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Cheap Labor and the Effects on the American Economy and Worker

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Cheap Labor and the Effects on the American Economy and Worker

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Abstract

This study shows how American companies have used cheap labor in the past and present to do smaller jobs or to make individual pieces or parts that were to be put together and used in larger products. This cheap labor came from both foreign and domestic sources. In recent times, however, these companies have picked up and moved their entire productions outside of the United States greatly impacting the American economy and workers. These moves have been called outsourcing or off-shoring and have played a major part in the decline of some of the larger manufacturing cities such as Detroit, Michigan. These moves have also created some new emerging markets that are predicted to overtake the American market by 2040. This has also helped foreign economies such as China, India, and Mexico, but it has also had an impact on the American workers who have had to deal with layoffs and job losses. This study also shows how mechanization, robotics, and contract employees have added to the continuing job losses.

Keywords: Outsourcing, Off-shoring, Illegal Immigration, Legal Immigration, Mechanization, Self Checkouts, Robotics, Layoffs

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Introduction

There is a growing movement in the United States to move more and more of a company's jobs or processes to overseas markets. These markets do provide a much lower cost based on the lower wages that these host countries can provide as well as possible cheaper raw materials. These moves are somewhat advantageous to the American consumers because they lower the cost of goods, but at what cost to the American workers and economy.

America is a country of immigrants, but for decades, immigration has been a growing concern. There are approximately 44 million legal and illegal immigrants living in America today. These immigrants migrate to America to escape oppression, raise families and try to build a better life for themselves and their families. Legal and illegal immigrants provide companies cheap labor because they are willing to work for a lot lower wages to just have a job so that they can survive.

Together with the job loss and economic impact of immigration comes advances in technology. With every technological innovation, the economy grew somewhat where the worker was left behind. There have been many advances to society and the economy from the Industrial Revolution to today's automation and robotics. These advances were to try and help make things or to do jobs faster which helps make companies and businesses more efficient and to be more profitable. These advances have come in many areas including farming, manufacturing, trash collecting, and even healthcare. This type of cheap labor, more often than not, also took away workers' jobs. The workers in these cases weren't always humans.

The moves made by these companies are creating a wave of mass layoffs. These layoffs are hurting the American workforce by sending their jobs elsewhere and hurting them psychologically, emotionally, physically, financially, and socially. These workers are usually

hard-pressed to find another job that can fit the description of the jobs lost or equal the pay they lost. Laid-off workers will tend to take jobs at lower pay to be able to pay their bills.

American companies' use of cheap labor, both foreign and domestic, has had its effects on the American workers and the economy. The places that this cheap labor is coming from are China, Mexico, and India as well as newer mechanized markets.

Literature Review

Outsourcing

As more and more American companies try to become more streamlined and cost-efficient, these same companies are sending more and more jobs overseas to developing economies. Outsourcing, or also known as off-shoring, is the process by which a company or government agency moves jobs from its home country to a foreign location or chooses to increase the production of goods or services by using a foreign third-party company rather than employ U.S. workers who are capable of producing such goods or services here in the U.S. (Marschall & Clawson, n.d.). This type of cheap labor is taking jobs away from the American workers and sending them overseas, mainly to third-world countries. According to the Bureau of Economic Analysis (2020), in 2018 there were 14.4 million people employed overseas, in outsourced jobs, by U.S. companies. These companies are using low-skilled labor in these other countries in the areas of manufacturing, technology, phone call centers, and human resources.

According to Amadeo (2021), who is an expert on U.S. and world economies and investing, with over 20 years of experience in economic analysis and business strategy:

Job outsourcing helps U.S. companies be more competitive in the global marketplace. It allows them to sell to foreign markets with overseas branches. They keep labor costs low by hiring in emerging markets with lower standards of living. That lowers prices on the goods they ship back to the United States.(para. 2)

Outsourcing began as large companies began buying out their smaller competitors, in a way to try and become bigger, better, and more profitable. As these smaller businesses were absorbed by the larger companies, the larger companies learned how taxing it was to take on the smaller businesses. They started to hire outside specialized companies to do part of their work which allowed the larger company to get back to their main business. First, they started hiring companies to do manufacturing because these countries could make their items more cheaply and had lower living standards, less restrictive laws, and regulations. They then moved into outsourcing payrolls, collections, customer service call centers, and employee benefits.

How does this outsourcing hurt the economy and workers? One of the main reasons is that the foreign workers don't pay Social Security or any other U.S. taxes. That means the increased tax revenue from corporate profits doesn't equal the amount lost on U.S. worker's income taxes. The profits are retained by the rich company owners while the middle class pays higher taxes (Reh, 2019).

Outsourcing is also responsible for the loss of what is considered intellectual capital. Intellectual capital is the value of a company's employee knowledge, skills, business training, or any proprietary information that may provide the company with a competitive edge (Chen, 2021). This intellectual capital loss was low at the onset of outsourcing as only low-skilled jobs were outsourced and companies retained their highly-skilled jobs. As more and more jobs were

outsourced, the host countries started to build their own intellectual capital as it is an asset to building their own economies. Intellectual property can be anything from the way an item is made, like trade secrets, ways of advertising to bring in new customers, or even research and development that is responsible for creating or improving products. Companies invest in their own company's intellectual capital when they hire more than qualified prospects, use company training to further broaden employees' knowledge, and developing new ideas or patents. We know that once a certain skill, or job, has been moved or outsourced, it is hard to bring back. This also means there are fewer workers in that skill area because there are fewer opportunities since they were sent overseas.

There is another thing companies lose when they outsource jobs overseas and that is manufacturing capacity. Mohr (2019) who is an author, chartered accountant, and certified management accountant describes this type of loss as:

When an industry moves offshore, not only do we lose the knowledge, we also lose the manufacturing capacity. For example, the U.S. was once the leader in solar cell manufacturing, but most American solar technology companies have set up new plants in countries that offer significant incentives, such as Germany. The manufacturing capacity is gone and, if the U.S. ever wanted to repatriate these types of industries, it would take years to re-develop the manufacturing equipment and train engineers.(para. 4)

Outsourcing also hurts the U.S. unemployment rate. Since there are 14.4 million workers overseas, those jobs would help reduce the unemployment rate here in America. It would greatly impact the number of Americans that only work part-time that do want full-time jobs.

Outsourcing to overseas countries does indeed help that host countries economy while it hurts ours. The host countries are generally poorer than the U.S. which means that there would be less financial aid needed from the U.S. to support their economy. The unemployment rate is also lowered which helps the workers in the host countries who also benefit as they are now employed and able to survive. But these workers don't get to enjoy workers' benefits as the host countries are often less regulated than the companies in the U.S. This means that Americans will have to pay for these human rights abuses and further damage to the planet that is caused by these fewer regulations (Reh, 2019).

This growing trend for companies to outsource or offshore their products doesn't appear to be going away. Even as the government has tried to make it more profitable to bring their companies back to America, they have not returned. There has been an increase in small companies being formed here in the U.S. such as Lyft, Uber, and Door Dash that has helped to get the unemployment rate down, but the larger companies are staying put for now.

Contract Employees

Companies today have an alternative to hiring traditional employees. Traditional, or full-time employees, require employer benefits such as taxes, social security, workers compensation, unemployment benefits, health benefits, sick leave, vacation time, and retirement or profit-sharing. These benefits are not required with contract employees or independent contractors. Being identified as an employee or an independent contractor does have an impact on the way the worker is protected from discrimination, on their benefits, and their pay. These contract employees are not eligible for any overtime, work that goes on after the 40 hours per week standard, like regular workers on the company's payroll.

What is a contractor, or independent contractor? This type of worker is usually self-employed and operates on their own and hired to complete specific projects or assignments (Post, 2021). Independent contractors are usually paid a commission per task that they complete for clients. They also have major control over how and when they complete their tasks. These independent contractors are not vital to the business of the companies or the people for which they work (Husak, 2019). Their contracts can be either short-term or long-term based on the needs of the hiring company.

Contract workers are on the rise in the United States. In the years from 2005 to 2015, contract workers in various fields rose from 10 percent to almost 16 percent (Katz, & Krueger, 2016). This type of work is better suited for some as they don't feel tied down to one job and they have the ability to work from home on some projects. Contract workers are, in a sense, being their own boss in that they have no supervisor to answer to and can work at their own pace. But they do have to rely on companies that hire them for regular income. These contract workers try to develop a network of clients so that they have steady work.

A poll done by NPR/Marist found that 1 in 5 jobs in the U.S. is held by a worker under contract. Within a decade, it is believed that contractors and freelancers could make up half of the American workforce (Noguchi, 2018). This rise in independent contractors that companies don't have to pay taxes on is putting a strain on some cities' budgets that plan on those taxes for things like police and fire departments and social services.

These contract workers are starting to appear in multi-national companies that are saving lots of money on labor costs by using them instead of regular employees. According to Andrew Moran, FedEx, General Motors, McDonald's, and PepsiCo are just a few of the companies that

have workers that work for subcontractors, franchisees, vendors, and others (Moran, 2015). Some large manufacturers are starting to temp out their operations and maintenance work to lower costs even further. These job losses are ones that will probably never return to these companies.

Some of these contract workers that can demonstrate their abilities well are hired as full-time employees after completing their temporary work. These large companies that employ them see that they have already spent money and time to train these contract employees and sees the value in hiring them when their budgets allow it.

Off-shoring

China

American companies have always tried to run their companies as efficiently and as cost-effective as possible. Henry Ford started a revolution in American industries with the implementation of the assembly line. But recently there have been periods of economic reorganizations by companies and that has led to a period of job displacements in what companies are calling downsizing. Job displacement is defined as the involuntary loss of one's job resulting from a layoff, downsizing, or a plant closing. Outsourcing of jobs to foreign countries is one of the great hidden economic issues of recent years. It is big business, with multinational corporations actively shifting jobs out of the United States and around the globe in search of the cheapest possible labor. But, following popular outcry against the practice in 2004, corporations have done their best to hide the details even as they expand their off-shoring activities. As a result, outsourcing has by and large fallen out of the headlines (Marschall & Clawson, n.d.). It is true that it is cheaper to rent a factory and its workforce rather than having to

pay for the upkeep of both (Strain, n.d.). Entrepreneur.com states that "many contract manufacturers offer services beyond production. They may store and ship your products as well, and charge either for the space you use or the services you buy". Overseas labor often includes technically skilled, highly educated, and multilingual workers who are willing to work for a fraction of U.S. salaries (Strain, n.d.). The advantage of having support workers who can respond to your global customers in many languages is a significant asset. In offshoring, it appears that the companies are willing to give up a little of their daily control to their overseas contractor to get this cheap labor.

When looking at cheap labor, one must start by looking first at the foreign labor pool in the third-world countries which seems to be the most popular with American countries. One of the largest foreign labor pools, and the one that most people think of first, is China. Indeed, China has profited from the outsourcing or off-shoring that has gone on in the current times. In recent decades, cheap labor has played a central role in the Chinese model, which has relied on expanded participation in world trade as the main driver of growth (Lin et al., 2003; Bernstein, 2004). Chinese wages have grown immensely since the Chinese economic reforms of 1978. In 1978 the annual wage of a Chinese urban worker was only about \$1,000 U.S. dollars which were only about 3 percent of the average U.S. wage at that time. The Chinese wage was also low relative to productivity (Li, et al., 2012). According to Ceglowski and Golub (2007), China's "unit labor cost"- wage as a percentage of labor productivity- relative to the same ratio in the United States declined from over 70 percent in the 1980s to about 30 percent in the mid-1990s. Moreover, the relative cost of Chinese labor at this time was not only lower than that of developed countries but was also lower than that of developing countries such as India, Malaysia, and Mexico. This wage increase is not limited to one area but it is spread across

skilled and unskilled labor also exporting and non-exporting companies. This rise in China's wages only goes to show that American companies are relying heavily on this cheap labor and moving their companies overseas has hurt the American worker and economy.

The Chinese reform period starting in 1978 and ran into the 1990s, did not see much rise in the wages of the Chinese workers. According to the Statistical Yearbooks published by China's National Bureau of Statistics (2015), the annual real wage of a Chinese urban worker increased only slightly from \$1,004 in 1978 to \$1,026 in 1997. However, China's wage growth started to pick up steam in the late 1990s. In 1998, the real wage as measured in U.S. dollars grew by over 14.1 percent, marking the start of a new era of fast wage growth. In the period from 1998 to 2010, the average annual growth rate of real wages was 13.8 percent, exceeding the real GDP growth rate of 12.7 percent. The fast rise of China's urban wages since the late 1990s is due in part to institutional factors such as the privatization of state-owned enterprises in the mid-1990s, the re-establishment of the labor market, and the slowdown of labor force growth and migration (Li et al., 2012). Chinese wages have been the lowest among other countries including India and the Philippines, but their wages as of 2008 were second only to the Philippines.

China entered into the World Trade Organization in 2001 and since then has had a negative impact on the American economy and workers due to the growing trade with them. China established itself as the epicenter of global manufacturing 20 years ago because their labor was cheap and the lure of more than a billion potential customers seemed to whet the appetite of many large businesses (Wagner, 2020). China, by the year 2000, was making most of the products Americans were wanting. Their manufacturers were making 91 percent of personal

computers, 80 percent of air conditioners, 74 percent of solar cells, 71 percent of cell phones, 60 percent of all cement, and nearly half of all the world's ships (Schiavenza, 2013).

Chinese labor costs are starting to rise. The per-hour wage has hit an all-time high recently going to \$3.70 per hour (Shira, 2021). That Rise is turning more Chinese workers into middle-class citizens that can afford some of the products that are being manufactured in their country. This is what the large companies are hoping for, and part of the reason that these same companies are still doing business in China.

Chinese immigrants have also been coming to the United States since the early 1850s. These immigrants stayed mainly on the west coast and worked in agriculture, mining, railroad construction, as well as other low-skilled labor positions. These Chinese immigrants came here during the gold rush to try and make their claims, but that went away as soon as the gold rush was over. Congress even passed a law in 1882 called the Chinese Exclusion Act aimed specifically at excluding Chinese immigrants, which was the first act of its kind based on the origin of a people.

Chinese immigrants are now third, behind Mexico and India, on the list of foreign-born workers in the U.S. today. China is the main source of foreign students enrolled in U.S. higher education systems. These Chinese immigrants are significantly better educated and are more likely to be employed in management (Estrada & Batalova, 2020).

These Chinese workers are not coming to the United States by themselves, they are being smuggled in by people who are willing to take advantage of them or their families. These immigrant workers or their families will pay large sums of money to leave their ill circumstances, like poverty or government corruption, to come to America to try and find a

better life. It is estimated that four million people are brought in through these illegal smuggling operations that operate around the world with approximately fifty thousand of those being Chinese. These smuggling rings have become a big business in the past few decades and yield about three billion dollars a year in profits as of 2000 (Kung, 2000). These workers coming to the United States providing cheap labor in the place of the American workers has hurt the U.S. economy, unwittingly to those workers. The smugglers, also known as snakeheads, will charge the immigrants somewhere between thirty thousand dollars to upwards of sixty thousand dollars for their journey, which is very treacherous. These snakeheads often use enforcers which will help the travelers on their journey from point to point and then keep them hostage later until all their fees have been paid.

When these immigrants get to America, it is thought by many that they are put to work in restaurants or even sweatshops to help to pay off their fees. This is not the case because their families or sponsors have to pay their fees in full the first week that the immigrants arrive. The snakeheads use harsh plans to make sure the money is paid. Sometimes they will call the families and torture the immigrants over the phone so the family or sponsors will pay the fees immediately so no future harm will come.

Although these workers would like to travel here legally, it is hard for them to get all the necessary paperwork without hassles along the way from their government. According to Kung (2000), although it is now easier for educated, wealthy, or professional Chinese to travel abroad, it is still very difficult for the average Chinese citizen to get the documents needed to leave China. Unlike the United States, China does not allow its citizens to freely apply for passports. Chinese people must apply for a passport through their danwei (work unit) or local village officials. To come to the United States, they must then procure a visa from the U.S. Embassy in

Beijing or the Consulate in Guangzhou. Only after they have both a valid passport and visa can Chinese citizens then apply to the Public Security Bureau for the final document needed to leave, an exit permit. Bureaucratic hurdles face the Chinese at every step in this process.

Mexico

Cheap labor also comes in the form of domestic labor that comes from either legal or illegal immigrants that have come to America to make a better life for themselves. America created the need for these immigrant workers during World War I when Americans were out of the country fighting in the war. During the Great Depression, the government felt it was cheaper to send the immigrants back to their homes rather than let them go on the newly formed welfare system. During World War II, the need arose again for the Mexican Immigrant workers as the American people were out of the country fighting another war. In the farming areas there arose a need for workers that were readily available and were plentiful and that had the knowledge of farming. According to Handman (1930), such a population was found in Mexico. As long as Mexico had a stable, although feudal, regime, the native agricultural population remained where it was. There was a slight movement northward into the United States before 1910, following the construction of the Mexican Railway system. But, in the main, the native Mexican is too addicted to his village and village ties to move easily. A crisis had to come and tear him away from his moorings and send him sprawling and dazed all over the land, hungry and afraid and in search of shelter and food. This was accomplished by the Revolution of 1910.

There was another reason for the need of the migrant Mexican workers in the fields, the farmers themselves were growing accustomed to the higher standard of living. The farmers saw that with the migrant workers in the fields that less and less of his hard labor or that of his family

was needed. At this time during the late 1920s and 1930s, the industries were paying higher wages than ever before, and luring the country population to the city; with the farmer's family gradually adopting the urban standard of living, which meant less work and better living (Handman, 1930). This created the need for these cheaper migrant workers to continue working the fields.

One thing that has come of the immigration is the governments counting of illegal aliens in the census which only occurs once every ten years. The policy of counting illegal aliens in the census makes it possible for areas with many illegal aliens to elect more federal and state representatives than areas with a higher population of citizens and lawful residents, but few illegal aliens. The problem with the Fourteenth Amendment with respect to the census is that in 1866 when the Amendment was drafted, there was no such person as an illegal alien (Wood, 1999). According to census.gov, as of the 2010 American Community Survey, there are nearly 40 million foreign-born in the United States and that number does not reflect the number of persons that do not wish to be recognized. Wood (1999) also noted that whether the alien has just been transported into the United States by a smuggler, has received a deportation notice, or is simply an illegal resident who has not been apprehended because of ineffective federal law enforcement, the Census Bureau currently seeks to count every such illegal alien.

Immigrants are taking Americans' jobs and we as a country need to protect those jobs from going away. They are coming here illegally and living here, working here, and plan on raising their families here. They are living the American lifestyle but because they are still here illegally they cannot live in the mainstream of society. Lakoff and Ferguson (2006) had this to say about immigration:

Perhaps most pointedly, the “immigration problem” frame blocks an understanding of this issue as a cheap labor issue. Undocumented immigrants allow employers to pay low wages, which in turn provide the cheap consumer goods we find at Wal-Mart and McDonalds. They are part of a move towards the cheap lifestyle, where employers and consumers find any way they can to save a dollar, regardless of the human cost. Most of us partake in this cheap lifestyle, and as a consequence, we are all complicit in the current problematic situation. Businesses, Consumers, and the Government have turned a blind eye to the problem for so long because our entire economy is structured around subsistence wages. Americans won't do the work immigrants do not because they don't want to, but because they won't do it for such low pay. (p. 4)

The United States tried to stop the flow of illegal aliens with the establishment of the U.S. Border patrol. Before the Border patrol, the United States and Mexican borders were open and U.S. citizens as well as Mexican citizens were free to travel across the border with no hassles at all (Morgan. 2004). During the late 19th and early 20th Mexican immigration reached significant proportions.

The Mexican workers that come here are here to make money not only for themselves but also for their families still living in Mexico. These Mexican immigrants will send large portions of their earnings back home to Mexico to their families. Their main idea is to work hard enough to make enough money to try and bring their families here and possibly become actual citizens. This is not bad for America nor the economy because they are trying to do this the legal way and are willing to pay their taxes. The ones that hurt the economy are the ones that are here illegally and have no intentions of becoming citizens. Their main focus is to come to make money also,

but they want to try and get government handouts but do not want to pay state or federal taxes to help stimulate the economy.

Mexico is the United States' second-largest export market and the third-largest trading partner. Many large global companies have decided to manufacture products in Mexico along the U.S. Mexican border. The combination of lower-cost wages and proximity to U.S. markets make Mexico an attractive option in today's competitive environment. Approximately 54 percent of the raw materials used in Mexican manufacturing facilities are sourced from the U.S according to Tacna.net.

Andres Rozental is the former deputy foreign minister of Mexico, who worked primarily on global governance issues, U.S.- Mexico relations, and international migration said this:

Low wages have never been the sole determining factor for companies to decide in which country to site manufacturing facilities; otherwise, countries such as Haiti or Bangladesh would be the manufacturing capitals of the world. Many other factors, such as the availability of skilled labor, infrastructure, the certainty of rules and regulations, and fairness of the justice system all play a significant role. True China's wages are rising and no longer represent an overwhelming advantage for labor-intensive industries, but salaries in Mexico and other middle-income countries are also climbing. Studies show that the all-in cost for an average factory worker in a Chinese industrial zone is more or less equal to a Mexican working in a maquiladora near the U.S. border. Where Mexico does have a clear advantage over China, and this is driving companies to relocate to our country, is in our geographic proximity to one of the largest consumer markets in the

world, economic and political stability, ability to provide just-in-time sourcing, and a regulatory framework in which to do business.

Since 2010, American trade with Mexico has grown almost 30 percent each year. Mexican imports are at about 14 percent of all U.S. imports. The reason this is happening is because of the recent government trade policies, the changes in the Chinese market, and the advantages of the proximity of Mexico to the U.S. The Mexican government has made efforts to help stimulate interest in their country and bring more manufacturing businesses to Mexico.

India and Other Emerging Markets

There has been an emergence of new markets recently which has given new life to failing economies, this has been in part due to the declining American economy. These new markets have risen out of nothing to be a player in the world market because they had supplied cheap labor in their past. According to Agtmael (2009), with the rising power of China, India, and other emerging markets, companies from all over Asia, Latin America, Eastern Europe, and Africa have evolved from small, little-known producers of commodities or low-tech goods into globally-oriented makers of demanding, high-quality products. Many emerging multinationals would surprise those who still regard “Third-World” companies as raw material producers or imitative makers of cheap electronics. A host of new products are, based on the quality of their design, the sophistication of function and durability, equal, if not superior, to competing products made in the United States, Japan, and Europe.

The gross domestic product of emerging markets is estimated to surpass all advanced markets by 2035. On a purchasing power parity index, China is already equivalent in market power to the United States, and India is the third-largest market, according to International

Monetary Fund 2008 data. According to Sheth (2011), several factors are responsible for the growth of these emerging markets. First, economic reforms in Brazil, Russia, India, and China (BRIC) have unlocked markets protected by ideology and socialism. As a result, some of the best capitalist markets today are ex-communist or ex-socialist countries. This policy change has resulted in creating altogether new markets for branded products and services. Second, all advanced countries are aging and aging very rapidly. As a consequence, their domestic markets are either stagnant or growing very slowly. Their future growth seems more destined to come from emerging markets. Third, worldwide liberalization of trade and investment, bilateral trade agreements, and regional economic integrations such as the ASEAN, Mercosur, and the European Union have resulted in global competition and global product and service offerings with unprecedented choices of branded products, especially in emerging markets.

India is on the rise as tech companies are starting to invest big money there as tensions between China and the U.S. mount. According to globalvillagespace.com(2020), India is also slowing its imports from China as tensions over the border dispute grow. New Delhi put a ban on some Chinese apps over the border dispute.

Early in 2020, big tech names like Amazon, Google, and Facebook have invested almost 17 billion dollars in India. These companies are banking on India becoming a tech giant in the near future as the world's distrust in China grows and the Chinese labor wages are increasing.

Immigrant Labor

Each year, hundreds of thousands of aliens cross our borders illegally violating our nation's immigration laws. These immigrants come here from all corners of the earth. This crime is a misdemeanor, but when repeated after deportation, it then becomes a felony. There are two

types of illegal aliens. First, there are those who enter illegally and never try to assimilate or get permanent citizenship. Second are the ones that enter legally and then overstay their visas and then become illegal aliens (Fair, 2021). Many Americans have lost their jobs in recent years due to companies opting to move overseas in search of cheap labor that those foreign companies can provide or hiring cheap domestic labor provided by the many legal and illegal aliens. Those same companies have been trying to cut costs in their labor for decades which has brought about a lot of concern from the American workforce. Their concern is founded because as the number of workers goes up, the amount of money that companies have to pay workers goes down (Borjas, 2016).

According to West (2011) who is an American author, political scientist, and political commentator:

Few issues are more controversial than immigration. The flood of illegal immigrants across the U.S. borders enrages many native-born residents who believe that immigrants compete for jobs, unfairly draw on government benefits and fundamentally alter the fabric of America. These native-borns fear that non-English speaking foreigners who move to the United States, legally or illegally, and do not integrate into mainstream social and political life are threatening to erase our culture's distinctive character. (p. 427)

With Americans growing concerned about losing their jobs to cheap foreign labor, one must consider the immigrants that are in the U.S. both legally and illegally. Immigrants in this country as of 2019, made up 17 percent of the civilian labor force according to the Bureau of Labor Statistics. And according to a new Pew Research Center study, 77 percent of the immigrants are here legally (Budiman,2020). With over 40 million people here in America that

was born in another country, it's easy to see why Americans are concerned. This growing group accounts for about one-fifth of the world's immigrants.

Immigrants generally come to the United States in three ways. First of all, they can marry an American, they can have extended family ties, or come as political refugees. Refugees must prove that they are being persecuted or be in fear of persecution either because of race, religion, nationality, or be of a particular social group. They can also come as asylum seekers.

The second way immigrants come is through temporary visas for either work or school. These people are here for a limited amount of time. Some of these are here for farming or construction and are only allowed to work in America for three years.

The last way these immigrants enter America is through illegal immigration. These are the ones that do not try to assimilate into society. They come here mainly along the southern border and tend to stay in border states or coastal states. Some of these immigrants pay their life savings for just a small chance to make it to the United States.

Immigrants don't always put a drain on society. Most actually contribute to many programs like Social Security and Medicare even though they are not able to receive benefits from either source. Some even start businesses like Sergey Brin, who is a computer scientist and a mathematician, co-founded Google with his college friend Larry Page. Sergey move to the United States in 1979 and went on to get degrees from the University of Maryland and Stanford University. Brin and Page were both intrigued with the idea of extracting information from the mass of data accumulating on the internet (Britannica, 2021). They worked on a new type of search technology that is now the largest internet search engine.

Immigrants that are coming here to start better lives for themselves often start their own small business. Immigrants are creating businesses, but they are not generating many jobs and tend to offer no benefits, These businesses will hire immigrants seeking an opportunity at lower-paying wages. These businesses can range from anything like a lawn mowing and landscaping business to opening a restaurant. Brin (2018) who writes for Forbes, wrote this about these immigrant entrepreneurs coming to America:

From Scottish-born inventor Alexander Graham Bell and native German blue jean tycoon Levi Strauss to Moscow-born Google co-founder Sergey Brin, Turkish-born Chobani chief Hamdi Ulukaya and many others, immigrants have generated wealth as they made their mark on American culture, science, technology, and business. (para. 2)

Legal Immigrants

One of the two ways that immigrants come to the United States is by legal immigration. Legal immigration can only happen in one of three ways: employment, or family reunification, or humanitarian protection. Most of the immigrants who enter America do so by family-based visas, meaning that a legal resident is now requesting that family members come to be with them. These family members include spouses, children, parents, and siblings. The family member must be above the poverty level as they will be sponsoring and taking care of the family member that is coming to America. This is one thing that illegal immigrants are not able to do when they arrive because they arrived here by illegal means.

For the most part, immigrants do try to come to the United States legally. They come here for work, travel, school or maybe even to visit families. They don't intend to break the

immigration laws, but sometimes they do. They try to do the right thing by renewing their visas but may get caught up in the backlog and then become illegal immigrants.

For immigrants to come here for employment, they must already have a job with an employer that is willing to be their sponsor. This is only allowed if the immigrants meet the education and job skill requirements and the employer isn't able to find a suitable U.S. worker to hire for the job. The U.S. government only allows a certain number of these visas for qualified candidates and even fewer visas for seasonal farmworkers.

Immigrants who are coming here for family reunification is the most common way they arrive. To be able to come to the United States, there must be a qualified family member already in the States. This family member or family members must seek permission to bring only qualified foreign-born family. This list of qualified foreign-born includes spouses, parents, children, and siblings. There is no limit on the number of visas for spouses, parents, or minor children of U.S. citizens, but there are annual numerical limits on the other family members.

There is also a limit on the number of immigrants coming to the United States as a refugee. These immigrants are screened by many international and U.S. agencies. They must show that they are in fear of persecution based on race, religion, member of a certain social group, or national origin.

Even if these immigrants do file for their visas there is no guarantee that they will ever get one. There is an annual Diversity Visa program available to these immigrants seeking to come to America, but only 55, 000 of those are granted. Millions of immigrants apply for these each year, so this way is not a good way to try to immigrate.

According to Krogstad et al., (2020) concerning the jobs that legal immigrants hold:

Many immigrants living legally in the U.S. hold jobs deemed essential by the federal government, including an estimated 2.7 million who worked in the health care sector, or nearly 15 percent of all health care workers as of 2017, the most recent year for which Center estimates on both legal and unauthorized immigrant populations are available.

(para. 7)

Illegal Immigrants

Illegal immigration is defined as the migration of people into a country in violation of the immigration laws of that country, or the continued residence without the legal right to live in that country. Illegal immigrants or aliens are defined as a foreigner who enters the U.S. without an entry or immigrant visa, especially a person who crosses the border by avoiding inspection or who overstays the time allowed as a visitor, tourist, or business person (Dictionary.com, 2021).

Right now the consequence for entering the U.S. illegally is to be deported back to the country of origin. The laws that are put forth in Title 8 of the U.S. Code are hard to enforce though. The illegal immigrants that are caught are usually told to appear in immigration court and more than likely will never be seen again as they move from place to place to evade capture and deportation.

Illegal immigrants come to the U.S. seeking better job opportunities. These immigrants make up 50 percent of all the farm and crop workers (Dudley, 2019). This is typically a job that most Americans are not interested in. They are helping to sustain the American farms and farmers and helping to put food on Americans' tables. It is no secret that farms have been employing illegals, mostly from Mexico, for decades. These farmers hire these illegal immigrants because they can't find and keep U.S. workers for these jobs. These immigrants have

worked in the fields for most of their lives, but fear they will be deported because they have entered the country illegally. They are working in industries that produce and distribute food such as food production and farming, food processing, food retail, and food distribution.

The American Farm Bureau Federation estimates that U.S. agriculture needs approximately 1.5 to 2 million hired workers each year to man the farms. Farmers are finding it more and more difficult to fill these positions by Americans, even as wages and benefits have increased. According to Moriarty (2020), who is the deputy director of federal policy at FWD.us:

American growers' inability to find dependable sources of labor is a major reason for the significant increase in the amount of fresh fruit and vegetables that are imported into the U.S., costing billions in sales and tens of thousands of jobs. Without workers, crops wither in the fields, contributing to food waste and millions of dollars in lost production. (para. 8)

Illegal immigrants are not allowed to vote in a presidential election, but their sheer numbers help the electoral college to favor one party or the other which helps that state's electoral votes. Electoral votes are given by the number of people residing in the state, not by the number of citizens residing there.

Illegal immigration is also not immune to the human smuggling business. These human smugglers offer immigrants illegal passage into the U.S. for a fee. The main area they are entering is the southwestern border of the U.S. and Mexico. These immigrants are often abused or killed in their journey to a perceived better life. Sometimes these human smugglers will even hold these immigrants to try and extort more money from the immigrant's family for safe entry.

If their families don't pay, these immigrants can be forced into labor, slavery, or prostitution.

These immigrants often endure long walks or rides in unprepared shipping containers or trains.

Illegal immigrants are estimated to be about 5 percent of the American workforce (Krogstad et al., 2020) These are jobs that seem to be jobs U. S. citizens don't want to fill because they are low paid, hard work, and low skilled jobs. These immigrants appear to thrive at these jobs which are farm jobs, construction jobs, and jobs that these illegal immigrants can't do from home like telework.

Recently, Borjas (2016), who is a professor of economics and social policy, had this to say about these type jobs and what it is doing to the low skilled labor force:

Both low- and high-skilled natives are affected by the influx of immigrants. But because a disproportionate percentage of immigrants have few skills, it is low-skilled American workers, including many blacks and Hispanics, who have suffered most from this wage dip. The monetary loss is sizable. The typical high school dropout earns about \$25,000 annually. According to census data, immigrants admitted in the past two decades lacking a high school diploma have increased the size of the low-skilled workforce by roughly 25 percent. As a result, the earnings of this particularly vulnerable group dropped by between \$800 and \$1,500 each year. (para. 5)

Illegal immigration is a problem not only because they broke the law to get here, but also because it hurts those who have done the right thing and came here legally. These illegal immigrants are not only taking Americans jobs, but many of the jobs they are filling are taking away from the lower-skilled areas where the legal immigrants are trying to fill jobs such as those

mentioned earlier in agriculture, construction, call centers, and even hospitality jobs like hotel maids.

Mechanization

The mechanization of jobs has been around for a few centuries. It began in the 16th century with a clergyman From Calverton, England named William Lee. Lee had an idea to mechanize the production of stockings. Lee is said to have developed the machine because a woman whom he was courting showed more interest in knitting than in him (2019). Lee produced a machine that made course wool for the stockings. Lee was refused a patent by Queen Elizabeth I. Lee then improved his machine to produce a silk-like material, which was finer in texture. The Queen denied him a patent for the second time because she thought it would hurt the security of the kingdom's hand knitters and eventually put them out of work. William Lee's machine didn't have much of an impact then, but it was later the basis of other textile machine developments (2019).

The industrial revolution for America didn't hit home until 1790. The beginning of the American Industrial Revolution is generally given to Samuel Slater, who had been an apprentice in one of the largest textile factories in England. Slater opened the first industrial cotton mill in America in 1790. Its design was taken from a British model where he had trained. Slater introduced using water as a power source for his mill, as would many of the mills and factories that came later. His new mill technology increased the speed at which cotton thread was spun into yarn. Slater's Mill was established in Blackstone Valley in Rhode Island and became one of the first industrialized areas in America.

Water power was just one way that industries were providing the power needed to run their new machinery. Before 1700, most of the industrial power was either human or animal-powered (Ferrell, 2021). With the introduction of water power, the need for human and animal power dropped significantly, thus hurting the labor force even more. Water power was used for textiles, sawing lumber, and grinding grain. As the demand for these goods also increased, so did the demand for water power which was the driving force behind the Industrial Revolution.

Water power used large water wheels that sit beside the factory. These wheels would turn as water from creeks or rivers ran over them and were connected to machinery inside the factories. Inside the factories were cogs or wheels that were connected to other parts of machinery to move or drive the parts. These water wheels relied heavily on having good weather conditions to be able to operate. If there were droughts or ice, the production in these factories would be halted.

The next great innovation that came from water power was steam power. The modern steam engine was designed by Thomas Savery and patented in 1698. Savery was a merchant and inventor from Devonshire, England. His knowledge of steam and pressure led to his invention of a steam engine for lifting or raising water. This engine was designed and put to use to help remove water that had seeped into coal mines. previously the only way to remove the water was through a horse-pulley system. This system used pack horses to haul buckets of water out of flooded mines. These horses needed frequent breaks and lots of care to keep them in good shape (Whipps, 2008). The invention of this engine was good for the economy because the coal was more readily available, but it took away the jobs for the pack horses and their handlers. Savery's engine was the basis for later steam engine redesigns by Thomas Newcome and James Watt.

James Watt was an instrument maker and was asked to repair a Newcomen-designed steam engine. He studied the Newcomen design and found some improvements he could make. Watt designed and built a steam engine with both a hot and cold cylinder, which was an improvement over the Newcomen design of one hot cylinder. This new design improved the steam engine's efficiency because now it needed less fuel to do more work, He later designed a double-acting mechanism that drove a piston both forward and backward, doubling its work capacity. He then made improvements on that design for rotary motion which meant it could power movement in any direction. This made it ideal for up and down pumping actions and repetitive cycles of movement (Ferrell, 2021). A savvy businessman, Watt marketed his machine by calculating the number of horses his engine would replace, coining the term "horsepower" in the process (Whipps, 2008). The steam engine replaced weak men or tired horses to get the work done faster and more efficiently. Economist Gregory Clark (2007) gives a good example of this type of loss in his book *A Farewell to Alms*:

There was a type of employee at the beginning of the Industrial Revolution whose job and livelihood largely vanished in the early twentieth century. This was the horse. The population of working horses actually peaked in England long after the Industrial Revolution, in 1901, when 3.25 million were at work. Though they had been replaced by rail for long-distance haulage and by steam engines for driving machinery, they still plowed fields, hauled wagons and carriages short distances, pulled boats on the canals, toiled in the pits, and carried armies into battle. But the arrival of the internal combustion engine in the late nineteenth century rapidly displaced these workers, so that by 1924 there were fewer than two million. There was always a wage at which all these horses

could have remained employed. But that wage was so low that it did not pay for their feed. (p. 278)

There have been many more advances in technology that have led to a better economy, but still took away jobs from the American workers. Inventions like the internal combustion engine, the diesel engine, and computers have changed the way we work. But with every new technology, a new industry seems to pop up and use that technology and help replace some of the jobs lost with new ones. Internal combustion engines helped to put smaller and lighter engines in cars and trucks and helped to drive the trucking and shipping industry. It also replaced the horse and carriage for deliveries and helped to connect the urban areas to the rural areas.

The industrial revolution was economic, technological, and social changes that took over one hundred years to come to fruition. During this time the making of goods moved from people's homes or small shops, where items were handcrafted by artisans, to factories with machine-made production. This took away many jobs from the handcrafters, but it created a few jobs in the factories where the machines still needed human overseers to make them run. These machines could produce in just a few minutes or hours what would take the home workers days to complete. The revolution involved industries such as transportation, agriculture, manufacturing, and communication.

Library of Congress (loc.gov) states this about the Industrial Revolution:

For millions of working Americans, the industrial revolution changed the very nature of their daily work. Previously, they might have worked for themselves at home, in a small shop, or outdoors, crafting raw materials into products, or growing a crop from seed to table. When they took factory jobs, they were working for a large company. The

repetitive work often involved only one small step in the manufacturing process, so the worker did not see or appreciate what was being made; the work was often dangerous and performed in unsanitary conditions. Some women entered the workforce, as did many children. Child labor became a major issue. Dangerous working conditions, long hours, and concern over wages and child labor contributed to the growth of labor unions. In the decades after the Civil War, workers organized strikes and work stoppages that helped to publicize their problems. One especially significant labor upheaval was the Great Railroad Strike of 1877. Wage cuts in the railroad industry led to the strike, which began in West Virginia and spread to three additional states over a period of 45 days before being violently ended by a combination of vigilantes, National Guardsmen, and federal troops. Similar episodes occurred more frequently in the following decades as workers organized and asserted themselves against perceived injustices. (para. 7)

Self-Checkouts

American shoppers in the early 20th century used to come into the groceries and hand their shopping list to clerks in the store. The store clerk would go through the store and retrieve the customer's order and bring it to them at the checkout counter. The stores then used a credit system where the customer paid their debt at the end of the month. Now, more and more stores are wanting their customer's to not only do their own shopping and loading up carts, but also unload those carts, ring up the items, and bag them themselves.

In 1916, businessman Clarence Saunders opened the first self-service supermarket in Memphis, Tennessee called Piggly Wiggly. Saunders found that keeping all of those clerks was cutting into his profits. Saunders had been a store clerk since he was 14 and eventually moved

into grocery sales. He believed that grocery stores were failing because of their credit system and the high labor cost of keeping so many clerks to do the customers' shopping. This self-service took a while to become standard and was popularized in the 1930s and 1940s. This self-service was supposed to be freeing for the customer as well as give the shopper some savings due to the lower labor cost.

Self-checkouts were introduced in 1984 by a company called CheckRobot that was owned by David Humble who created and patented the register (Tiffany, 2018). The self-checkouts did not go over very well and were acquired by International Business machines in 2003, but their idea wasn't a big hit either. National Cash Register Corporation from Atlanta is probably the company most recognized for making self-checkouts. Their Fastlane system is used in Wal-Mart and Home Depot.

With technological advances, the threat of technological unemployment is real (Brynjalfsson & McAfee, 2011). In today's marketplace, technology and mechanization are growing problems for the American labor force. More and more companies are utilizing a mechanized labor force that is taking away human jobs. One instance that everyone can identify with is the self-checkouts at Wal-Mart. Wal-Mart is the largest employer in the United States. Retail checkouts have been evolving for years, but more recently Wal-Mart started putting in self-checkout lanes. These lanes were put in to help reduce the long lines at regular checkout lanes and to speed up the customers' shopping experience. The more self-checkouts that are installed are reducing the number of real cashiers needed.

Not only are these people losing their jobs to the self-checkouts, but the customers don't like to use them. There are a few reasons why the customers aren't utilizing the self-checkouts,

one being the attendants. There are times when there isn't an attendant at their assigned area to help the customer in need of help. There are also times when the attendant is inattentive and doesn't see or know the customer is there and in need of help. And then there are times when the attendant is just too busy helping another customer that doesn't know how to use the self-checkout lane.

These self-checkout lanes aren't only hindered by the attendants, but by the computer and scanning system itself. These computer systems, bar codes, and scanning technology were introduced into the self-checkouts in the early 00s. The self-checkout is notorious for items not scanning, alarming you that there is an unauthorized item in the bagging area or just not working and having to call an attendant to reset the machine or put in a code to get the items to scan.

Another reason that the customers don't use the self-checkout lanes is that they see that it is hurting the workers that are losing their jobs to these self-checkout lanes. These people don't want to feel like they contributed to the demise of those workers losing their jobs. Also, the customers don't use self-checkout lanes because they feel that the company itself is trying to make them do the actual stores work for free. Before self-checkouts, people felt like they were being served, in some small capacity, because the cashiers were doing all the work at the registers. Now the customer is doing all the work, from their standpoint, for free. They feel that they have done the shopping and that they shouldn't have to do the actual ringing up the items and then bagging them too.

Even with the high intelligence of the self-checkouts, there still has to be a certain amount of human interaction to help clear up confusion or keep the transactions going. As mentioned before, the attendants have to step in on occasion to help the customers. So we see

that even though self-checkouts are taking away jobs from the cashiers, there will always be a need for a human attendant to keep these self-checkouts running smoothly.

Amazon has now entered the grocery business and has acquired Whole Foods in 2017. They are now taking on Wal-Mart, Kroger, Target, and others in the grocery business. Amazon started an Amazon Go store in Seattle, Washington. This store has no cashiers and uses a bunch of surveillance cameras to track you through the store and will charge you based on what you actually put in your basket. According to Schlosser (2020), you enter the store using an app on a smartphone and the store charges your Amazon account for the items after you leave the store. Even Though this store doesn't employ cashiers, it does employ other types of associates.

It is estimated that about 4 percent of items that go through the self-checkouts are not paid for. The theft that goes on is better explained by Tiffany (2018):

Grocery stores have extremely tight profit margins, so 4 percent is a big deal. People steal and steal from self-checkout. They type in the price look-up code for bananas while far more expensive fruits or vegetables or even meat are on the scale. They pull stickers off cheap stuff and put them on expensive stuff. They are ingenious, as humans are when they want to do something that is against the rules. One Australian woman photocopied the barcodes from packets of instant noodles and printed them on sticky labels, which she then brought to the store with her every time she went shopping. (para. 19)

These stores should look to Clarence Saunders' later model of a grocery store. He started another very unsuccessful business called Foodelectric in which customers got their own groceries, rang them up, and bagged them. This is what we are seeing more of companies

wanting their customers to do, but the customers aren't willing to let go of the past and still want to feel served in some capacity by having a cashier ring up their items and bag them for them.

Robotics

Along with these great increases in mechanization comes robotics. Robots are increasingly being used in every industry and are here to stay, and robotics usage has both positive and negative impacts on businesses and employees (Anthony, 2019). Many people aren't afraid of losing their job to a robot, but that the robot will become their boss. (Dzieza, 2020) But what are robots? According to Merriam-Webster (n.d.), a robot is a machine that resembles a living creature in being capable of moving independently (as by walking or rolling on wheels) and performing complex actions (such as grasping and moving objects). They also define a robot as a device that automatically performs complicated, often repetitive tasks (as in an industrial line). Companies are using more robots in the workplace because of projected savings, more efficiency, better outcomes, not wanting to deal with low numbers of workers in certain fields, wanting to stay innovative, a need to stay an attractive employer, and so on (Smids, 2020)

There are several types of robots that are being used in industries today. According to Smids et al., (2020) these are the types of robots we can expect to see:

First, we can distinguish preprogrammed robots, such as the robots employed in the assembly halls of car manufacturers designed to perform well-described tasks in well-defined and controlled environments. Second, there are teleoperated robots that are under continuous control of human operators at a distance. Paradigmatic examples are drones, robotic submarines, and surgery robots. Third, autonomous robots are able to

sense their environment and act with purpose, such as delivery robots in hospitals that distribute and register patient's medicines. A further category of robots is "augmenting" robots, which are connected or integrated with the human body. Examples are exoskeletons by the means of which (partly) paralyzed persons can walk, or robotic legs or arms. Such robotic skeletons can also be used to enable workers, e.g., soldiers, to use heavy gear. (p. 505)

There are robots, for instance, that can do assembly work on a manufacturing line such as those that are employed in car manufacturing plants. Car manufacturers have been using robots in their assembly lines for over fifty years. These robots can weld the body parts of the cars faster and more precisely than their human counterparts. They can also assemble smaller parts of the cars like motors and pumps. Even further down the line, there are robots that can install windshields, mount tires, or even set screws. Robots are priming, painting, sealing, and adding adhesives which are toxic jobs and help keep humans out of those toxic environments. Pouring molten metal, stamping metal parts, transferring small parts to other robots, and even cutting and trimming parts are on their resume (Hartwig,2019). As more and more robots are introduced, a few workers can transition into jobs that will need training on how to oversee these robots.

Robots are also replacing workers in everything from stocking, packaging, and even receiving goods. An example of this is at Amazon which is an American multinational technology company that does e-commerce, online streaming, and artificial intelligence. At Amazon, one type of robot is used to assist the workers called pickers. The robot is a shelf-carrying robot that goes through the warehouse and picks or retrieves items so the worker doesn't have to do it. These robots are very efficient and help to keep the pace up in the warehouse. This actually helped to get more workers hired because they were needed in other roles around the

warehouse (Dzieza, 2020). The robots were so good that Amazon was not only able to hire more workers but to also build more warehouses and now employs three times more warehouse workers than before they had the warehouse robots.

Robots are even being used in the medical field for things like physical therapy and even children's therapy sessions. Robots have been used for decades for physical therapy sessions for patients. These robotic systems help guide patients' limbs during their physical rehabilitation exercises (Weir, 2015). These robots aren't replacing any of the Physical Therapists or Physical Therapist Assistants as they have to put the patients in or on the robotic machines doing the therapy. The Therapists also have to input the type of exercise program they want the patient to receive into the robotic system for each patient because not all therapy patients will receive the same type of therapy session. Removing the patient is also done by the Therapists at the end of the patients' therapy session on the robotic machine.

Robots are also advancing into actual healthcare scenarios. Doctors are now using telemedicine robots that are in hospitals to do visits for them, and they never have to leave their offices. The robots allow the Doctors to monitor patients remotely as the patients may be in other states or even another country. These robots have cameras, microphones, and a video screen on them that lets the doctor actually see and hear the patient. They can be attached to stethoscopes, otoscopes, and even ultrasound to help the doctor better in treating the patient. The use of these robots is helping patients to receive better care more quickly in time-sensitive cases. These robots are helping in rural areas where a certain type of specialist may not be on a particular hospital's payroll (Continuum, n.d.).

There are also medical microbots that are being used in medicine. There is one such microbot called the Plaque Buster. It is a tiny ten-millimeter-long capsule equipped with a drill head that surgeons use to remove plaque from arteries. This microbot is powered by electromagnetic coils and uses magnetic field gradients to steer it through the patient's clogged arteries.

Robots are also helping with children that are on the autism spectrum. The children are placed in rooms with a robot that is like the upper body of a human. If the child walks away from the robot, it bows its head and whimpers. If the child walks towards the robot, it smiles at the child, makes happy sounds, and blows bubbles (Weir, 2015). This helps these kids learn social skills such as imitation, taking turns, and maintaining mutual attention with other people.

Children on the autism spectrum have trouble dealing with adults, but many are drawn to technology. Scassellati (2012) says "In almost all the cases, you see the kids with autism get very excited to interact with the robot, and they have sustained interest." (p.280)

The fastest-growing type of medical robotics is Orthoses or exoskeletons. These types of robotics are being used for several different types of applications but the main way they are being used is for helping paralyzed patients to walk again (Alexander, 2020). Exoskeletons take electronic pulses from the patient and turn that data into movements for the limbs, mainly just lower limbs at the present. These exoskeletons haven't eliminated the need for therapists yet as it requires help from therapists to get the patients into the exoskeleton.

Robots are being used in trash collection and recycling plants today also. The newer trash compacting trucks are now equipped with robotic arms that can lift much heavier trash cans that deposit the cans' contents into the truck. The trash trucks used to man 2 to 4 workers per truck to

be able to lift the heavy trash cans and dump them into the trash trucks. Now these newer trucks only require one man to be able to drive the truck and use the robotic arms to pick up the trash can and dump it in the truck. These trucks then deliver their trash to recycling centers for a percentage of the trash to be sorted for recycling. The recycling plants are now using robots to sort the trash at a much higher pace and more effectively to sort the different types of materials to be recycled. These robots have been fitted with sensors that can determine size, shape, and material to be recycled. One robot being tested in Colorado called Rocycle can identify 3 different types of materials, paper, plastic, and glass, Rocycle was 85 percent accurate in doing just this (Johnson, 2019). The robots will be fitted later with visual sensors that will be able to distinguish even more types of items to be recycled. These robots will continue to help reduce the amount of waste going to landfills around the world while only taking a few jobs away from this job field as they still need human overseers to keep them running at this point.

Robotics seems to be moving into all areas of our lives. Today more companies moving towards Artificial Intelligence. Artificial Intelligence (AI) is the simulation of human intelligence in machines that are designed or programmed to think like humans and mimic their actions. AI can be used for environmental sustainability systems that use sensors to detect if someone is in a room and turns on the lights or heating and cooling system for them as they enter a room or home. These type of systems are included in what some are calling smart homes being built across the U.S. This type of system is used to help lower energy costs for the business owner or homeowner.

It's looking like there is coming a time where more and more machines are taking jobs that used to be done by human workers, and those machines are getting those jobs done more cheaply.

Layoffs

The recent periods of economic reorganization in the U.S. have been associated with increasingly widespread job insecurity and waves of job displacement (Kalleberg. 2000). Job displacement is defined as involuntary loss of one's job resulting from a layoff, downsizing, or a plant closing. Many companies across America are beginning to try to cut costs by laying off some of their workforces and calling it downsizing. Getting laid off from a job is one of the most traumatic things someone can experience, but this not only hurts the employee but also their families, friends, and many more people around them in the community. Although the layoff might not be permanent, many of these employees are not ready for the layoff when it comes time to leave their jobs.

The 1988 Worker Notification Act (WARN) says companies in the United States are required to give potential candidates for layoffs 60 days advance notice (called "warns") when planning large-scale layoffs or plant closures (Addison, 1994). Layoffs usually have series of events leading up to the actual layoff including the notice of layoff, the anticipation, the layoff and eventually being unemployed. Being laid off usually has nothing to do with that employee's job performance. There are many psychological, emotional, physical, financial, and social impacts of a layoff for both the employee being laid off and for the workers that remain after the layoff. In this researcher's experience as a laid-off nuclear worker from the United States Enrichment Corporation (USEC), these things hit home, seeing firsthand the effects that layoffs can have on the workers and the communities where they happen. Some rumors started in 2012 that USEC was thinking about starting employee layoffs because the company couldn't secure a government loan guarantee to help run their new plant in Ohio, and the workers began getting concerned. It was widely known that the new plant was losing money, but the workers there

never thought it would concern the Paducah plant as it was still making profits for the company. There were many problems associated with the new technology the company was trying to use to cut costs.

This government loan guarantee was needed due to the after-effects of the earthquake that had hit Japan and caused a tsunami that hit the Fukushima nuclear facility. After this disaster in 2011, there were many nuclear facilities that were put on standby so that safety inspectors could look at the facilities and make sure that this kind of disaster didn't take place at their facilities. As a result of these safety inspections USEC lost a lot of business from the sale of their uranium products. one of USEC's main buyers, Germany, completely shut down their nuclear facilities after this disaster. The ongoing effects of the Fukushima breach at their nuclear facility and the later nuclear material spill into the ocean are still being felt. Nuclear waste and other things are being found all along the west coast of America.

Employees were given a probable date that May 2013 was going to be the actual time of a layoff if the loan guarantee wasn't secured. Seniority was a concern, as it appeared to be a deciding factor as to who would be laid off according to the union contract that was in place. USEC was still trying to secure the loan and not go through with the whole process of the layoff, but the government would not loan the money to help advance the new technology in refining uranium. USEC gave the final announcement that they would start layoffs in August of 2013, but did not tell anyone who was going to be a part of the first layoff until two weeks before the actual date. Some people left immediately for other lower-paying jobs that had about the same benefits. This did not affect the actual number of people USEC would lay off later.

Aamodt (2010) who is an American industrial and organizational professor had this to say about the effects of one being laid off from their job:

From a health perspective, victims of downsizing report an increase in headaches, upset stomachs, sleeping problems, cholesterol levels, physical illness, hospitalization rates, heart trouble, hypertension, ulcers, vision problems, and shortness of breath.

Emotionally, victims report high levels of stress, increased drug and alcohol abuse, more marital problems, and feelings of depression, unhappiness, anger, frustration, and dissatisfaction with life. Socially, victims are reluctant to share their feelings with friends, avoid family and friends due to feelings of embarrassment and shame, and avoid social situations and entertainment requiring money. (p. 540)

Psychological and Emotional Impact

There comes a time when a company is ready to downsize due to economic changes and they let the employees in the company know of the layoff. The employees may or may not know immediately if they are going to be a part of this evolution. To most workers, their job provides much more than just a source of income. It also provides them with a sense of accomplishment and the feeling of need. After the notice is given that a layoff will occur, workers tend to get stressed out as they begin to wonder who will be laid off. The feelings of dread start to set in as the employees start asking themselves "*Is it going to get to me?*". If the staff that will be laid off are notified at the start, they are the ones in disbelief or denial and may get stressed out. Stress can affect your thoughts and feelings, and behavior before you even recognize the symptoms. It can also affect the employees' work and safety as they are focusing on the layoff and not the job being performed. The remaining staff also experience considerable trauma as their security is

shaken at the thought that it may happen to them next. Most of those remaining will notice a decrease in productivity and production after the layoff (Fogarty, 2000). A sudden job loss is a life-changing event for all involved.

Depression may also start to set in as one starts to think about the impending job loss. Research shows a link between job displacement and layoffs with increases in subsequent levels of depression (Burgard et al., 2007). Prolonged feelings of helplessness and weakness also make it difficult for the employee to independently determine his or her next step. Men will take this harder than women because they are supposed to be the breadwinners in the family and society trains us to identify ourselves by how we provide for our family. The amount of stress and depression will bring on in both men and women a change in their sex drive. The feelings of uselessness can come into play during job searching because they are not at a daily job. Without a purpose in life, humans tend to feel that they are no longer in control. Job loss also creates a loss of self-esteem and self-confidence frequently. Anxiety starts to kick in and begins to raise the levels of hormones that promote inflammation in the body (Felger, 2018). Workers may see an increase in the number of cigarettes smoked daily or even relapse back into smoking. The loss of the job may bring on irritability or anger towards family and friends or even previous co-workers and sometimes even rage. There may be parental irritability, combative interactions between parent and child, harsh punishments, and even family violence or abuse. The employee may find himself or herself with a lack of motivation or focus. Layoffs among older workers will be harder, as late-career job changes are less common and older workers are more likely to have accumulated non-transferable job or industry-specific skills, wages, and benefits, leading to poor reemployment prospects and significant economic hardship (Pric et al., 2002). Reemployment may not be enjoyable as some of the newly hired workers may face discrimination in their new

place of employment. This is the time drug and alcohol abuse can factor in as the job search goes on. Some may even see the need to seek outside help or counseling for some of these conditions. The company will also have to make sure to keep the remaining employees involved in their work and to not focus on the layoff since productivity falls off and the remaining employees feel less valued. Some people may feel shame even though they have done nothing wrong to bring the layoff upon themselves. There are even some of those that start to think suicide is the only way out of the situation.

When close relationships are developed between the laid-off workers and the staff that will remain, the loss is traumatic. In one report, the survivors close to those laid off felt the layoff was more unfair, worked less hard, and became less committed to the organization. They also believe that if additional layoffs were to occur that there would be little they could do to counteract the negative effects of job loss (Brockner, 1992). Confusion among the remaining employees sets in as they don't know how to relate to the one being laid off. They don't want to say the incorrect thing or make the laid-off staff feel uneasy therefore, they tend to withdraw away and not make eye contact even though the impacted worker may be a friend or family member.

Job loss to a parent leads to higher dropout rates and lower test scores in their children. Even in wealthier families, where financial impact is lessened, children still underperform. Studies suggest that a job loss for a parent will only produce short-term negative effects on children (Kalil & Ziolk-Guest, 2008). There are additional studies that suggest that sons whose fathers lost their job when they were younger have earnings that are reduced by about nine percent (Oreopoulos et al., 2008). Young adults who are in these situations are less likely to even attend college. People who lose their jobs due to layoffs tend to see greater long-time earnings

losses, decreased job stability, lower employment rates, earlier retirements, and lower health insurance coverage (Farber, 2003).

Physical Impact

Another factor that will come along with the layoff is the physical impact on the laid-off worker. A person being laid off from a job due to factors beyond their control can see many long-term health problems. A study done on self-reported health data showed that eighty percent of people who were laid off reported new illnesses within eighteen months of their layoff (Strully, 2009). Stress is the big component because it not only causes psychological symptoms mentioned previously, but it causes a wide range of physical ailments as well. Stresses related to the layoff can cause one to have high blood pressure and potentially lead to heart disease. Some of the symptoms of stress are headaches, muscle tension or pain, chest pain, fatigue, change in sex drive, and insomnia. There are many ways to help manage stress including physical activities, relaxation techniques, meditation, yoga, Tai Chi, and counseling. Other ways one can combat stress are to get plenty of sleep, eat a balanced diet, and reduce caffeine and alcohol intake.

The body's system for fighting illnesses, the immune system, is also weakened which leaves you vulnerable to getting sick. One may get more colds, viruses, even have a greater risk of getting arthritis or colitis. Stress can affect your stomach and intestines because they are less able to protect themselves from the stomach acid and cause ulcers. When one is very stressed, one can notice a faster heart rate, sweating, rapid breathing, dizziness, loose stools, and a frequent urge to urinate. Overeating or under-eating may occur during this part of job loss. Layoffs can affect a person's life expectancy by as much as twelve to eighteen months.

Additional investigation is needed to understand the exact connection between job loss and poor health. The focus is mostly on the direct and indirect effects of stress. The long-term effects of job loss go on even after a new job is found because the worker carries a legacy of poor health due to once being laid off.

These health effects are not just felt by the employees being laid off, but also the employees who survive the layoff. These employees will carry more stress as they now wonder if there will be more layoffs and if they will eventually get laid off too. There may be more jobs placed on these surviving workers due to the smaller number of workers to perform the jobs. This stress and added work will break down their bodies faster also.

Financial Impact

The third impact of a layoff that will have a consequence on the employee is going to be the financial impact. Moving into unemployment is typically associated with assorted economic pressures, including reduced income, loss of health and pension benefits, and interruption of asset accrual (Brand et.al, 2008). This is where the layoff starts to affect the families involved as the income shrinks or goes away if both spouses don't work. Job loss is typically found to have considerable effects on earnings, and the overall family income. The changes in income will often leave the employees under pressure to maintain their families' general quality of life. Some common worries after a job loss are: How long can I maintain these budget changes? Will I deplete my savings? Will I lose my house? How will my long-term financial goals (saving for retirement or college) be impacted? Luxury things are not affordable and this can lead to difficulty finding a new job, and maybe even losing the family as bills pile up and near the brink of bankruptcy. Finding a full-time job rather than a part-time job is more than likely the first

thing on their minds. Finding a job that has the same amount of pay as well as benefits in today's economy will be hard. Involuntary layoffs result in lower lifetime earnings according to Social Security and other government records. Workers that lost their jobs in 1982 suffered an average drop of thirty percent in their incomes. Even twenty years later, their earnings had not come back. Many workers will be forced to take a job at a lower pay just to be able to survive and feed their families.

Occasionally an employee will be offered the chance to have a voluntary layoff which is called a Voluntary Reduction in Force (VRiF). In this event, the company will offer employees a chance to get a full retirement if they are willing to leave the company earlier than their targeted retirement date. This may be beneficial to the employee rather than taking an involuntary layoff which might cause them to lose all of their benefits. This voluntary layoff differs in what benefits will be given to the employee. Some companies will offer the ones retiring early insurance and a major portion of their retirement. Not all companies will give this option to employees, but this is a better option than getting involuntarily laid off and losing all the benefits that they have worked hard to achieve.

Anyone who has a job should try to build an emergency fund since there are no guarantees in keeping your job. An emergency fund is some money set aside for unexpected things in life such as job loss, car breakdowns, storm damage to your home, and so on (Ramsey, 2003). Landing a job after a layoff is only the start of rebuilding a career. The workers going back to work may find that their jobs are of lower quality in comparison to the job they lost and the jobs of the remaining workers (Brand, et. al, 2008). Underemployment is also a reality that may face the worker in the job market. Finding a new job will take a great deal of effort and flexibility, especially when openings are scarce, and the need to shift from one industry to

another to gain a new job may cause the worker prolonged unemployment. Older workers may opt for early retirement rather than take on a new job of lower quality.

However, workers forced into early retirement may be inadequately prepared to meet their retirement consumption needs (Brand, et. al,2008). There are several programs in place to help reduce the financial effects of layoffs on employees. The Consolidated Omnibus Budget Reconciliation Act provides the option of continued health care benefits, but employees should consider alternative plans that are less expensive. The distribution of pension fund options should be explained to the workers before their release. It is often advised to leave their money in existing plans, but some employees may elect to take a distribution from the plan just to stay on top of finances. The company may even provide laid-off workers with a severance package depending on their years of service that they were employed by the employer. There are outplacement services to assist displaced workers in finding new jobs, continued access to employee assistance programs, and even job training and education. Some companies will even provide educational assistance to laid-off employees that will help them go to college or vocational school to be retrained to go into another job field. These educational benefits may last up to 2 years after the layoff has occurred. There are also government programs available to help such as Unemployment Insurance and the Supplemental Nutrition Assistance Program (formerly called the Food Stamp program). Some of these programs are only available to those that lost their jobs involuntarily such as a layoff.

Financial loss can play a part in losing one's home. The laid-off worker may not have a way to pay for the home if it is not paid off already. These homes may also sit on the market for long periods and go into disrepair. These homes may not even sell or be absorbed by cities to be able to take over the land and get some use of it. This puts financial stress on these cities and

towns because of the reduced tax revenue collected from the laid-off workers and the companies that closed.

Social Impact

The final impact of a layoff is the social impact, not only on the employee, but the people around them, and the employee's spouse is usually the first to feel this. Work provides meaning to life through social connections with co-workers and the ability to continue to an organization. Layoffs put forth lasting ripple effects on the worker's relationships leading to disconnections and can make the employee feel lonely or isolated. The employee, fighting off stress and illnesses and bouts of depression, will not want to socialize especially if their friends are people they worked with. The frequency of contact with those friends from the previous employer will decrease. There may even be a loss of friendships due to the lack of socialization of the laid-off worker. Not having an income makes it hard to go out and do much of anything let alone to go out and socialize. It has been shown that workers who experience an involuntary job loss are 35 percent less likely to be involved in their communities than those who have never been out of work. This means that they will stop going to soup kitchens, homeless shelters, or even their school PTA meetings not just during their unemployment, but for the rest of their lives. Laid-off workers are more likely to withdraw from participating in youth and community groups like coaching soccer and baseball games, followed by church and church groups like men's or women's bible studies, and charitable organizations and leisurely activities, such as country clubs. The researchers concluded that being laid off isn't as socially damaging for older workers as it is for the younger ones (Brand & Burgand, 2008).

The extent of disruption in the workers' lives from layoffs has been widely documented in both academic studies and popular press. These impacts are felt by the workers, their families, their friends, and almost everyone around them. There is little for the employees to do that are getting involuntarily laid off.

To help lessen the impact on these communities, more focus can be put on other areas such as tourism. These tourism jobs can't replace the number of jobs lost, but they can help to bring in visitors that can help with money lost from the taxes of the workers. Some of the workers that lost jobs may even try their hand at starting their own business which would also help bring in revenue to help revitalize these broken cities and towns. But as we have seen in Detroit, a major decline may be inevitable.

More recently, in January 2021, President Joe Biden signed an executive order revoking the Keystone XL Pipeline and took even more jobs. This executive order ended the construction on the pipeline resulting in jobs lost, and loss of economic opportunities for thousands of workers. A study done by the State Department says that 26,100 direct and indirect jobs would have come from the Keystone XL Pipeline project, through its construction and supply chain that provides lodging, food, and healthcare to workers in small towns across several states (Christ, 2021).

Some of these jobs, 106 to be exact, that are being lost are from Berg Pipe in Mobile, Alabama. Berg Pipe had received a large order to make the piping for the Keystone XL Pipeline project in August from the extensions construction company TC Energy (Garber, 2021). This is a small number, but when added to the welders, pipefitters, truckers, and other jobs that will be lost, it adds up very quickly.

The Keystone XL Pipeline is just an expansion of an existing pipeline that runs from Alberta, Canada to the Gulf Coast of Texas. This new expansion would be able to transport about 830,000 barrels of Canada's tar sands to refineries there in Texas (Denchak, 2021). These tar sands are heated and refined to produce fuel. The original Keystone Pipeline has been in operation since 2010 and brings tar sands to the U.S.

This decision has also hurt the Nekanee Cree First Nation tribe in Saskatchewan, Canada. They had secured a 30-year contract, providing money and jobs to this tribe in exchange for using the indigenous land for the pipeline. This pipeline offered economic freedom for this tribe of 542 people, 50 percent of which are unemployed (Christ, 2021).

No matter the size of the layoff, it hurts so many involved. Whether through advances in technology or getting rid of an idea like fossil fuels, the pain is real. The workers' families and communities will feel the effects and hurt with the workers laid off. The after-effects such as the economic impact will come, even as politicians try to say it won't hurt anything and be better in the long run.

Recommendations

At this particular point in time, there are no real recommendations that can be given on these subjects that can be attained. Large companies are going to be outsourcing and off-shoring long into the future as long as there are third-world countries that can provide them the cheap labor they are seeking and there are less restrictive laws on their manufacturing. When those countries' wage labor gets too high, they will search out newer emerging markets to help keep their costs of manufacturing down.

Immigration will always continue because it is vital to a growing economy. The low-skilled labor positions they fill will not go away because fewer Americans want to fill those positions. Illegal immigrants will still come to the U.S. because politicians and other lawmakers are not enforcing the current laws we have in place. As long as politicians allow illegal immigrants to cross our borders illegally, provide illegal sanctuary cities in their districts, provide housing and give them free healthcare, they will keep coming.

Technology will still continue to advance and take more jobs. The U.S. is starting to see more and more unmanned vehicles, aircraft, and even farm machinery. Robots are moving into more of our daily lives whether we want them to or not. In this last pandemic, we even saw that many people can work from home and still do their jobs effectively.

As all of these things take place, there will be more layoffs in all areas of the American workforce. The outsourcing, immigrants, and robots will continue to take jobs from the labor pool.

Conclusion

In conclusion, we have seen the far-reaching effects of cheap labor on the American economy and workers. The research shows that there are many damaging and lingering effects that take place due to outsourcing and off-shoring. The damage done has destroyed families and cities alike as their jobs were ripped from them just to save some money. These are good-paying jobs with good benefits that will never return. The countries that these jobs are going to are seeing their economies grow and are becoming emerging markets that will rival larger more established markets soon.

This study also looked at the rise of the contract employees or independent contractors making their own way doing specific jobs or projects for companies. These companies know that this saves them money because these contractors aren't on their payrolls and they don't have to pay any employee benefits to these contractors. Independent contractors are building companies such as Door Dash, Uber, and Lyft because these companies employ very few regular employees and many contractors.

Immigrants are coming to the U.S. both legally and illegally and will continue to do so until the U.S. government changes the immigration laws and enforces them. These immigrants are taking away jobs from American citizens even though politicians say they are not.

Technology is continuing to advance the way companies do their business. This is also changing the way workers do their work. Whether workers integrate with automation and robotics or not, there will be job losses.

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