

## **Universal Basic Income in the United States**

### **Introduction**

Changes in technology have prompted changes in the structure and composition of the labor market. In the United States, jobs are being replaced or are at risk of being replaced by automated machines. Innovations in artificial intelligence have begun to put middle-income jobs at risk of automation as well. The current system of social insurance in the United States is plagued by inefficiencies that make the system as a whole unable to support workers displaced by automation. Universal basic income plans have begun to be implemented in experimental settings to address problems caused by welfare inefficiencies and changing labor markets. A partial basic income plan in the United States would raise wages, supplement consumer demand, and reduce inequality. The focus of this paper is to examine automation as a potential problem for the labor market and look at the viability of a basic income in the United States. The implementation of a basic income will be examined in a theoretical labor market model, an aggregate demand – aggregate supply model, and through case studies. This paper will examine the potential benefits of a partial basic income by analyzing the shortcomings and benefits of the Alaska Permanent Fund Dividend.

### **Problem: Automation in the Labor Market**

Beginning in the early 1990s, labor saving innovations have been created at an exceedingly fast rate. Automation and artificial intelligence has allowed firms to replace labor with machines. Advances these technologies have led to three fundamental changes in the labor market: the relationship between demand and supply, the level of competitiveness, and

the education and training of human capital (Dumitru, 2016). The effect of automation on the availability of jobs varies from higher estimates to more conservative estimates. A study by Osborne and Frey predicted that 47% of United States jobs were at risk for automation and computerization (Osborne and Frey, 2017). Conservative studies place the percentage of job loss because of automation to be only 5% of current jobs (Chui et al., 2016). Despite the differences in expected job loss, there is a consensus that there will be short to medium term disruption in the labor market because of automation (Pulkka, 2017).

Job displacement is not the only impact from automation in the labor market. The labor market is likely to become more polarized as the demand for higher and lower skills jobs increases and the demand for middle skill jobs decreases (Pulkka, 2017). The widespread substitution of machines for labor will further inequality in the short run (Mokyr et al., 2015). Currently inequality in the United States is high. The wealth owned by the top one percent of the nation is equal to one third of total nation wealth (Botos, 2015). The high levels of inequality currently seen in the United States have been shown to limit potential economic growth (Botos, 2015). Inequality breeds a vicious cycle of disparity in economies. This vicious cycle begins with wage stagnation. In turn, workers buy less and companies downsize. Tax revenues for the government decreases and the government cuts important programs. As a result, workers are trained less and unemployment rises (Kornbluth and Chaiken, 2013). As automation replaced middle-income jobs, the vicious cycle will continue unless measures are put into place to curb the effects of rising inequality and disappearing middle-class jobs.

The disappearance of middle-income jobs will cause consumer demand to decrease. Those who are displaced due to automation and artificial intelligence will not have the

purchasing power they previously had. Consumer spending accounts for 69% of gross domestic product (GDP) in the United States (U.S. Bureau of Economic Analysis). If consumer demand falls, businesses will experience fewer profits and will ultimately not invest. In the short term, consumer demand would be supplemented with debt-driven consumption, but this kind of consumption is only sustainable if financial crises can be prevented (Pulkka, 2017). Consumer demand is also a vital part of aggregate demand in the United States economy. Lower levels of consumer demand would ultimately lead to less real income and lower output in the economy. Securing consumer demand is vital for stabilizing the automated labor market (Pulkka, 2017).

Social insurance programs will be utilized to support workers through the displacement that will be caused by increased automation in the labor market. The current welfare system in the United States is ill equipped to handle the job displacement, rising inequality, and poverty in the United States. The federal government spends close to \$600 billion on antipoverty programs each year, while states spend nearly \$284 billion on welfare programs. This amounts to about \$20,000 for every poor person (Zwolinski, 2015). Federal and state governments are spending large amounts of money on programs that are highly ineffective at dealing with widespread job displacement and disruption in the labor market. Social insurance schemes currently implemented in the United States are limited in their reach, costly, and dysfunctional in economies that are characterized by labor market flexibility, economic informalisation, and fluidity of labor force participation (Standing, 2004). Additionally, any welfare programs in the United States that rely on labor income taxes will come under pressure as automation increases in the labor market (Straubhaar, 2017).

Unemployment benefits are subject to specific inefficiencies that reduce their effectiveness. Unemployment benefits create poverty traps and unemployment traps. In some situations legal income-earning work is deterred because the recipient of the means-tested benefit would gain little or nothing by taking a low paying job (Standing, 2004). Unemployment benefits create incentives to remain in the system rather than working because of the incentive structure of the benefits. Additionally, unemployment benefits ignore the need for more education in job training. The benefits system acts as a labor market regulator for unemployed workers who may be pushed into the saturated low-wage labor market (Platt, 2003). Ultimately unemployment benefits in the United States fail to achieve what efficient social policy should. Efficient social policy should be blind to ensure it is effective and equitable. Additionally, the policy should support people rather than specific factors of production. Social policy should also refrain from paternalistic behavior and flow unconditionally (Straubhaar, 2017). The current forms of unemployment benefits are not blind and function in a paternalistic manner. As a result, applicants are subjected to personal intrusions, arcane regulations, and constant surveillance (Platt, 2003).

### **Solution: A Universal Basic Income**

In order to overcome the inability of the current welfare system in protecting workers from increased automation in the labor market, a universal basic income is proposed to replace unemployment benefits. A universal basic income is a payment paid to all citizens on a regular basis regardless of other incomes or social situations (Pulkka, 2017). Basic income plans range

from full basic income to partial basic income. A partial basic income replaces some basic security benefits without reducing current levels of social security. A full basic income replaces most or all social benefits and increases the level of social security provided by the state (Pulkka, 2017).

A universal basic income is not a new idea. Marquis de Condorcet first promoted the idea of basic income paid to all citizens in the 18<sup>th</sup> century (Gruioniu, 2013). Recent changes in the labor market have increased the debate on a basic income. Many see a basic income as a credible alternative to orthodox thinking on reducing poverty, inequality, and economic stability (Wispelaere, 2016). Using a partial basic income to replace existing unemployment benefits would have positive benefits on both the labor market and on society as a whole. A basic income is also considered to be a more efficient model of social insurance than the current welfare system. A basic income would be less expensive, bureaucratic, and paternalistic. Additionally, a basic income system would be less prone to political opportunism and less invasive than the current system (Zwolinkski, 2015). A basic income would have important effects on wages, consumer purchasing power, and inequality

### **I. Effect on Wages**

Figure 1 shows the effects of automation on the labor market. As automation replaces human capital, the demand for labor will shift to the left. This shift of the demand curve will cause wages and overall amount of labor used to decrease. The amount of this decrease will depend on the degree of displacement caused by automation. Figure 1 demonstrates the effect of a job loss similar to the 47% of job loss predicted by Osborne and Frey.

Figure 1

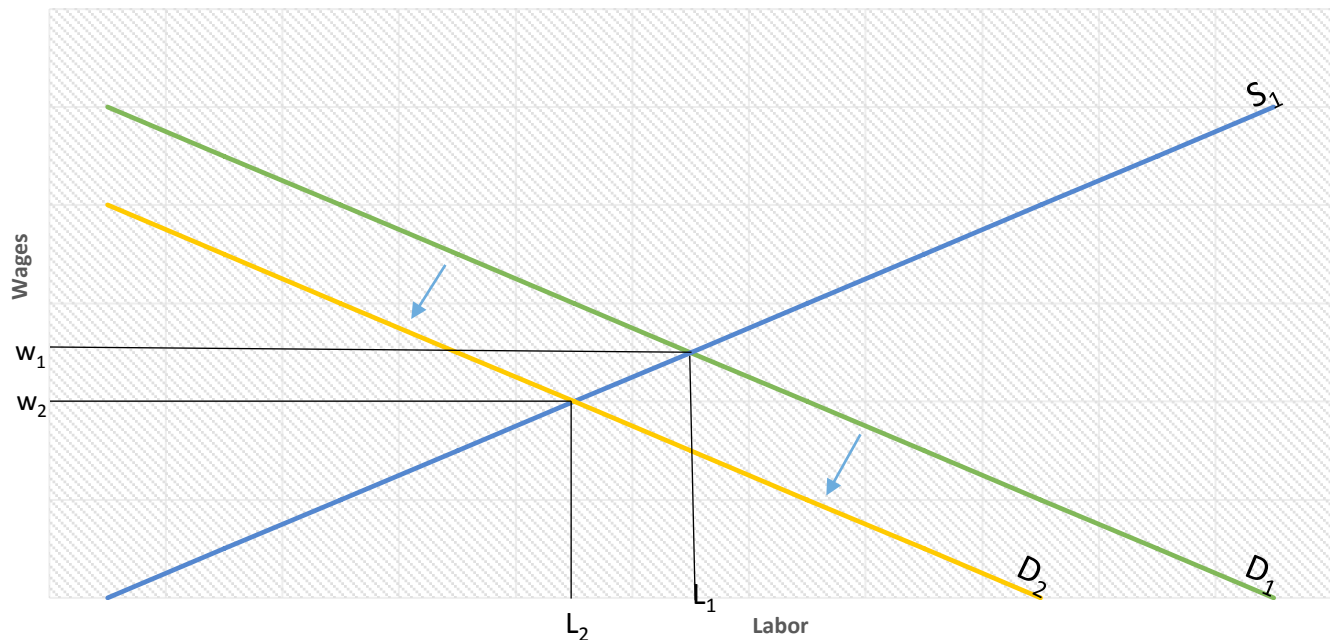


Figure 1: Labor market model for the United States showing the effect of automation on the demand for labor assuming large-scale disruptions.

The implementation of a basic income plan would raise wages paid to workers despite the predicted job loss. The effect would occur because a universal basic income gives laborers more negotiation power in the labor market. Wages are primarily determined by bargaining power. Those who face income insecurity will accept lower wages than those with more security (Standing, 2004). A basic income would serve to decommodify labor and give workers the power to negotiate better working conditions and wages (Pulkka, 2017). Additionally, a basic income would legitimize other forms of work, like care work and community work, which are not strictly considered labor (Standing, 2004). A basic income also decreases the opportunity cost for developing skills that will be needed in an evolving workforce (Gruioniu,

2013). A basic income ensures that individuals will have enough income to live off of while they pursue education or trade skills. All of these facts impact the supply of labor in the economy.

A basic income would cause the supply of labor available in the labor market to decrease as workers bargain for better wages, invest their time in education, and devote more time to work outside of the labor market. Figure 2 demonstrates the effect a basic income would have in the labor market. A basic income would shift the supply of labor to the left. The new equilibrium of wages and labor shifts from  $w_1$  to  $w_2$  and  $L_1$  to  $L_2$  respectively. In both cases a basic income would drive wages up for those still working and provide a safety net for those unemployed by automation and artificial intelligence.

Figure 2

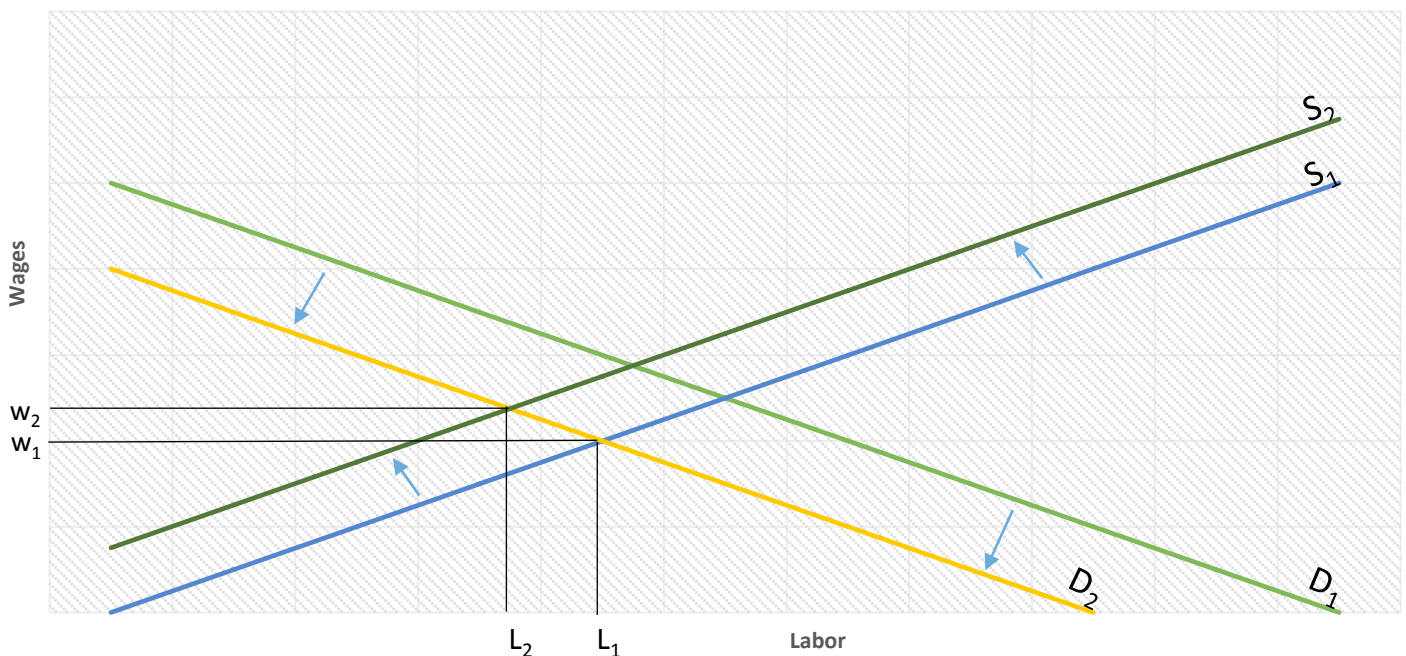


Figure 2: Labor market model demonstrating the effect on wages and labor used under conditions of a basic income and widespread automation.

## II. Consumer Demand

To demonstrate the effect automation will have on consumer demand and aggregate demand as a whole, Figure 3 demonstrates an aggregate demand – aggregate supply model. Consumer demand accounts for 2/3 of aggregate demand in the United States. As jobs are replaced by artificial intelligence and automation the aggregate demand curve ( $AD_0$ ) will shift to the left ( $AD_1$ ) as incomes fall and consumers are unable to purchase as many items. The shift in the aggregate demand curve will depend on the level of disruption. This model assumes there is medium disruption of around 25%. The shift of the demand curve decreases real output and real income. The current system of unemployment insurance is not flexible enough to handle large disruption in the labor force and secure consumer demand. A basic income would enable unemployed workers to spend money as they choose and supplement consumer demand. In order to achieve a significant impact on consumer purchasing power, the basic income plan should increase the disposable income of unemployed, underemployed, and precarious workers above their current level (Pulkka, 2017). The universality of a basic income ensures that all groups of workers are enjoying the benefits of the system.



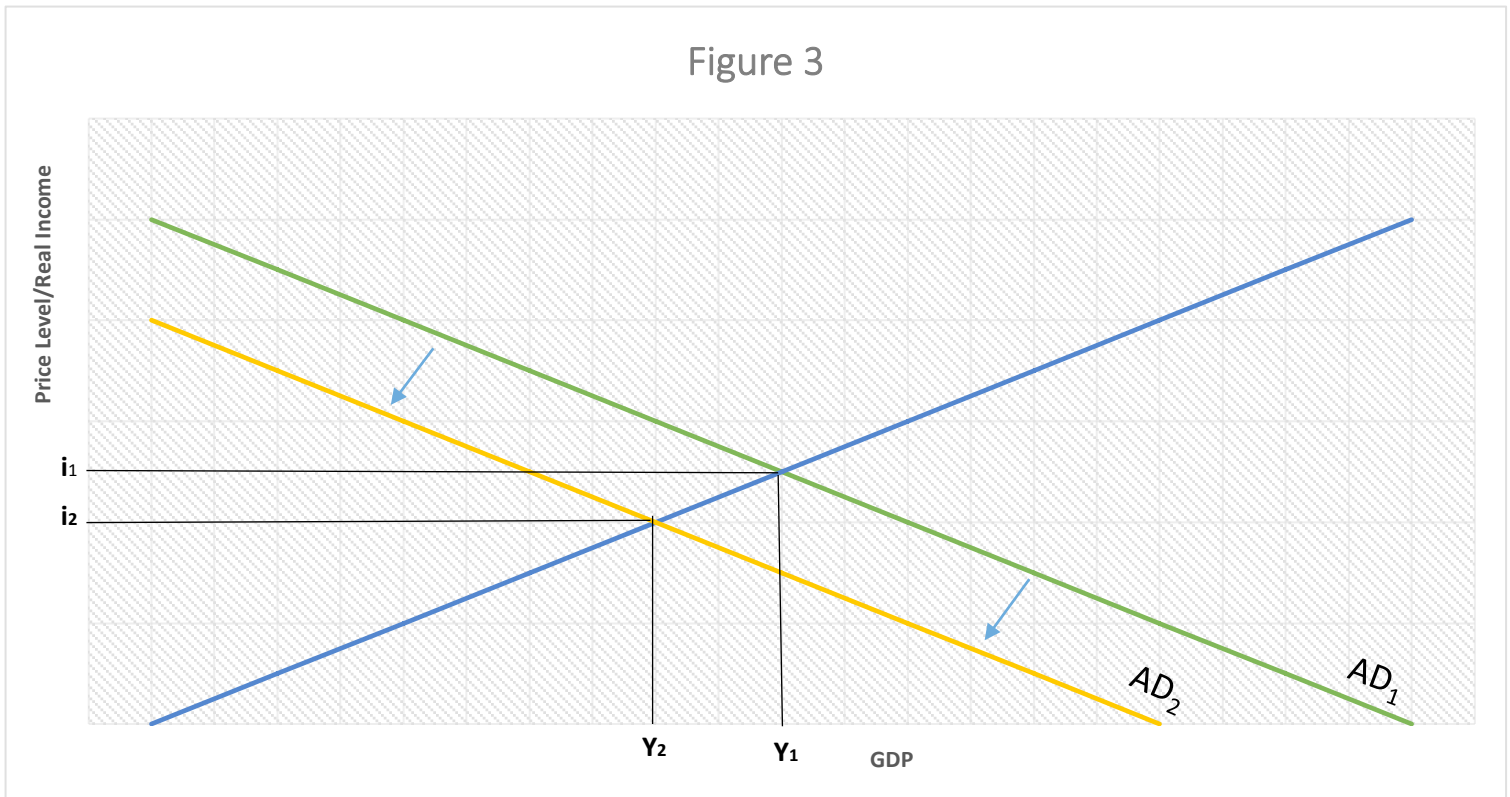


Figure 3: Aggregate demand – Aggregate supply model depicting the effects of disruption of jobs on GDP and price level/real income

Implementing a basic income into the aggregate demand – aggregate supply model would shift the curve to the right. Aggregate demand would move from  $AD_1$  to  $AD_2$ . The rightward shift of the demand curve depends on the basic income plan implemented. Partial basic income plans are unlikely to supplement consumer demand to the levels prior to the job displacement. A full basic income is likely to keep consumer demand at the level attained prior to the job disruption and may ultimately raise the purchasing power of consumers depending on the amount of income distributed. A partial basic income is more realistic and viable in the United States. Figure 4 depicts the effects of a partial basic income on aggregate demand. The increases in both real output and real income do not reach the original levels of income and output; however, they improve income and output after job disruption occurs.

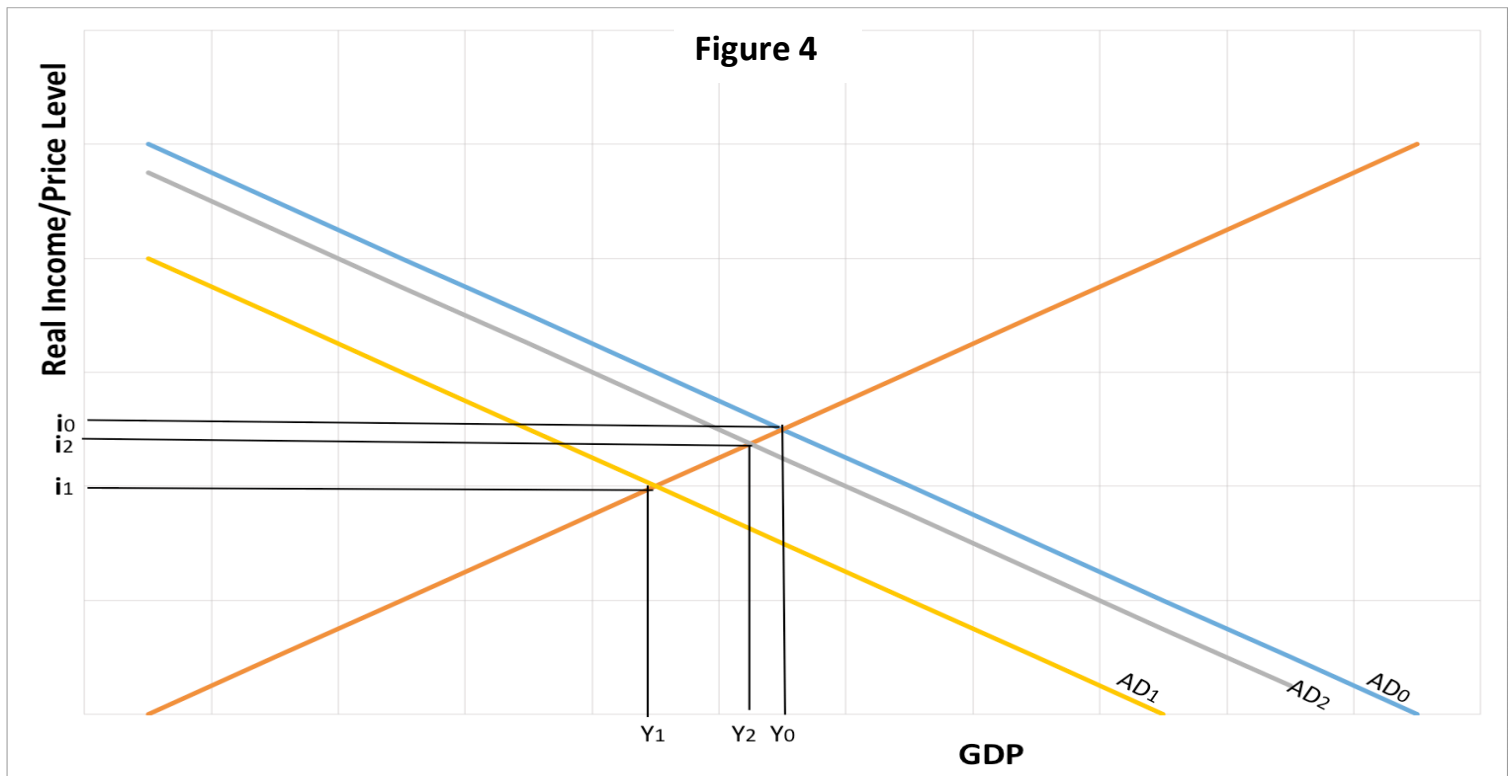


Figure 4: aggregate demand – aggregate supply model depicting the effect introducing a basic income would have on GDP and real income/price level after job disruption.

### III. Inequality

Inequality negatively effects social cohesiveness and the potential growth of an economy. The United States is currently experiencing high levels of income inequality. As automation replaces jobs, this inequality is expected to increase. The implementation of a universal basic income plan would reduce inequality more than current redistributive options. Stevens and Simpson (2017) simulated the effect implementing a basic income in Canada would have on poverty and inequality. They found that a universal basic income reduced overall incidences of poverty by 40% and the depth of poverty by 17%. The basic income also reduced income inequality, measured by the Gini coefficient, by 3.3% (Stevens and Simpson, 2017). A

basic income plan implemented in the United State would likely have the same effects on both poverty and income inequality.

A basic income would not only have effects on income inequality, but also health inequality. Income has generally been considered to be the most important social determinant of health (Ruckert et al., 2017). Basic income trials and experiments have been shown to have positive effects on mental health, access to healthcare and early child development. The income transfers from the Alaska Permanent Fund increased birth weights by 38.8g and made it 14% less likely for babies to be born with a low birth weight. An additional income experiment in Indiana increased the access to neonatal nutrition and healthcare (Ruckert et al., 2017). A basic income experiment was also conducted in Malawi. The results indicated that schoolgirls whose families received the income were about 38% less likely to experience psychological distress. Additionally, the Malawi experiment showed that drug dealing declined and the youngest members of families were less likely to suffer from psychiatric diseases (Ruckert, et al., 2017). A basic income has also been shown to increase access to healthcare. India's basic income trial diminished the occurrences of common illness in participants and reduced the likelihood of health problems from developing because preventative care visits were made possible by the increased level of income (Ruckert et al., 2017). Basic income would result in a healthier population and aid in reducing costly healthcare needs.

Education inequality also has many negative effects on long-term growth of the economy. Education is vital for technological advancement and economic growth. Studies have shown that a basic income will improve literacy scores, reduce dropout rates and improve grades (Ruckert et al., 2017). Basic income studies in Namibia and India both resulted in higher

school enrollment and more money spent on school supplies and school enrollment fees (Ruckert et al., 2017). Additionally, a basic income makes it less costly to pursue education in lieu of entering the workforce. With a basic income there is a lower opportunity cost for developing skills that can be used in the workforce (Gruioniu, 2013). A basic income would make it easier, especially for low paid workers, to reduce their working time in order to acquire further training for higher paying jobs (Parijis, 2013). Education is vital to a growing and prosperous economy. The implementation of a basic income would raise education levels and ensure more equal access to education.

#### **IV. The Alaska Permanent Fund Dividend**

In 1982 Alaska created a cash transfer system to ensure Alaska residents could benefit from the state's oil revenues. The Permanent Fund Dividend allocated \$1,884 to everyone who met the residency requirements in 2014 (Wispelaere, 2016). The system is politically successful and unlikely to disappear any time soon. The dividend meets basic income requirements because it is universal, individual and unconditional. However, the level of income paid to residents fluctuates depending on the oil revenue of the year. Additionally, the grant is not of a high enough level to have many aggregate effects on the economy. The Alaska Permanent Fund Dividend demonstrates the potential popularity and success of basic income plans; however, it fails to show a sustainable funding model. The fund relies on resource dividends rather than raising income or consumption taxes or reducing other social program funding (Wispelaere, 2016). Additionally, resource based basic income models may only have limited effects on reducing inequality (Wispelaere, 2016).

Increasing the amount distributed through the Alaska Permanent Fund would increase the effectiveness of the cash transfers and create a more sustainable basic income model. The level of income distributed by the Alaska Permanent Fund is insufficient to have effects on the labor market, specifically wages. The amount paid by the fund also fluctuates with the oil revenues of the state. As a result, the income given to residents is not reliable. This reduces the ability of the redistribution system to have widespread aggregate effects. It is predicted that most of the income distributed by the Alaskan Permanent Fund go toward the purchase of consumer durable goods (Goldsmith, 2002). This effect can partially be explained by the timing of the payment. The cash is distributed in a single payment during the Christmas shopping season. Much of the income subsequently is spent on gifts and consumer goods (Goldsmith, 2002). There has not been any studies looking directly at the effect the Fund has on the labor market, however observations have deemed the Fund to have little effect likely due to the small amount and unpredictability of the payment. Inequality has been significantly reduced by the Fund. Income of the poorest 20% of Alaskan families increased 28% compared to 7% increase for the richest 20% in Alaska (Goldsmith, 2002).

Increasing and securing the amount distributed by the Alaska Permanent Fund to a poverty level basic income would have important effects. A poverty level basic income is set at \$12,000 per adult and \$6,000 per child. The Fund could use oil revenue to pay for part of the plan and create a tax plan to fund the rest of the amount. Stabilizing the amount of income paid to each resident would increase the impact on consumer demand and the effect on wages. If the amount of the fund fluctuates yearly, the bargaining power promoted by a basic income is unlikely to be as strong. Additionally, a fluctuating income does not encourage as much

spending as a predictable payment does. The Fund would also be executed in a monthly payment schedule in order to address the inefficiency observed currently in the payment schedule of the Fund. Creating a poverty level basic income plan in Alaska would also further reduce inequalities by supplying a dependable stream of income that could be used for healthcare and education. Securing the income distributed by the Fund at a certain level, in this case at the poverty line, and increasing the amount of funds would allow the Fund to be more effective at supplementing consumer demand, reducing inequality, and raising wages.

The Alaska Permanent Fund Dividend provides an example of the benefits a basic income could have in the United States. Adopting a higher level of redistribution and more secure payment would increase positive impacts and help lessen the detrimental effects of automation on the economy. The current setup of the Fund makes it an unsustainably financed model that could be made better by incorporating the plan into a tax structure. Additionally, the Fund gives evidence for the potential political popularity and positive effect a basic income could have.

### **Challenges of a Basic Income Plan**

A basic income has a lot of potential as a solution to overcome the job disruption caused by increasing technology in the labor market. However, a basic income plan always has a lot of costs associated with it. The cost of a basic income plan has been exaggerated by some, but is still a significant barrier to the implementation of a basic income plan. Overcoming the cost of a basic income is simply a matter of priorities that will have to be addressed as the labor market changes. Additionally, the implementation of a basic income, especially in the United States,

would have to overcome significant political barriers. A basic income in the United States is still far from even being discussed in the political arena. Despite the serious hurdles a basic income must overcome, there have been many basic income trials and experiments that show it is a viable solution.

## **I. Financing**

The cost of financing a basic income is the biggest challenge to any basic income plan; however, it can be done in the United States. The Partnership 2000 Working Group on Basic Income found that a tax integrated basic income would be affordable and have vital distributive effects (Wispelaere, 2016). Full basic income plans vary from poverty level plans to social justice plans. Poverty level basic income plans pay what is considered a poverty level of income to everyone. Social justice incomes are intended to raise everyone to middle class lifestyles. Social justice basic income plans use “basic family budgets” calculated by the Economic Policy Institute as the measure for the level of income given to everyone (Major, 2016). Any basic income plan would require serious financial considerations; however, at this point the most viable option in the United States is a poverty level basic income plan.

The cost of financing a basic income plan has received a lot of attention and has resulted in different estimates. A basic income is best discussed under terms of net cost rather than gross cost. Wilderquist (2017) estimated the net cost of a poverty level basic income in the United States. For his calculations he used a basic income plan that was set right at the poverty line: \$12,000 for every adult and \$6,000 for every child. At this level of basic income the gross cost of the plan comes out to \$3.415 trillion and the net cost is \$539 billion a year. He makes

these calculations under the assumption of a flat 50% marginal tax rate. The distinction between net and gross costs is important because the gross cost exaggerates the true cost by nearly six times. Giving and taking-back makes up the majority of what a basic income plan does, but this comes at a minimal cost to the taxpayers, economy, or government. The net cost of a basic income is the amount of money the plan transfers from one group of people to another plus the associated transaction costs (Wilderquist, 2017). Taking into account the net costs of a basic income plan make a poverty level plan viable in the United States. Under Wilderquist's calculations, a poverty level basic income would cost less than 25% of current United States entitlement spending, less than 15% of overall federal spending, and only 2.95% of United States GDP (Wilderquist, 2017). A basic income could be financed in a variety of ways in order to ensure the financial viability of a basic income plan.

## **II. Political Considerations**

A basic income plan would have significant political challenges to overcome. Basic income plans often get lost in legislation and never debated. The basic income plans that reach implementation are often susceptible to failure because they lack a timetable for implementation and are subordinate to budgetary and developmental priorities (Wispelaere, 2016). Basic income plans can often struggle to even get picked up in the policy discussions. A basic income plan has to overcome the idea of the entanglement of work and the right to income (Koistinen and Perkio, 2014). This entanglement makes many politicians and policy designers to turn away from basic income legislation. Despite the hurdles basic income plans must overcome, a handful of trials and experiments have been put into action that demonstrate the pros and cons of different basic income schemes.



### **a) Iran Price Subsidies**

Iran prior to 2010 used proceeds of oil exports to implicitly subsidize domestic consumption. In 2010 the government implemented a cash transfer program to remove these implicit subsidies. The program transfers about \$45 to each resident of Iran. Initially, the Iranian government attempted to transfer income to only the poorest 70% of the population. The government found they could not accurately identify the right individuals to receive the transfers and ultimately decided to drop the restriction (Tabatabai, 2011). The attempt by the Iranian government to determine who should receive the benefits demonstrates some of the inherent inefficiencies of mean tested benefits. Similar to the basic income scheme in Alaska, the Iranian scheme relies heavily on natural resources to fund the plan. The Iranian plan may not continue once the five-year reform period is completed because the public support for the program is not nearly as high as the public support for the Alaska Permanent Fund Dividend (Wispelaere, 2016). The Iran plan demonstrates the need to basic income plans to be universal as well as offers an example of a basic income plan. However, the Iranian scheme faces serious political backlash and is not a sustainable or effective method of raising income levels.

### **b) Pilot Projects in Namibia and India**

In 2007 a pilot program was launched in Otjivero-Omitar, Namibia. In the pilot all residents under the age of 60 received a monthly basic income of \$12 (Martin, 2016). The pilot project had a variety of positive impacts on the community. The population under the poverty line decreased by 60% and there were significant reductions in crime, malnutrition and debt. Additionally, there were higher school enrollment rates, more employment, higher savings and

incomes (Martin, 2016). The majority of pushback from the policy came from moneylenders. Moneylenders saw business decline as more and more people in the community became financially secure (Martin, 2016). The community suffered from extended family migration due to the implementation of the pilot program. The pilot program suggested that the positive impacts of the cash transfer could increase with a national basic income because domestic migration would not be as significant (Martin, 2016). The pilot project in Namibia demonstrates the many benefits associated with a basic income. The pilot project in India demonstrated similar effects on poverty, education, health and work as the Namibia pilot projects. The Indian pilot program gave monthly payments to individuals in a handful of villages at levels around 30% of the subsistence line, which equated to about \$5 (Martin, 2016). Both pilots resulted in the ability for individuals to plan and prioritize their spending and resulted in political momentum for basic income plans in both countries (Martin, 2016). These pilots show the ability for basic income to positively affect communities and the ability of a basic income to enter the political arena.

### **Conclusion**

A basic income is a viable solution to problems caused by automation in the labor market. A basic income raises wages by increasing the bargaining power of workers and validating work outside the labor market. Additionally, a basic income will supplement consumer demand by giving displaced workers access to income that is not means tested or paternalistic. Basic income pilots in Namibia and India have shown that basic income is effective at reducing income, health, and education inequalities. Increasing the amount of income distributed by the Alaska Permanent Fund Dividend would have positive impacts on wages,

consumer demand, and inequality. The effects in Alaska are likely to be similar to those seen in the rest of the United States. Implementing a partial basic income in the United States would solve many problems that automation is likely to cause in the labor market.

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