economy, Australian Economy

Categories: Retirement, Payout, Social Security

Introduction to the Australian System

For a long time, the Australian Retirement Plan was modeled after the United States's Social Security program. However, in the 1980s, Australia was forced to switch to completely remove this pension plan and replace it with the system they have today due to the inability to meet budget requirements. Today, this program is known as the Superannuation Guarantee and continues to be modified and expanded. The plan was created in order to solve problems such as low worker participation in savings or pension plans, dependence on social security leading to lower national savings and slowing down economic growth, and a growing elderly population threatening to overrun the social security system and cause it to fail. (Mitchell, 1997)

Under the Superannuation Guarantee, each Australian citizen who is paid \$450 or more each month is required to set aside 9.5 percent of their annual income and put it into a fund of their choice. These payments are made 4 times annually by the quarterly due dates. If a payment is not made on time a superannuation guarantee charge must be paid. It is also important to note that the superannuation guarantee is non-tax deductible. Each citizen can choose from a total of 137,808 funds to place their money into. Citizens also have the ability to add more than the required amount into the reserve if they would like to. (Probasco, 2020) Upon retirement, each citizen will receive a steady stream of annual income, which would amount to a minimum of 2-3 times the amount that they would have received under the original Social Security System. The Superannuation Guarantee has already led to a 3% increase in overall savings rates and lower total government spending.

Current Problems with Social Security

The current American Social Security system has a few different sustainability issues. In 2020, social security entered a deficit for the first time in the history of the program (Rae, 2019). This has largely been caused by a problem that did not exist when the system was first founded in 1935. The senior population has increased heavily from only 7.5 million in 1935 (SSA, 2021) to 54 million in 2020 (Census, 2021). The changing demographics of the US have caused challenges that the founders of social security could never predict. As the senior population of the US continues to increase, the burden of social security

will continue to escalate for working citizens. However, the senior population is not the only demographic factor that works against the sustainability of the system; increasing life expectancy has also put major pressures on the system. At the time of Social Security's founding, the average American life expectancy was 62 (factoring in high mortality rates) while benefits would only start to be paid out by 65 (Klein, 2019). However, in 2020, the average life expectancy was 79 years old (Statista, 2020) while social security benefits would start to be paid out at age 66 (Probasco, 2019). This means that even though the average life expectancy in the US has increased by nearly 17 years; the age at which social security benefits are paid out has barely changed. This has created a second strain on the system as people who live longer will now be receiving benefits for longer.

In addition to the demographic changes that present issues on social security, the system also struggles due to the program's sheer cost. Due to the aforementioned change in demographics, social security recipients make up the largest portion of the US population ever seen, and we are likely to see the worker to social security recipient ratio fall from 2.8 in 2010 to 2.1 in 2030 (Williams, 2018). This means that the cost of paying an average of nearly \$18000 yearly (Whiteman, 2019) for benefits is going to be split amongst only 2 workers instead of the previous 3 workers. Each American worker will need to pay a hefty sum of \$9000 for the social security system by 2030 instead of the \$6000 they have been used to paying since 2010. This is all money that workers could have saved in order to pay off a mortgage, pay for their child's tuition, or save for their own retirements.

In addition to the hefty cost, the program has also been unable to sustain itself off of current government funds. The Trustee fund created in 1983 is soon set to run out of the nearly \$3 trillion worth of funds by 2035 (Nino 2020). Due to the enormous burden of this program, the government is faced with two main choices if they wish to get rid of social security: they can either increase taxes to continue to pay for this program, or decrease/change benefits to make the program more affordable. Neither of these options would likely be a very popular one with government officials, nor with the average American. All of these limitations have been exacerbated by the coronavirus shutdowns as the national debt has increased by nearly \$5 trillion in less than a year. An economic recession would also mean less tax revenue to pay for social security.

Potential U.S. Specific Drawbacks

With the implementation of the Australian system, there are several distinctive drawbacks respective to the United States. The Australian Retirement plan calls for citizens to pay 9% of their annual income into their retirement funds (12% as of 2020) (Agnew, 2013), with citizens also having the choice to put in more as they wish. This creates the potential problem of the rich investing more money in the fund and some argue, these tax breaks may cost the authorities more in revenue than the money saved from lower welfare payments. One possible way to fix it is to raise the minimum mandatory percentage to twelve percent, however, this is going to bring in another potential problem. The percentage of Australian citizens living below the poverty line was 10.5% (Semega, 2020) in 2019. For an Australian to be considered below the poverty line, their annual income must be equal to or below \$12,490 (ASPE, 2019) If rates are raised to 12%, these people will be left with \$10,991, which averages to \$916 per month. This is most likely not going to be able to support a person's basic need when they need to cover basic living expenses such as rent, mortgage payments, utilities, maintenance, food, clothing, insurance, taxes, installment payments, medical expenses, support expenses when the individual is legally responsible, and other miscellaneous expenses (Cornell 2021). This is even more true in times of recession such as the Coronavirus outbreak of 2020, which has made every penny count; therefore most people are going to struggle with putting another 12% of their income into their retirement fund.

Another problem is that since everyone is going to be guaranteed a high rate of return, the economy is going to be more sensitive to inflation. Citizens receive monthly installments over their lifetimes, which could result in money running out if the individuals live too long. Therefore if the system were implemented in the US, older Americans are going to be like how older Australians were "heavily exposed to longevity, inflation and investment risks," Agnew wrote (Eisenberg, 2013).

Another potential problem could be citizens investing in multiple funds, which leads to more and unnecessary fees and life insurance premiums. This is caused by people who switch jobs constantly, where some jobs automatically enroll into funds but do not roll their old account into the new one. Similar situations happened in Australia and the government review body identified 10 million duplicate accounts that racked up \$2.6

billion a year in unnecessary fees (Burgess, 2020). This seriously harms Australian citizens because if they turn in 9% of their annual income, they already have less money to spend on daily expenses and if they still have to suffer from extra unnecessary fees, they will rack up even more expenses, which also means less money to spend on daily necessities.

A final issue to consider is the implications of another recession in the United States sometime in the future. The American economy tends to have large unemployment numbers in response to a recession and it is vital to ponder what outcomes the implementation of the Australian Retirement plan has. For example, during the 2008 recession, unemployment peaked at 10% in October of 2009 and about 30% of households owned by people over age 40 said they were more than two months behind on their mortgage, in negative home equity, foreclosure, or unemployment between November 2008 and January 2010 (PRB, 2010). In such scenarios, the Australian Retirement System would be rendered useless for the duration of the recession where people would be unable to add to their account, and also the amount made on the account would be in jeopardy depending on what funds were invested in.

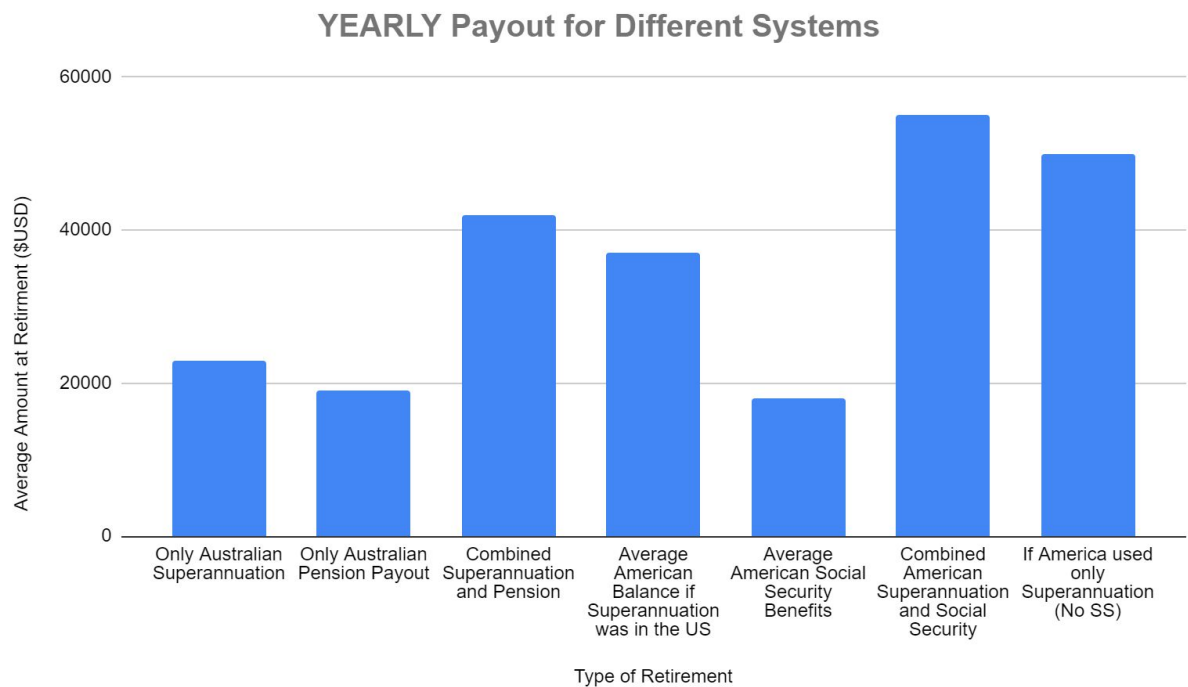
Payout

Under the superannuation program, Australia has nearly \$2.2 trillion in pension funds. This makes the Australian pension fund the 3rd largest in the world, despite the fact that the Australian economy is only 13th on world rankings. This shows how the Australian system has significantly outperformed that of other nations with significantly larger economies. This high payout becomes even more evident when examining the average superannuation account budget. For the average Australian who is 15 years or older, the superannuation budget was \$168,500 and \$105,400 for men and women, respectively (Superannuation, 2019). Considering the average net worth of an American household is \$97,000, this means that the average Australian Retirement fund alone has a greater value than the whole net worth of the average American. This difference becomes even more clear when considering the total wealth of the average Australian adult vs. that of the average American. Australia is the wealthiest country with a population over 10 million, with the median income per adult sitting at \$181,400 vs. America's \$65,900. This

massive difference in wealth is largely due to the superannuation fund which allows Australian citizens to retain much more of their wealth.

The vast differences in payout can also be modeled by a superannuation calculator using the average incomes of both nations. This is a very good way to calculate the large variance in the payout of the current American system vs. what could be achieved under the Australian model.

Results



We found the results of different retirement systems and the yearly payout they would create. All of the values have been converted into US Dollars to avoid any possible confusion in values. The yearly payout for all three superannuation statistics was assuming a 7.5% withdrawal rate which is the average superannuation interest rate. The average Australian Superannuation fund at the retirement age of 65 was valued at around \$300,000 (Superannuation, 2019). This puts the annual withdrawal rate at around

\$23,000 per year. Full benefits for the Australian Pension system (assuming you are a single person) are paid out at around \$19,000 per year (Drury, 2020). This pension is paid for by fees on superannuation funds along with employee and employer taxes. Most Australians receive the superannuation and pension plan, although benefits do go down when assets exceed a certain point. This means that the median Australian retiree receives the Superannuation plan and reduced pension payments. We put this combined number at around \$42,000. Using the Australian government's superannuation calculator, we found that the average American would retire with a \$491,000 superannuation balance. Assuming the same withdrawal rate, Americans could receive \$37,000 from a superannuation fund. The current American Social Security system, which is paid for by a 6.2% employee tax and a 6.2% employer tax, gives \$18,000 in average annual benefits. If Americans received both superannuation and social security (SS), this would mean nearly \$55,000 paid out annually in senior benefits. Finally, if Americans paid 12.4% into a superannuation fund instead of the 12.4% into social security, it would come out to a superannuation balance of \$620,000 by the age of retirement at 67. Assuming the same 7.5% withdrawal rate, this would put the payout rate at \$50,250 per year. However, it is important to note that without the 1% fee necessary to pay for pension plans such as social security, and the higher average rate of return for American equities, it would be very likely for the average American superannuation balance to exceed \$1 million at the age of 67. This would make some annual payout rates get to \$75,000.

Method

American results were found using the Australian government's superannuation calculator. We used the average retirement age of 67, average OECD salary of \$63,000, and a starting work life of 20 years old. We first used all the same preset metrics as Australian superannuation to find the \$491,000 total. In order to calculate the American system relying solely on superannuation, we changed the presets to incorporate the 12.4% tax currently paid for social security. In order to get the final \$1 million figure, we eliminated the 1% fee associated with paying for the pension system and we also increased returns by 1% as American equities outperform Australian equities by about 1% every year.

Issues

One issue in this calculation was the lack of clear information on how different values of assets affect Australian pension payout. For this reason, all figures regarding Australian pensions were rounded down to account for this. Second, the annual payout can be determined by the individual, meaning that some can choose to withdraw 50% of their account in one year, while others choose to withdraw 4%. We chose the 7.5% figure as this is the average return rate for the funds. It is important to note, however, that most people would likely take out more than the 7.5% figure in order to use up more of their hard-earned money or to pay for unseen expenses. Lastly, it is important to note that the future can never be predicted completely correctly, so these figures could change greatly within 10 years.

Solutions to the Problems of this System

Given the several U.S. specific complications with implementing the Australian system, some solutions can be implemented to better its efficiency and effectiveness in the long term and with certain case scenarios like the COVID-19 pandemic. These solutions include flexibility, limiting payment of older citizens, risk management, and making reasonable fees for changing retirement plans.

In situations where people have a lower income and live in a paycheck to paycheck fashion, they will not be able to afford superannuation fees or put away the money required for retirement according to this system, especially in times when many people are struggling financially like during the COVID-19 pandemic. Thus, certain adjustments to the system must be made to alleviate these issues. These adjustments center around payment flexibility and include providing the option to delay superannuation fees until a certain point or having lower payment options for those with a lower income.

Next, to combat the possible inflation due to people living longer, payment options could be changed after people pass the average life expectancy. Some possible changes that could be made are that payments for senior citizens over the average life expectancy will either have less frequent payments in order to account for this inflation. Then, fees associated with an account for transferring jobs must be uniform regardless of financial

status. Additionally, after accumulating a certain amount of fees, future fees will be applied in lower percentages.

Lastly, for difficult financial times and recessions, there can be an option to keep a small percentage of the portfolio that is kept in liquidity and not invested. This percent would be taken from each payment in a small amount so that over time it would add up and be used or invested at a later date.

Similar Systems Around the World

Other than Australia's Superannuation Guarantee and America's Social Security, there also exist various other options on how to best create a sustainable pension plan for our seniors. One such example, the Netherlands' pension system, is considered the best in the world. It is very similar to the US's social security system in that it relies heavily on taxes. However, it differs from social security in that the taxes for the Dutch system are nearly 18% of one's income, one of the highest rates in the world. The Dutch also have a very strict system for qualifying for benefits as you would have needed to work for 50 years to receive full contributions, and any time spent living outside the nation can decrease your eligibility (Maunder 2020). In addition to the government pension, nearly 90% of employers offer a private pension. The average public pension payout is \$19,200. This is higher than pension payouts of Australia and America, however, Australians receive superannuation payout which can push their actual payout past \$40,000, far higher than the Dutch. In addition to the much higher payout, Australians only pay 9.5% of their income to the superannuation fund, lower than 12.5% in American social security, and far lower than the Dutch 18%. This means that when it comes to the actual cost of each system, the Australian system is still more effective. Another accurate comparison to the Australian system is the US 401k system. With an average account balance for the 60-69 age group sitting at around \$200k, it still lags behind the Australian balances but it is important to note that most Americans put 7-8% (Cheng, 2020) of their earnings into a 401k while Australians must pay a minimum of 9.5% of their earnings into superannuation. However, going by the same calculation metrics as before, this would mean that the average American would have a yearly payout of \$33k when receiving Social Security and a 401k. This is still behind the Australian payout of \$42k.

Conclusion

Just as Australia's retirement system improved in quality when they switched to the Superannuation Guarantee, the United States would see great improvements in quality and longevity with a switch to a similar system. A system like the one in Australia would allow for retired Americans to have more money while lowering government spending and saving the United States from going into a deficit on its retirement program.

Although the Australian superannuation program does have some flaws such as risks of inflation and those living under the poverty line losing income which they may need to pay bills and survive, the risk is relatively low compared with keeping the social security system the United States has today. With social security entering a deficit this year, the problems with social security have grown more obvious and imminent. Not only does the Australian retirement system solve the issue of longevity that social security lacks, but it would do so while also increasing the average savings retirees would receive just as it did in Australia.

REFERENCES

- Agnew, J. (2013). *Australia's Retirement System: Strengths, Weaknesses, and Reforms* | Center for Retirement Research. Bc.Edu.
- ASPE (2019, January 11)..*2019 Poverty Guidelines*.
- Bloomberg - Are you a robot?* (n.d.). Www.Bloomberg.com.
- Bureau, U. C. (2020, September 15). *Income and Poverty in the United States: 2019*. The United States Census Bureau.
- Bureau, U. C. (n.d.). *Older Population and Aging*. The United States Census Bureau.
- Eisenberg, R. (n.d.). *To Solve The U.S. Retirement Crisis, Look To Australia*. Forbes.
- Finance.Yahoo.com. (n.d.). *Here's Every State's Average Social Security Check for 2020*.
- Investopedia. (2019). *401(k) Balance: How You Compare to Others Your Age*.
- Klein, C. (2019, May 14). *How Much Did the First-Ever Social Security Check Pay Out?* HISTORY. <https://www.history.com/news/first-social-security-check>
- United States: life expectancy 1860-2020*. (n.d.). Statista.
- LII / Legal Information Institute. (n.d.). *22 CFR § 17.6 - Ordinary and necessary living expenses*.
- Mitchell, D. (n.d.). *Australia's Privatized Retirement System: Lessons for the United States*. The Heritage Foundation.
- Probasco, J. (n.d.). *When Do Social Security Benefits Start and End?* Investopedia.
- Rae, D. (n.d.). *Six Ways Social Security Will Be Changing In 2020*. Forbes.
- Social Security History*. (n.d.). Www.Ssa.Gov.
- Social Security is On an Unsustainable Path*. (2020, January 21). The Advocates for Self-Government.

SuperGuide. (2020). *Age Pension rates (March 2020 to March 2021)*.

The Dutch pension system - Expat Guide to The Netherlands | Expatica. (2018). Expat Guide to The Netherlands | Expatica; Expat Guide to The Netherlands | Expatica.

The Impact of the Recession on Older Americans – Population Reference Bureau. (n.d.).

What is an average super balance. (n.d.). Qsuper.Qld.Gov.Au.

Williams, S. (2018, August 27). *The 4 Biggest Problems Facing Social Security.* The Motley Fool; The Motley Fool.

Current Corporate Monopolies

Jennifer Khosid, Alan Goldengur, Vishal Kothari, Stella Vayner

Affiliation: International Socioeconomics Laboratory™

ABSTRACT

Monopolies are a growing problem in many of today's major industries - large companies have amassed a significant percentage of the market and have acquired the ability to manipulate it in their favor. While monopolies have existed in principle for centuries, the birth and popularity of the Internet in recent decades has enabled the rise of newer corporate monopolies whose reach extends beyond the realms of physical products, creating a new market: the market of information. The power and influence that these companies have over their respective sectors has had a serious impact, making it difficult for smaller businesses and startups to succeed in the market.

Categories: Economy, Monopoly, Corporations

Key Words: Agriculture, E-commerce, Social Media

Historical Context and Introduction

Since the rise of the second Industrial Revolution, the methods of production have shifted from a ‘by-hand’ approach to more automated and more efficient versions that have enabled the widespread mass-production of goods. This shift has also allowed certain companies to ‘rise to the top’ and exercise a considerable amount of control over their sector of the market. Examples of this economic phenomenon have been plentiful in the centuries since the Second Industrial Revolution: it all began with natural resource giants Andrew Carnegie and John D. Rockefeller, who ran the Carnegie Steel and Standard Oil respectively. While monopolies on ‘real’, tangible products are still prevalent today, the rise of the Internet has prompted the creation of numerous companies that dominate the information and technology realms, often referred to as FAANG (Facebook, Apple, Amazon, Netflix, Google). These companies have capitalized on the fledgling information and technology industries, and have grown to possess a significant percentage of the market.

International Agriculture

Agriculture has not been the US’s collective focus since before the Second Industrial Revolution when technology and mechanization first began to take over the world. However, monopolistic agricultural companies, whose growth has never been checked, have been taking over the industry and knocking out small farmers. The US agricultural market suffers from a high rate of consolidation, which means that only a handful of corporations control every single part of the industrial process, from the production to the distribution of your favorite foods. In every field, the top companies are predicted to control around 40% of the market; when that threshold is exceeded, the market competition is threatened and power is more likely to be abused (Kenton, 2020). In the agriculture industry, almost every sector has a company that holds well above 40% of the market, including but not limited to beef (84%), corn (80%), and soybeans (70%) (Farm Aid, 2020). In the 2017 Census of Agriculture, it was concluded that the top 5% of farms are producing 75% of total sales across the board (Gloy, 2019).

Since a handful of corporations control the majority of the market, those dominating corporations can take advantage of smaller farms. The former can take control of products and the market to drive the latter out of business, perpetuating this monopolistic cycle. CAFOs, concentrated animal feeding facilities, pack thousands of animals into commercial barns and keep them under constant surveillance. Although CAFOs only accounts for a small number of farms in the US, it dominates animal production and has an enormous great influence on crop growth, particularly in the midwest. There are about 70 million pigs in the US at any time, but 1 in 10 are breeding sows, the majority of which are CAFO establishments. The biggest pig farmer in the country is Virginia-based Smithfield Foods, which has nearly a million sows in the US. Additionally, Iowa Select Farms has one of the fastest-growing CAFO operations in the country, with 800 farms across half of the counties in Iowa (McGreal, 2019). The sheer number of livestock these giant farming corporations own gives them unbridled power over small farms and market prices when it comes to animal products.

Large corporations also have control of the products small farmers use. For instance, when a farmer buys seeds, they have to choose from Bayer or Dupont, the two major seed providers. The markets for chemicals and fertilizers are similarly limiting. Finally, once this farmer has created their product, there are only a few companies to sell to, especially in the pork industry, where most farmers have strict contracts with Tyson and JBS, the two dominant figures of the industry. "They have very constrained choices and that means that they are also smaller players," says Mary Hendrickson, professor of rural sociology at the University of Missouri. "They don't have the market power to negotiate on equal terms with these larger players." (Moon, 2019). As a result, producers often find themselves farming in ways that benefit big corporations at their own expense, sticking to one crop or forgoing crop rotations that could suppress weeds or disease without the use of pesticides. While big business has been taking over the agricultural sector, smaller farmers have petitioned for the legislature to protect themselves from these unchecked corporate giants.

In 1921, the Packers and Stockyards Act (PSA), similar to the Sherman Antitrust Act of 1890 (Legal Information Institute, 1992), was created to regulate meatpackers, livestock and poultry dealers, swine contractors, and other middlemen in the livestock industry. The PSA addressed the concentration and anticompetitive practices in the livestock

industry, but also contained several provisions that protected individual farmers and ranchers from abuse and unfair practices. The PSA was meant to level the playing field and rein in the power of corporate meat giants. However, the PSA has not been adequately implemented or enforced due to the deep pockets of corporate agriculture giants that have made it difficult to do so. Additionally, the 2008 Farm Bill authorized new authority for stronger protections for farmers and ranchers who dealt with meatpackers. It was an answer to decades of protest and unrest among farmers who were taken advantage of by corporate meatpackers. The USDA finalized its rules in December of 2011, but unfortunately, those efforts have since been attacked heavily by Congress, which has blocked the implementation of the rule since 2012 through the funding and continuation of various resolution bills (Farm Aid, 2019).

Ecommerce

Today, monopolistic tendencies have extended to the online realm, largely in the form of the e-commerce monolith, Amazon. Since its creation in 1994, where it was an online marketplace for books, the Seattle-based company has become an enormous conglomerate, controlling about 40% of the retail market today (Stevens, 2020). This is a massive fraction - Amazon's closest competitors in the US e-commerce, Walmart and eBay, make up only 5.8% and 4.5% respectively (Garcia, 2020). Over the last two decades, Amazon has been making great efforts to expand into and create a presence in nearly every major category of online retail, spanning industries from entertainment to ebooks (Statista Research Department, 2020). Amazon's market power is tremendous and enables the company to continue to grow through some rather unpleasant methods.

A monopoly is described as a company having "...complete control of the entire supply of goods or of a service in a certain area or market" (Merriam-Webster, 2020). This definition implies that monopolistic companies can effectively destroy competitors and dictate the prices of goods in their domain. Amazon fits this mold - they have been able to expand into different sectors of the retail market by using their wealth to manipulate the market into an environment where it is difficult for other, smaller businesses to compete. One standout example is the fate of Diapers.com and the startup behind it, Quidsi (Oremus, 2013). In 2009, Diapers.com saw quite a bit of success and subsequently met with an Amazon representative, who explained to them that Amazon was looking to

enter the diaper market, urging Quidsi to sell Diapers.com to them. After Quidsi refused, they noticed that Amazon was dropping the prices on similar goods (diapers, baby formula, etc.) by up to 30%. This was no coincidence - Amazon's pricing bots (software that monitors other companies' prices and adjusts Amazon's accordingly) were tracking Diapers.com. Over time, this drop in prices would eat into Quidsi's profits, driving the owners to eventually sell the company to Amazon in late 2010. This is a prime example of Amazon's abuse of its monopolistic position - they can change the prices of goods in such a way that it largely prevents other, smaller competitors from remaining in the market. Amazon uses the injurious pricing technique dubbed 'dumping' to do so: they adjust their prices to the point that the prices are so low that they do not generate profit. Amazon, with its wealth, can sustain such a loss, while smaller businesses cannot. Their inability to compete with these ever-lowering prices forces them out of the marketplace and enables Amazon to return to their original prices. It is clear that Amazon possesses the power to shape the market to their pleasure - their immense size enables them to drown their competition and maintain the top spot, extending their power and legacy into the indefinite future.

Social Media

Social media as a whole is one of the biggest and most influential aspects of the economy today. It allows people all over the world to connect, share experiences, and create change, all of which many companies and platforms have taken advantage of. 80% of all internet users visit social media sites at least once a month. Younger people are the primary users of social media, with 90% of younger Americans using some form of it in 2019, compared to only 60% of elders (Pew Research Center, 2020). Almost all businesses and start-ups have some sort of social media presence to help increase their popularity. Today, 3.9 billion people use social media, and this number has only grown with the rise of the coronavirus pandemic (von Abrams, 2020). Some companies, including Facebook, have capitalized on this growing market and seen incredible growth and profit in the past 12 years, becoming the main apps half of the world's population use every single day.

Social media companies such as Facebook, the leading social network today, make revenue through advertising both well-known and more obscure companies. Facebook

makes almost 9 dollars per active monthly user every year, for the growing number of 2.7 billion users (McFarlane, 2020). In the third quarter of 2020, Facebook made almost 8 billion dollars, with numbers following closely in past quarters. With the acquisition of WhatsApp for 19 billion and Instagram for 1 billion, Facebook has been able to take over 68% of the social media market, with 3.2 billion people using Facebook, Instagram, WhatsApp, and (Facebook) Messenger, of which 1.8 billion are daily users (Noyes, 2020). This number grows by about 12% each year. With over 70 billion dollars in revenue by 2019 and a stock growth of 163% in the past 5 years, it is clear they have taken over the market and have effectively created a monopoly over the industry. This company and a few others have made it incredibly difficult for new companies to grow, but some companies have been able to succeed in recent times.

Facebook's closest competitor is Pinterest, with a 30% prevalence in the market, but even then, the latter has only made a revenue of about 1.17 billion in 2019, 70 billion less than Facebook (Cheung, 2020). There are also other companies and apps that are popular in today's social media economy - this includes Snapchat, which is mainly used by people younger than 16 years old, making about 1.7 billion dollars in revenue each year with 218 million daily users. Twitter is another popular platform, used more by celebrities and influencers to share thoughts rather than photos. Other major companies include LinkedIn, which is typically used by professionals, and WeChat, a messenger that is very popular in China. However, with Facebook having the biggest influence in the social media realm, they can take anything unique from any other new social network and create their own version and are generally able to control the market in order to grow their own presence.

Search Engines

Launched from humble beginnings in 1998 by Sergey Brin and Larry Page, Google has managed to turn into the world's most popular search engine. Valued at approximately \$320 billion in December of 2020 (Staff, 2020), it has flourished under its parent company, Alphabet, and has made many extensions into other realms of technological advancement. Controlling over 90% of the market, Google has dominated for decades; Bing, Google's closest competitor, only possesses a mere 2% of the market (Siddiqui, 2020). Whether or not Google is a true monopoly is a persistent question - most are

unsure if Google earns profit legally, or if there are more questionable measures in play. According to the legislatures of nearly 40 U.S. states, more investigation needs to be conducted on these suspicious matters.

From October to December of this year, three major antitrust lawsuits have been filed against Google, with allegations centering around how the company abuses its position above other rivals. The Department of Justice claimed that Google stifled its competitors and hurt consumers with exclusionary agreements, finding a breach of trust in American law. Recently, Google has agreed to multi-million dollar deals that have made it the default search engine on Apple products. As the lawsuits reported, this use of profit to earn “special treatment” classified Google as a monopoly and threatened the innovation opportunities of other companies (Allyn et al., 2020). During his time in office, President Donald Trump stated that he would hold “Big Tech” accountable for their violation of the law, referring to their gatekeeping of most online platforms. Nebraska’s Attorney General Doug Peterson claimed that “Google uses people...” with his fears concerning the company’s use of personal data. Capturing almost 78% of all U.S. digital ad dollars (Marvin, 2017), the search engine has managed to become the epicenter of national interest. Globally, the company has been fined more than \$9 billion by European competition groups, for their online advertising practices that broke the EU’s antitrust rules.

Google’s annual \$160 billion earnings have granted it unprecedented opportunities to expand its sphere of dominance. Since 2019, the company has been able to hire over 20,000 additional employees, increasing their worker count to 100,000. This increased workforce has led to international workplaces emerging in Latin America and Europe (Garun, 2019), Google’s influence now extending into foreign economies. Only in China, where Google is banned, has the company not seen established networking (Doffman, 2020). Google is no stranger to forming connections and undermining the system. Its aforementioned deal with Apple puts Google in a very favorable position with U.S. consumers - the search engine has also made agreements with Samsung, playing for both teams in the technological marketplace.

Most recently, Google has capitalized on two separate business platforms, focusing on entertainment and autonomous vehicles (D’Allegro, 2020). After purchasing YouTube in 2006 for \$1.65 billion, Google has brought in an enormous yearly revenue of roughly

\$15.15 billion from the platform (Lipton, 2014). Earning all this from advertising revenue, the corporation's access to user information is higher than ever imagined. In fact, their data control is so strong that politicians have begun to raise suspicion. In Texas, Senator-led allegations have been made against Google, claiming that the company colluded with Facebook to divide the market share of advertisements (Feiner, 2020). These two online superpowers supposedly partnered in 2018, and Facebook has begun to cut back on header bidding costs since using Google's ad server. It seems as if Facebook was willing to modify its whole advertisement strategy simply to create this alliance for the future.

Google's position in entertainment, marketing, and production is like that of no other company. Only continuing its growth as technology becomes more widespread, the company seems to have no limitations on its expansion. With that said, the public wonders whether their "partnerships" have been in the best interest of future innovators - if Google's access to personal data has caused rightful concern for the DOJ, then surely we, as citizens, should raise our attention as well.

Without a doubt, Google has become a monopoly. Encompassing their entire market with influence on their competitors, the company has crossed the boundaries in terms of an "equal" power dynamic. Looking at Google's financial history, recent fines, and profits, it can be concluded that this single organization has complete say in matters concerning its market. This is the problem. New innovators cannot get access to the already established market. Foreign companies cannot limit Google's influence, as its connections with other online powers make it unremovable from society. All in all, Google's monopolistic methods must be stopped. For the sake of our personal data, market change, and technological development, this issue must be confronted.

REFERENCES

- Allyn, B., Bond, S., & Lucas, R. (2020). *Google Abuses Its Monopoly Power Over Search, Justice Department Says In Lawsuit*. NPR.
- Cheung, B. (2020). *Who Are Facebook's Main Competitors?* Investopedia.
- D'Allegro, J. (2020). *How Google's Self-Driving Car Will Change Everything*. Investopedia.
- Doffman, Z. (2020). *Why Google And YouTube Are Now China's Most Wanted*. Forbes.
- Farm Aid. (2019). *Fair & Competitive Markets for Family Farmers & Our Food*. Farm Aid.
- Farm Aid. (2020). *Corporate Control of Agriculture*. Farm Aid.
- Feiner, L. (2020). *Texas and nine other states file new antitrust lawsuit against Google - here's the full complaint*. CNBC.
- Garcia, T. (2020). *Walmart surpasses eBay in U.S. e-commerce for the first time, Amazon still tops: eMarketer*.
- Garun, N. (2019). *Google's 2019 expansion plans will put offices in 24 out of 50 states*. The Verge.
- Gloy, B. (2019). *Concentration in Agricultural Production*. Agricultural Economic Insights.
- Kenton, W. (2020). *What is Concentration Ratio?* Investopedia.
- Legal Information Institute. (1992). *Sherman Antitrust Act*. Legal Information Institute.
- Lipton, J. (2014). *Google's best and worst acquisitions*. CNBC.
- Marvin, G. (2017). Report: Google earns 78% of \$36.7B US search ad revenues, soon to be 80%.
- McFarlane, G. (2020). *How Facebook, Twitter, Social Media Make Money From You*. Investopedia.

-
- McGreal, C. (2019). *How America's food giants swallowed the family farms*. The Guardian.
- Merriam-Webster. (2020). *Monopoly*.
- Moon, E. (2019). *Big Ag Monopolies Have Stifled Small Farmers. 2020 Democrats Want to Break Them Up*. Pacific Standard.
- Noyes, D. (2020). *Top 20 Facebook Statistics - Updated October 2020*. Zephoria Inc.
- Oremus, W. (2013). *How Amazon Went Thermonuclear on Diapers.com*.
- Pew Research Center. (2020). *Demographics of Social Media Users and Adoption in the United States*. Pew Research Center: Internet, Science & Tech.
- Siddiqui, A. (2020). *2020 Search Engine Market Share: Google Leads by a Huge Margin!* Digital Information World.
- Staff, B. T. (2020). *Google Net Worth, Revenue and Wiki*. Trendrr.
- Statista Research Department. (2020). *Amazon*.
- Stevens, P. (2020). *This breakdown of retail sales data shows why Amazon is leading the stock market*. CNBC.
- von Abrams, K. (2020). *Global Social Network Users 2020*. Insider Intelligence.

Nationalized Healthcare vs. Privatized Healthcare

Philip Zitser, Allan Rikshpun, Sarah Derkach, Maddox Garetti

Affiliation: International Socioeconomics Laboratory™

ABSTRACT

For decades, countries around the world have been battling in the debate on what type of healthcare is most beneficial - privatized or nationalized. Though it doesn't look like it will be resolved anytime soon, Nationalized health care seems ideal, considering patients don't pay for their medical treatment. However, to account for all medical expenses and ensure that care is free of charge, countries must find other mediums to cover production and employment costs such as taxation. Privatized health care has been notorious for its lack of affordability to the average citizen and better care. As it is a for-profit business, there is no need for other financial support methods other than cost-sharing and out-of-pocket payment. Both Nationalized and Privatized healthcare come with their benefits and disadvantages. The debate continues, as countries with different healthcare systems prove to be well functioned and organized.

Categories: Economy, Healthcare

Key Words: Affordability, Nationalized Healthcare, Privatized Healthcare

Healthcare in the US

The US fosters a healthcare system that is a mix of public and private for-profit and non-profit insurers and healthcare providers. The federal government provides funding for the national Medicare program for adults age 65 plus, those with low income, disabilities, and veterans. In 2017, public spending accounted for 45 percent of total health care spending (8 percent of GDP). Federal spending represented 28 percent of the total cost of healthcare. Federal taxes fund public insurance programs, such as Medicare, Medicaid, CHIP, and military health insurance programs (Veteran's Health Administration, TRICARE). The Centers for Medicare and Medicaid Services is the largest governmental source of health coverage funding. On the contrary, in 2018, spending on private health insurance accounted for one-third (34%) of total health expenditures. Private insurance is the primary health coverage for two-thirds of Americans (67%). The majority of private insurance (55%) is employer-sponsored, and a smaller share (11%) is purchased by individuals from for-profit and nonprofit carriers. Many employers contract with private health plans to administer benefits. Most employer plans cover workers and their dependents, and the majority offer a choice of several plans. Both employers and employees typically contribute to premiums; much less frequently, the employer fully covers premiums.

In today's society, [Tolbert '19](#) finds that almost 30 million Americans had no medical coverage in 2018, with [Pifer '20](#) explaining that an additional 43 million Americans could lose their insurance in 2020 and 2021 due to the COVID-19 pandemic. Because of such extreme cuts to medical coverage in response to the pandemic, Americans are surely in danger. The issue becomes catastrophic when looking to [Brody 17](#), who quantifies that 125,000 people die every year because of medical nonadherence. On the other hand, [Yale researchers](#) find that increased coverage and hospital access under Medicare for all would save over 68,000 lives a year.

Privatized Healthcare

Though privatized healthcare is typically viewed as a sole means of profit for large medical corporations, privatized healthcare comes in many forms. Universal healthcare is a form of healthcare where a country requires each individual to buy a healthcare

insurance plan. When purchasing health insurance from a private insurance company, there are three types of cost-sharing charges. Cost-sharing is the amount that one has to pay for their medical item or service, including hospital stays, physician visits, and prescriptions. The first kind of cost-sharing charge is called a deductible, which is set on a yearly basis. If an individual pays for a \$1,000 deductible plan, it means that until they spend \$1,000 or more on medical services or items, they pay the total cost. Deductibles don't necessarily apply to all medical items and services. The second type of cost-sharing charge is copayment. Copayments are a fixed amount of money that an individual must pay for their service or item. For example, if someone buys a prescription drug from a pharmacy, they may have a copayment of \$10, and the insurance company covers the rest. Finally, there is a coinsurance, which is a fixed percentage that an enrollee must pay for medical expenses. An example of such is in a hospital stay, where the enrollee is covered 70% and is required to pay the other 30% (Beyond the Basics, 2021).

Many countries such as Switzerland, Norway, Germany, Israel, and the Netherlands have universal privatized healthcare insurance systems. Switzerland, unlike the United States, has universal privatized coverage for healthcare. The federal health insurance act requires all citizens to buy statutory health insurance (SHI) from private insurance companies to cover essential health care services. These services include hospital inpatient services, general practitioner and specialist services, pharmaceuticals and medical devices, home care services, some preventive measures, maternity care, outpatient care for mental illness, and hospice care in the case of an underlying disease (Tikkanen et al., 2020). It does not, however, provide insurance for dental work and eyeglasses or contact for adults. In Switzerland, competing insurance companies offer SHI, and upon arriving, each individual over the age of 19 is given three months to buy healthcare insurance from one of the private insurance companies.

Norway is another country with a universal private healthcare system. Like many countries with privatized healthcare, the government pays for medical facilities. However, every adult is required to pay an annual fee to private insurance companies to cover their medical expenses. Those under the age of sixteen receive free medical care. This differs from the standard medical procedures in most countries, with privatized healthcare. Norway's government provides basic healthcare coverage for all tax paying citizens. However, those who lost income due to illness receive a basic income to cover

their medical needs. The public health expenditures represent 10.5% of GDP in 2016. The public insurance also accounts for most health coverage, at 85%. Though Norway is considered to have private healthcare, in 2016, only 10% of the population had additional private insurance and 90% of these were paid for by an employer. (Tikkanen et al., 2020)

Cost-Benefit Analysis

Privatized health care can come in many forms, two of the most common being employer-sponsored coverage and an independent plan purchase, the former being the *more* common of the two. The largest demographic of individuals taking advantage of these privately-funded plans are those under the age of 65.

Health care in the United States has been more or less taken over by the private industries, where we're seeing fewer people covered by government-funded healthcare. Over the years, and what is currently expected of future years, there has been an upwards trend for privatized health insurance spending; a trend almost twice as great in comparison to that of both Medicare and Medicaid (Altman, 2015).

One of the main fights against the privatization of health care is the notion that everyone should be able to receive the same level of healthcare, despite financial differences. Although, Medicare offers a specific privatized insurance that offers more for less (Altman, 2015). The reason behind why healthcare is so expensive is due to the original prices of the provided services and that these services can sometimes be viewed as luxuries, and not necessities. Specifically speaking, Medicare combats this fact by creating a more cost-efficient method than their publicly-enrolled counterparts.

Nationalized Healthcare

In the current society, there is little that comes without cost. In many countries, healthcare is extremely expensive, under a privatized system. Nationalized healthcare would lead to heavier taxes, lower wages for doctors, longer lines, but free health care for all. The big question is whether or not the benefits outweigh the costs. Nationalized healthcare has been implemented in many countries around the world, primarily in the European region. Italy and Canada are known for their positive

outcomes under nationalized healthcare. These governments try to provide most of their citizens in regards to medical care and to ensure that the benefit given is sufficient and does not provide a financial hardship to citizens.

Canada has a decentralized, universal, publicly funded health system called Canadian Medicare. Health care is funded and administered primarily by the country's 13 provinces and territories. Each has its own insurance plan and receives cash assistance from the federal government on a per-capita basis. All citizens and permanent residents receive medically necessary hospital and physician services free at the point of use. To pay for excluded services, including outpatient prescription drugs and dental care, provinces and territories provide coverage for targeted groups. In addition, around two-thirds of Canadians have private insurance. Total health spending is estimated to have reached 11.5 percent of GDP in 2017; the public and private sectors accounted for approximately 70 percent and 30 percent of total health expenditures, respectively. Italy's National Health Service covers all citizens and legal foreign residents. It is funded by corporate and value-added tax revenues collected by the central government and distributed to the regional governments, who are responsible for delivering medical care. Residents receive mostly free primary services, inpatient care, and health screenings. Private insurance plays a very limited role in the healthcare distribution of Italy. Evidently, medical schools in these countries are cheaper than in the US. Relatively, US doctors receive a significantly higher paycheck on average. Nationalized healthcare is implemented for the benefit of the people. It provides healthcare to all, but raises taxes by a significant amount.

Cost-Benefit Analysis

Nationalized healthcare is a governmental system in which the government itself funds the medical care of the country's/region's residents, fully and in a non-discriminatory manner. This concept creates a medical world where competition is nonexistent; the lack of profit incentive for doctors, nurses, and any other medical workers sets forth the idea driving the "universal healthcare system," which is medical care for all. The government is the umbrella factor in this kind of healthcare; they both control and regulate the costs of this aid, which essentially reinforces the indistinguishable treatment that the residents would receive.

The government's funding of national healthcare within the United States tops any other. From 2018 to 2019, a 4.96% growth of this sector's expenditures had transpired, having an overall sum of upwards of \$3.8 trillion. For the same year, this number represents 17.7% of the nation's GDP (Center for Medicare and Medicaid Services, 2020)

The question here is whether or not this large sum of governmental money (single-payer system) being spent on healthcare can be supported and justified by the quality of its output. This can be broken down into different categories, although the largest tie back into the level of healthcare that *every* resident receives, in a non discriminatory manner. While this concept is supposed to be what drives a universal healthcare system, there are notable instances of the opposite occurring in the US (Ryan Nunn, Jana Parsons, Jay Shambaugh, 2020).

The first questionable aspect of the system present here in the United states is that the price tag hanging on the same services differ greatly within many parts of the country. This is a complete change in direction from the already-known definition of the foundation that a universal health care system is built off of. For example, the prices of things as simple as a blood test are completely different in certain metropolitan areas. The 2016 median for this test, "a comprehensive metabolic panel," in Portland, Oregon is less than 50 dollars. On the expensive side of the spectrum, places like Miami and Fort Lauderdale in Florida have the median price for this same test going for upwards of 350 dollars. These differences in prices are mainly due to the fact some of these stated metropolitan areas "have nicer facilities, or employ more experienced medical teams, allowing [them] to charge correspondingly higher prices."

Impacts of Nationalized v. Privatized Health Care on Insurance

The US system became increasingly costly, leaving now about 46 million of Americans uninsured. In 2005, expenditures were twice as high in the US as in Canada — US\$6697 per person v. US\$3326 in Canada (Schoen C, Osborn R, Doty MM, et al., 2007). And although Canada insures all its population for necessary doctor and hospital care, the US leaves 15% without any insurance whatsoever. (US Bureau of the Census, 2006). Those who are insured often need to pay a substantial fraction of the bill, and some necessary

services may not be covered. In a recent survey, 37% of Americans reported that they went without needed care because of cost, compared with 12% of Canadians.

Whether privatization would shorten waiting lists by creating more facilities is arguable. What it would certainly do is change who would be waiting. In the US, for example, well-insured patients have a very short wait for a hip replacement, but the 46 million Americans without health insurance might wait for the rest of their lives. As in all such parallel systems, privatization would draw off resources from the public system (James Lorimer & Company Ltd, 2007). Waiting lists would be shorter in the private system, but they would almost certainly grow longer in the public system.

Money diverted to the private system would not buy the same health care as it would in the public system. There have been many studies comparing for-profit and not-for-profit health care in the US. For-profit care is nearly always more expensive and often of lower quality (Woolhandler S, Himmelstein DU BMJ, 2007). Indeed, logic and common sense would suggest the same conclusions even without the growing empirical evidence. Unless we believe, without any evidence whatsoever, that for-profit organizations have some secret of efficient operation not known to the not-for-profits, it makes no sense to suppose that, given the same payment system and the same patient population, the for-profit organizations can provide similar services while still extracting their profits and business costs from the system. Neither does it make sense to imagine that investor-owned businesses are charitable organizations that wish to contribute their resources to the community. It is obvious that their responsibilities to their investors require them to take profits from the community. To do this, as many US studies have shown, they skim off the profitable patients and the profitable services, leaving the leftovers to the not-for-profits.

Outweigh

Nationalized Health Care poses a benefit for those who are unable to receive by privatized healthcare institutions operating on the sole purpose of profit. This single payer system removes administrative costs and offers a large range of coverage compared to its counterpart. However, proponents of privatization of healthcare argue that the removal of these jobs in the administrative sector of healthcare industry would result in a

loss of jobs and a larger influx of taxes that would immediately harm the working class through its extensive cost of implementation of (32 trillion USD for M4A) and high decreases in GDP of an utmost 8.5%.

30 million Americans have no medical coverage in 2018. With the raging pandemic, 43 million additional Americans can lose their insurance. Nationalized healthcare under a single medicare system would save 68 thousand lives a year. In fact nationalized healthcare would impact the working class in two ways: small businesses and job opportunities. The average American family would see positive annual savings of about 2400 dollars which means that they are now pocketing dollars that would have previously gone to their treatment. Anderson '14 Every extra dollar going into the pockets of low-wage workers adds about 1.2 dollars to the national economy. This becomes largely significant when looking to the 53 million low-wage workers in America who would, therefore, add trillions of dollars to the national economy annually.

Currently, employer-provided health insurance locks workers into their jobs, acting as a perceptual incentive for employees to stay because they do not want to risk losing this insurance. Due to this phenomenon, Chute '15 864,000 people are discouraged from changing jobs which causes 1.8 billion dollars in lost income within the job market annually. Bivens '20 National Health Care would remove the job lock by guaranteeing healthcare for every individual, allowing them to switch to higher paying jobs without worrying about employer insurance. Therefore, Saez '19 the elimination of insurance contributions would allow an average employee to see their wages go up by 30%. Finally, Brownell '16 Every 1% increase in wages increases consumer spending by 2,800 dollars, looping right back into our economy while a 1% increase in per capita income reduces income poverty by as much as 4% which is critical when looking to the fact that, in the most recent evaluation, Galea '11 Approximately 291,000 deaths were caused by insufficient income in the US. The only way you can prevent these deaths within this debate is by allowing citizens to spend exponentially less on their medicine and more on their well-being.

REFERENCES

- Admin. (2020) Key Facts: Cost-Sharing Charges.
- Anderson, S. (2014) Wall Street Bonuses and the Minimum Wage *Institute for Policy Studies*
- Center for Medicare and Medicaid Services (n.d) National Health Expenditure Data
- Columbia University Mailman School of Public Health (2011) How Many U.S. Deaths are Caused by Poverty, Lack of Education, and Other Social Factors?
- Diego, C. (2019). Documented Impacts of Minimum Wage Increases on Job Growth, Business Health, Consumer Prices, and Family Spending.
- Drew Altman Follow @DrewAltman on Twitter Published: Apr 16, 2015, A. (2017, February 07). Public vs. Private Health Insurance on Controlling Spending.
- Nunn, R., Parsons, J., & Shambaugh, J. (2020, April 06). A dozen facts about the economics of the US health-care system.
- Picchi, A. (2019, December 02). Almost half of all Americans work in low-wage jobs.
- Press Releases (2020) Medicare for All would boost wages, expand workers' options, and likely create jobs, *Economic Policy Institute*
- Saez, E., & Zucman, G. (2019). Opinion: We can afford Medicare for All...
- Tikkanen, R., Osborn R., Mossialos, E., Djordjevic, A., Wharton, G. A. (2020) Norway
- Tikkanen, R., Osborn R., Mossialos, E., Djordjevic, A., Wharton, G. A. (2020) Switzerland.

Minimum Wage

Angye Bardales, Achraf El Madnaoui, Deven Rozario, Renee Fishler, Theresa Morano

Affiliation: International Socioeconomics Laboratory™

ABSTRACT

Through the analysis of the consequences of raising the minimum wage in the United States, many different factors have been taken into consideration – disparities in minimum wages in large cities and smaller cities, the effects of policies on small businesses, and the effects of such policies on large corporations. Raising the minimum wage is most detrimental to small businesses, as large corporations are more able to afford such a change while incurring minimal losses. In essence, an increase in the minimum wage would result in various consequences, affecting every business differently depending on their location, size, and structure.

Categories: Economy, Economics, Corporation

Key Words: Minimum Wage, Businesses, Cities

Introduction

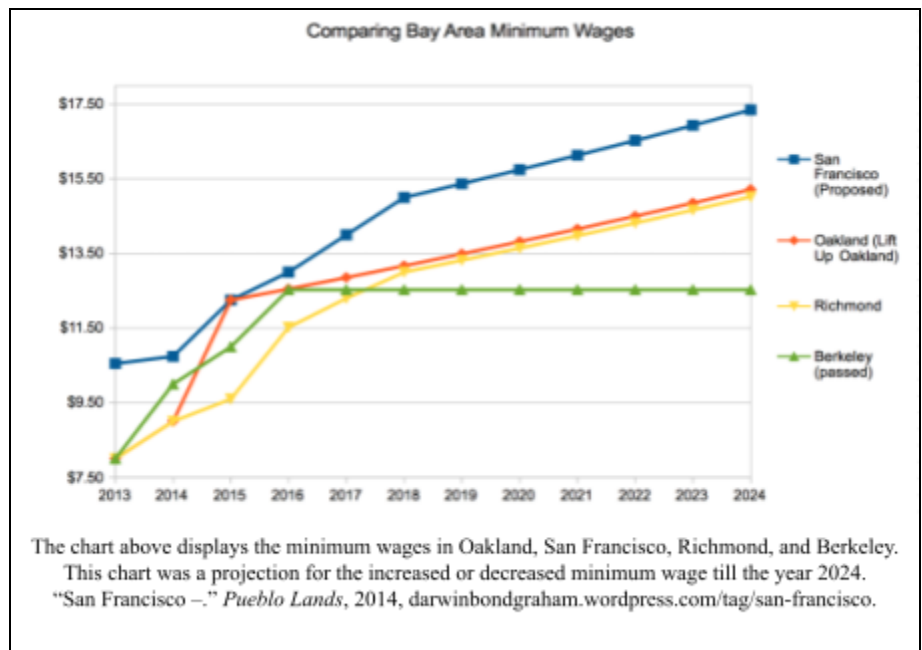
The question of raising the federal minimum wage has been a prominent topic for many years in the United States. There are several arguments as to why the minimum wage should be increased: reduced turnover rates, lower unemployment rates, along with several other benefits. However, there exist equally important arguments against such a policy, like the risk of inflation, increased outsourcing of jobs, etc. In recent years, many large corporations have given up on their lobbying efforts against higher minimum wages, while small businesses are as passionate as ever to protect their businesses from the repercussions of an increased minimum wage. As it is a complex debate to resolve, the federal minimum wage affects all areas of the country in distinct ways.

Big Cities vs. Small Cities

There are many factors that contribute to the increasing or decreasing rates of the minimum wage in specific regions. The decline, however, is primarily seen in low-income jobs, with growing levels of economic inequality. After the sudden strike of COVID-19, unemployment rates have caused a reduction in minimum wages throughout both large and small cities in the United States. One example of this phenomenon would be New York City. The minimum wage in NYC is \$15.00 (Depersio, 2020), despite the city's immense population of approximately 8.3 million ("New York City", 2020).

Wyoming’s capital, Cheyenne, with an approximate population of 64,165 (“Cheyenne”, 2020), has a minimum wage rate of only \$7.25 an hour (Minimum-Wage.org, 2020), compared to large cities like NYC and San Francisco, which have minimum wage rates of \$15.00 and \$15.45 respectively (Depersio, 2020). This massive contrast between large cities with sizable populations and smaller cities has caused great outrage and conflict throughout the US as to whether it is useful to increase or decrease the federal minimum wage. Research shows that in 2016 when San Francisco raised its minimum wage from \$6.75 to \$8.50 per hour, the results changed the perspective on minimum wage in big cities. To be specific, this data indicated that businesses absorbed the costs that were incurred as a result of the wage increase through lower turnover and small price increases at restaurants. The increase in prices for the products led to an increased concentration on lower-wage workers and a higher productivity rate. Additionally, when Santa Fe allowed the phase-in of a 65% increase in the minimum wage for small businesses, researchers found that employment rates were slightly higher in Santa Fe than in Albuquerque, which didn’t raise its minimum wage (Thompson, 2016). Another research study, performed by the Minimum Wage Study Commission (MWSC), where three economists found that an increase in the minimum wage had little to no effect (0% to 1.5%) on the employment status of teens (ages 16-19 (Shemitt, 2013).

Another important factor that contributes to the minimum wage issue is the passing of 2019 Raise the Wage Act, which stated that by 2025, the federal minimum wage would be \$15.00 an hour. In contrast, the current federal minimum wage has been \$7.25 an hour since 2009 (Maverick, 2020).



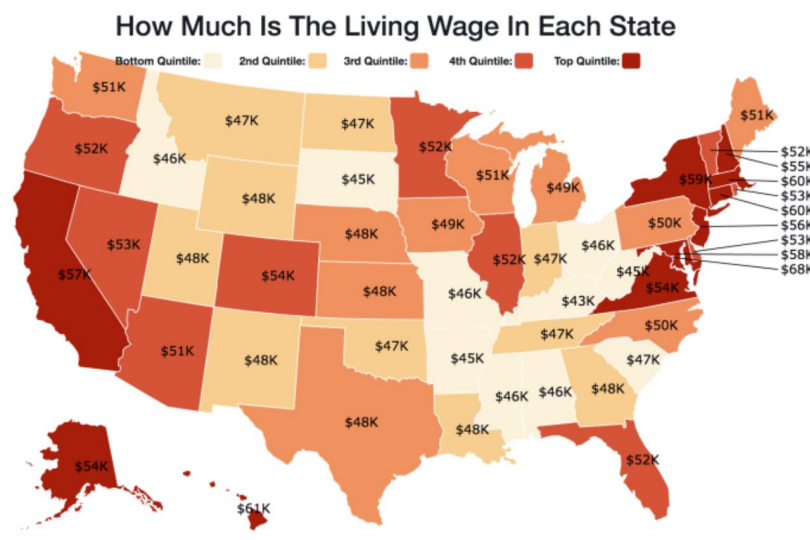
Jobs with higher wages have proven to lead to more job openings in lower-paying service industries and increase the number of well-paid workers in the nation (Wright, 2013). This act would change the difference between cities due to the imbalance of minimum wage rates. Now, while NYC has one of the highest minimum wages and is one of the highest populated cities, there are far more job positions, including those that pay a substantial salary. Nonetheless, with a higher yearly salary, there are also higher taxes to pay, along with the fact that homes in the city cost a lot more than average. However, even after the 62% decrease in real estate sales and a 4.2% drop in prices (International Socioeconomics Laboratory, et al., 2020), Manhattan is still one of the most expensive cities on the planet to live in, paying one of the highest wages in the country, where blue-collar workers earn an average salary of \$61,870 per year, according to the Bureau of Labor Statistics (Liu, 2019).

Effect on Small Businesses

The rising minimum wage trend in recent years has proved to be disastrous for small businesses. While large corporations tend to have enough money to accommodate increases in the minimum wage, many small businesses do not have this luxury. Small businesses often cannot afford to pay their employees a higher wage, causing these businesses to either let go of their employees, raise their prices, or both. As an example, a specific type of small business that would experience this issue are sole proprietorships,

which are businesses owned by a single individual. Sole proprietorships usually have a harder time generating a profit as they cannot sell stocks and find it more difficult to obtain bank loans (Shnir, et al., 2020).

Despite the challenges displayed by small businesses, such as sole



proprietorships, the minimum wage has been on the rise for the past decade. The federal minimum wage, currently \$7.25 per hour, is intended to guarantee a livable wage for the lowest-paid workers (Cooper, 2020). However, in most states, this is not a livable wage. For example, in Florida, the living wage is \$52,000 per year and the living wage in California is even higher at \$57,000 (Green, 2016). Meanwhile, the annual wage of a full-time federal minimum wage worker is \$15,080 (Center for Poverty and Inequality Research, 2018). This is why many states and cities have proposed a higher minimum wage—the current one provides workers with unlivable salaries. Take New York City as an example; in 2016, the minimum wage for small businesses was \$10.60 per hour. Now, as previously mentioned, it is \$15 per hour (Replicon, 2020). Additionally, the increase in minimum wage has been harmful for small businesses across the country. In the United States, 8% of small business owners say they would be forced to lay off workers if the minimum wage was increased. 14% say they would be forced to cut worker hours. 14% say a higher minimum wage would result in less revenue for their business and 22% say it would result in less profit for them (Wronski, 2020). In New York City, the increase in minimum wage to \$15 per hour has proved detrimental to many small business owners. For instance, the owner of Lido Restaurant in Harlem, Susannah Koteen, expressed her concerns about the effect of increased wages on her restaurant. She has had to be more strict about overtime and has cut back on shifts for her forty employees. Koteen has also had to raise her prices to accommodate for this wage increase (John, 2019).

Effect on Large Corporations

Corporations are easily the business structures with the highest profits. Though there are many types - C-corps, S-corps, B-corps, close corporations, and non-profit corporations— they all obtain significant benefits and shield owners from personal liability, allowing for their large sizes and profits (Shnir, et al., 2020). For example, Amazon generates millions of dollars of profit each year and has thousands of employees, so it would be easier for them to accommodate a raise in the minimum wage without seeing devastating effects. In addition, in the coming years, technology will replace these labor jobs for big companies, so it will be even easier to increase the minimum wage and avoid detrimental consequences. Although the wage premium for working at a large company has decreased over time, big businesses still achieve economies of scale through centralized HR (Human Resources) and benefits departments. They also have the upfront capital needed to invest in automation, such as the purchasing kiosks now in

place at McDonalds, that will make businesses less subject to labor costs in the future (DePillis, 2019).

Minimum wage as a whole is not a significant threat to many large companies because they have a tight job market for rank and file workers. In addition to that, they seek to incentivize people to become a part of their company through the offer of perks and high salaries. In fact, certain corporations have demonstrated that paying its employees a livable wage, usually over twice the federal minimum wage of \$7.25, actually reaps several benefits such as lower turnover, higher productivity, and a satisfied and loyal workforce. For instance, Ben & Jerry's pays all of its Vermont full-time workers a livable wage of \$18.13 as of 2020 ("Livable Wages", 2020). This, among other policies granting their employees benefits, has not created any significant repercussions for the large corporation, supporting the argument that large corporations will generally not face any challenges with the mandate of a higher minimum wage.

In addition, large corporations don't like to oppose wage hikes, because they fear it will bring bad publicity. This is a risk that is not worth taking, because they rely on consumers, and it looks bad on the company if they don't give their workers a higher salary. This same kind of pressure on corporate minimum wage is like a competition. If one company raises their minimum wage, they will brag about it and get a lot of 'good' publicity. However, if another similar company does not do the same, they are frowned upon, and if they do increase their minimum wage, the other company is incentivized to increase their minimum wage again. These companies do this to make their consumers sympathize with them and buy their products instead of those of their competitors. At the same time, large corporations may still tend to seek maximum profits. Therefore, they may decide to outsource more jobs to countries with little to no minimum wage laws in order to limit the cost of operations, causing large scale job losses. A less obvious consequence of raising the minimum wage would be the occupation of minimum wage jobs by overqualified workers. This means that there would be fewer job opportunities for recent college graduates or generally younger, less experienced workers, who tend to seek employment specifically in large corporations to further their careers (Maverick, 2020).

Conclusion

Existing minimum wage policies vary significantly from region to region. Larger cities tend to have higher minimum wages, such as the \$15.00 per hour minimum wage of New York City, as opposed to the \$7.50 per hour federal minimum applied in a city like Cheyenne. In larger cities, these higher minimum wages will result in average salaries that are much closer to a livable salary of that city, while in smaller cities the average salary of an individual will be a concerningly small portion of a livable salary. Yet it must also be acknowledged that workers in larger cities like NYC will be met with higher tax rates to pay, which not only affect minimum wage workers, but large corporations since they will have the highest tax rates. Thus, these large corporations may seek to optimize profits by raising prices for consumers to balance a rise in minimum wage, or, they may choose to implement policies with no serious loss in profits. Regardless of their location, small businesses simply cannot afford a dramatic rise in minimum wage without laying off workers or raising prices—if not both.

REFERENCES

“Cheyenne” (2020), Cheyenne, Wyoming Population 2020 (Demographics, Maps, Graphs)

Center for Poverty and Inequality Research (2020), What Are the Annual Earnings for a Full-Time Minimum Wage Worker? *Center for Poverty and Inequality Research*

Depersio, G. (2020), The Top 5 U.S. Cities With the Highest Minimum Wage, *Investopedia*

Cooper, David (2020), Raising the Federal Minimum Wage to \$15 by 2024 Would Lift Pay for Nearly 40 Million Workers, *Economic Policy Institute*

DePillis, Lydia (2019), Why big business is giving up its fight against a higher minimum wage, *CNN Business*

Green, A. (2016), The Minimum Income It Takes to Live in Each State, *Mental Floss*

International Socioeconomics Laboratory (2020), 2020 & Real Estate: The Effects of COVID-19 and Social Unrest on Real Estate Markets, *Across the Spectrum of Socioeconomics*, 2020,

John, A. S.. (2019), New York City Businesses Struggle to Keep Up After Minimum Wage Increase, *The Wall Street Journal*, *Dow Jones & Company*

Liu, J. (2019), These Are the US Cities Hiring the Most Workers in Every State—and “Livable Wages” (2020), *Ben & Jerry’s*

Maverick, J.B. (2020), What Are the Pros and Cons of Raising the Minimum Wage? *Investopedia*

Minimum-Wage.org (2020), Wyoming Minimum Wage

“New York City” (2020), New York City, New York Population 2020 (Demographics, Maps, Graphs), *World Population Review*,

Replicon (2020), New York Minimum Wage 2020: NYS Minimum Wage, *Replicon*,

Shcmitt, J. (2013), Why Does the Minimum Wage Have No Discernible Effect on Employment

Shnir, A., Derkach, S., Rikshpun, A. Fishler, R., Huang, E., Kadaev, M., Kothari, V. (2020), Company Structures and the Impacts of Policy, *Across the Spectrum of Socioeconomics*, 1(2), 99-113

Thompson, L. (2016), Studies Look at What Happened When Cities Raised Minimum Wage, *The Seattle Times*

Wright, J. (2013), The Cities Creating The Most High-Paid Jobs, And Why They’re Good For Low-Wage Workers Too, *Forbes*

Wronski, L. (2020), SurveyMonkey senior research scientist, Minimum Wage Increases Aren't a Job Killer: Small Business Survey, *CNBC*