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Analyzing the Necessity and Feasibility of the Freedom Dividend

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What Would You Do With $1,000 a Month?

Assessing the Necessity and Feasibility of the Freedom Dividend

Patrick G. Hodson

University of Nebraska at Omaha Honors Program
Analyzing the Necessity and Feasibility of the Freedom Dividend

Abstract

Job displacement stemming from automation has already taken away millions of jobs in the United States. Andrew Yang fears that future advancements could replace further jobs and exacerbate the wealth inequality already prevalent in our country. This has motivated his plan for change, the Freedom Dividend. This paper was designed to begin with an analysis of the motives for Yang’s plan. It then goes on to cover the details of his plan and assess the economic and administrative feasibility. The paper is concluded by looking at the potential outcomes of the plan and identifying major problem areas that need to be considered before implementation.

After analyzing several potential cost and funding alternatives, the Freedom Dividend does not make economic sense at this time. With a cost of $2.27 trillion and revenues from his current plans amounting to only $1.3 trillion, the primary concern with his plan is funding. However, the research also indicates the necessity and potential benefits that stem from a plan like Yang’s. For these reasons, even though his plan is not complete at present, the ideas he draws from deserve further investigation as research and technology continue to progress.

Keywords: Andrew Yang, Universal Basic Income, Feasibility, Necessity, Outcomes
Analyzing the Necessity and Feasibility of the Freedom Dividend

Introduction

With such turbulent political times, increasing wealth inequality, and technological advances that threaten to displace millions of workers across the United States, it is no surprise that politicians are scrambling to provide solutions that will create real change and help push the country forward. Next year is an election year, and after Donald Trump’s first term, there are some two-dozen democratic candidates pushing for economic and social reform. One such candidate who has created buzz for his unorthodox ideas is Andrew Yang, an attorney from Columbia Law turned entrepreneur and philanthropist. His flagship idea is to implement a Universal Basic Income (UBI) in the United States which would see that every citizen between the ages of 18 and 65 receives $1,000 a month from the government. Why do we need it, can this really work, what do the experts think, or has it been done before? These are all questions that come to mind with such a radical proposal as Yang’s, and these are the very questions that I hope to investigate and flush out in this paper as I attempt to form an evidence-based opinion on the feasibility of the “Freedom Dividend” that Yang is pushing for.

Aside from presidential and congressional elections, I have never been a very informed person in the political arena, nor have I spent much time thinking about candidates or the implications of their plans. As a young student, I focused more on my schoolwork and social sphere than on the macroeconomic and political events happening around the world and in our country. However, as the political arena seems to have gotten increasingly more charged, and as I have become older and more involved in the world and economy, I have begun to see the value in understanding and digging into political and economic discussions.
What I Hope to Explore in this Essay

This paper is partly about amassing information to come to my own conclusion about feasibility, but also an opportunity for me to learn about politics, economics, and the coming social changes our country will face. These are all topics that were not thoroughly covered by my education in accounting and finance, yet are all things that will contribute to my personal growth and to becoming a well-informed citizen of the world. As this research paper is largely intended for personal growth and expanding my knowledge base of important topics in the world, there are a few key areas I targeted for exploration in this essay.

1. To explore the factors that got our country here and what the motivations for change are.
2. To determine, based on evidence, the economic and administrative feasibility of Andrew Yang’s Freedom Dividend.
3. To explore past examples of similar efforts to determine whether or not the Freedom Dividend could solve the problems that Andrew Yang claims it will.
4. To end with a discussion of the weaknesses of such a plan.

We begin with an exploration of the issues our country is currently facing.

What Are the Issues

The Tech Revolution and the “Great Displacement”

Technology and its rapid progress have been one of the greatest advancements of the last 100 years. We have computers in our pockets, can travel thousands of miles in mere hours, and can communicate almost instantaneously with people on the other side of the world. All of these advancements have made us more productive, brought down the price of many goods in our economy, and have provided entertainment. However, nothing comes without a cost, and in spite of such benefits, there are also challenges we must overcome with them.
The downside that Andrew Yang is most concerned about is what he refers to as “The Great Displacement,” the process by which more and more people are finding their jobs replaced by automation and are not able to find a similar job or readily retrain for a new one (Yang, 2018). From the industrial revolution of the 1800s to the first technological revolution of the early 1900s, technology has created new and exciting opportunities at the cost of old jobs. Historically, this process has created more new jobs than were replaced. However, with advances in critical areas like artificial intelligence, data processing, and microcomputing, this revolution may be different.

The Great Displacement has already begun, and to demonstrate this point, we begin with some examples of jobs that have already been hit hard by automation and technological advances. The displacement from technology started in routine, manual jobs. We start the analysis by investigating one of the most prolific examples, and one that played a key role in the election of 2016: manufacturing.

Figure 1: Manufacturing Employment

As Figure 1 above depicts, manufacturing jobs have taken a serious hit, dropping 26% since 1990. The most significant drop was during the Great Recession, and even though...
companies are reporting record levels of profitability, the number of people employed in the industry has lagged. Cocco (2016) argues that 80% of these losses were attributed to automation (as cited in Yang, 2018, p. 252)

Another area where jobs have been rapidly lost is the retail industry. You do not have to drive far in most cities to see an abandoned mall or closed Sears store -- think of Crossroads here in Omaha. The demise of these brick and mortar stores is largely due to the growth of online retailers like Amazon and Alibaba, who have leveraged technological advances to grow rapidly. Figure 2 below depicts just over a 28% decrease in retail employment at department stores between 2001 and 2017, at which point data stopped being collected.

Figure 2: Department Store Retail Jobs

Retail and Manufacturing have been the prominent targets in the past, but the trends of disruption are becoming more pervasive in an increasing number of industries. Fast food and banking employees alike are under threat of automated tellers and cashiers, and self-checkout lines at grocery stores have been commonplace in many parts of the country.

One area that is under heavy pressure are professional drivers. There are 3.5 million people in the U.S. who drive trucks for a living, making it the most common job in 29 states
Analyzing the Necessity and Feasibility of the Freedom Dividend

(Yang, 2018, p. 43). Self-driving cars are still in the early stages of development, but as the technology gets better, it will be a big hit to those millions of people; not only to truck drivers, but to anyone who drives for a living. A simple google search reveals that Daimler, Ford, Volvo, and Tesla are already moving to disrupt these industries and all have announced self-driving cars.

The jobs that I have discussed are mostly manual repetitive jobs. However, as AI and data processing are becoming more advanced, and the machines which use them are more sophisticated and user friendly--meaning they are more seamlessly integrated into business models--the fields that are susceptible to automation are broadening past blue-collar jobs. This includes jobs requiring an education that have traditionally been thought of as “safe.” These include professions like banking, law, and accounting. However, the repetitive nature of many of the tasks in these fields make them prime targets for more powerful automation tools (Yang, 2018, p. 56-57).

Computerization, big data, and AI have already begun pushing into non-routine cognitive tasks as well (Frey & Osborne, 2017, p. 268). This is concerning because even non-repetitive jobs that require decision making and adaptability are becoming more threatened. Data analysis and AI advancements allow computers to process huge amounts of data and to identify trends and make decisions based off what they find. Galeon (2016) described computers that train themselves to improve at any task it is performing (para. 1). These advancements lift the limits of doing what a programmer teaches computers to do and releases the floodgates on the potential growth of automation.

These are only a few of the key examples, but according to Frey and Osborne (2017), 47% of current U.S. employment is susceptible to automation in 1-2 decades (p. 268).
Analyzing the Necessity and Feasibility of the Freedom Dividend

Additionally, in a study performed by Manyika and Sneader (2018) of 2,000 work activities in more than 800 occupations, the researchers found that 30% of the activities in 60% of occupations studied could be eliminated. (Part 2, para. 2). This means that even for the jobs that are not taken away outright, the nature of work will change radically as the work of humans and machines becomes increasingly intertwined.

**Why Yang says There Won’t Be as Many New Jobs Created**

These findings illustrate the nature of the changes to come. Yang warns, “The speed, breadth, impact, and nature of the changes are considerably more dramatic than anything that has come before” (2018, p. 70). These changes are more pervasive and displacing than in revolutions past for a number of reasons.

First, the jobs created will require more skills than ever before. Revolutions in the past created more jobs for unskilled labor. Totty (2019) explains that unlike past revolutions, where more jobs were created for unskilled laborers, this one is not (Many jobs will disappear, para. 6). When discussing jobs that will be created, Totty explains, “For one thing, developing and implementing AI systems creates a growing demand for data scientists, roboticists, machine-learning specialists, cybersecurity experts and other highly skilled workers” (Totty, 2019, There will be plenty of jobs, para. 5). The jobs that will be created are not going to be easy for a lot of people to learn and adapt to.

To make matters worse, we are not prepared to accommodate the workforce transition that is coming. Keynes (1930) explains a plague to mankind which he terms “technological unemployment”. This is when the rate at which old jobs are replaced by new technology happens faster than new opportunities can be developed for that labor (p. 358). Although that is only a temporary issue, the critical issue lies in retraining and supporting people while in the process of
finding new uses for their labor. Manyika et. al (2017) explains that up to one-third of the workforce in the United States may need to learn new skills and find work in new opportunities (p. 11). This of course begs the question on whether or not we will be able to train people for the new jobs that are created. Although some people may, and will find new opportunities, it is unlikely that the millions of middle-aged truck drivers across the nation will become high-tech programmers.

**Wealth and Income Inequality**

Technological progress itself is not a bad thing, as it helps make our lives easier and better overall. Frey and Osborne (2017) explained, “The balance between job conservation and technological progress therefore...reflects the balance of power in society, and how gains from technological progress are being distributed” (p. 256). So where is it going? Andrew Yang argues that the gains from automation have made us more productive, but those gains are not being shared evenly (Yang, 2018, p. 15).

Over the last decades, automation and technological progress has enabled companies to become exponentially more productive. However, the following graph from the Economic Policy Institute reflects the growth in hourly compensation has failed to keep up with those gains:
Figure 3: Productivity and Hourly Compensation Growth

Figure 3. The productivity-pay gap, 1948-2018. Graph from the Economic Policy Institute at www.epi.org/productivity-pay-gap/

Figure 3 reflects that there has been just under 150% growth in productivity since 1978, but only about a 20% increase in wages. This is incredible, but why is it happening? Andrew Yang attributes this largely to automation, as it leads to a small handful of winners (Yang, 2018, p. 15). Those who own and design the machines are making huge profits while those that the machines replace are left behind.

Another useful comparison to display the imbalance is to compare corporate profitability to the increase in real income across income groups. The past decade has been one of the most prosperous in our country’s history, but the gains from those increases have not been shared. The following graph depicts corporate profitability since 1990:
Corporate profitability has skyrocketed since the depths of 2009, but according to Saez (2019), 49% of the real income increases between 2009 and 2017 went to the top 1% (p. 6). This point is further displayed by the breakdown of asset holdings by income group in Figure 5 below:

Figure 5 shows that the share of total assets held by the top 1% in 2018 was 29% of the total, while the bottom 50% hold less than 5%. As automation continues to change the nature of work, and if policy changes are not enacted, the concern is that automation will make inequality even
worse. This was stated quite saliently by Manyika and Sneader (2018) in their article on the future of work, “The risk is that automation could exacerbate wage polarization, income inequality, and the lack of income advancement that has characterized the past decade across advanced economies, stoking social, and political tensions” (Part 3, para. 4). That risk, along with the other problems described in the previous section, lay the stage for Andrew Yang’s plan.

**Assessing Yang’s Plan**

In response to the issues described in the preceding section, Andrew Yang wants to implement a Universal Basic Income, an idea that is by no means new. This idea has been tested in the U.S., Canada, and around the world. MLK, Elon Musk, and Barack Obama have all spoken in support of a UBI at one point or another. In a final online posting before he passed away, Stephen Hawking said the following:

> Everyone can enjoy a life of luxurious leisure if the machine-produced wealth is shared, or most people can end up miserable poor if the machine-owners successfully lobby against wealth redistribution. So far, the trend seems to be toward the second opinion, with technology driving ever-increasing inequality. (as cited in Goodkind, 2018, para. 4)

In Andrew Yang’s words, “It’s simple, it’s fair, it’s equitable, it’s easy to understand, it benefits at least 80 percent of the population, and will be necessary to maintain the fabric of society during the automation wave” (2018, p. 173).

**The Freedom Dividend**

From a high level, Andrew Yang’s plan is really quite simple. He wants to give every American, aged 18-64, $1,000 a month ($12,000 a year), regardless of income level, and adjusted for inflation. The current poverty line is around $11,770 a year, and his idea is to give everyone enough money so that their basic needs are covered while they adapt to the new
Analyzing the Necessity and Feasibility of the Freedom Dividend

Analyzing the Necessity and Feasibility of the Freedom Dividend

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Analyzing the Necessity and Feasibility of the Freedom Dividend

Economy and to redistribute some of the gains that technology has created. Some other details of
the plan are that it would require a constitutional supermajority to amend or change the amounts.
Also, current welfare and social assistance recipients would be given a choice between their
current support and the freedom dividend while social security recipients and veterans would get
the $12,000 a year in addition to their current benefits (Yang, 2018, p. 166)

Funding

Providing every American $12,000 a year is a lot of money, so how will it be funded?
Yang explains that there are many ways to pay for such a program, but the one he champions is a
value added tax (VAT) (Yang, 2018, p. 177). A VAT is a consumption tax that is assessed at
each step of the value chain and is wrapped into the costs of production. As a company buys
component pieces or inputs to their products, they are paying a tax on the value that was created
in the previous step, minus the amount already paid on the value created from the steps before
that one. In the end, the final consumer (that is, households) bears the burden of the tax, making
it most similar to a sales tax. (OEAD, 2018, p. 22-23).

Over 160 countries already have a VAT, including every other developed country in the
world besides the U.S. The graph below depicts the countries in the world who have
implemented a VAT (in red) and those who have not (in blue):
Even though most countries in the world have a value added tax, each one implements their VAT differently. One of the advantages of it is that governments can choose which industries and goods you want to tax and exempt those that you do not. However, Yang is kind of vague here. At times he says it would be placed on large technology companies and other times that it could be assessed on all goods in the economy. Yet, on the Value-Added Tax section of his website, he lists that some goods, such as groceries and clothing, could be excluded and luxury goods that would be taxed at a higher rate (Value-Added, n.d.). Whatever the tax base would end up being, the VAT is assessed on all consumers when they buy the goods and services that the government selects for the tax.

Countries select the goods and services they want to tax in different ways, and similarly, the amount they choose is subject to change. The average VAT in Europe is 20% (Yang, 2018, p. 171). The average VAT in OECD countries was 19.2% in 2017. Andrew Yang suggests implementing a mere 10% tax. Essentially, every end consumer will be paying a 10% VAT on
Analyzing the Necessity and Feasibility of the Freedom Dividend

the goods and services that are specified by the plan. If everyone is receiving $12,000 a year, then only those who consume more than $120,000 of the defined goods will end up paying more into the system than they are getting out (at consumption of $120,000 with a 10% VAT on that consumption, you will simultaneously be paying in and receiving $12,000). Therefore, those consuming more than $120,000 a year will be paying into the system, while those consuming less will be receiving from the system. In this way, the VAT helps distribute income since those that are the most well off have to pay the most (i.e. those consuming more than $120,000 a year). As automation continues to threaten employment, people face increasing pressure from automation and robots, and the economy becomes more polarized, there needs to be a way to redistribute the gains and ensure a fair and just society. Thus, the 10% VAT makes sure those who benefit the most from society and technological advancements must pay into that society to keep it going.

The VAT is Yang’s flagship idea, but he also references a number of other potential sources of funding, including:

1. Carbon tax: Set an initial tax of $40/metric ton, increasing by $5/ton for four years and then $10/ton until it gets to $100/ton.
2. .1% Financial Transactions Tax.
3. Eliminating favorable tax treatment for capital gains.
4. Lifting social security payroll cap.

Feasibility

With a basic understanding of Yang’s plan, we can now move onto feasibility. In assessing feasibility, we look at two different perspectives: the economic feasibility in terms of
Analyzing the Necessity and Feasibility of the Freedom Dividend

cost and funding, and then also the administrative burden it would require to implement the UBI and VAT.

**Economic Feasibility**

**Cost of the plan.** If you are like me, Andrew Yang’s plan sounds nice at first glance, but we should dig a little deeper before we start cutting checks. In the following analysis, I compare a number of different alternatives to determining the cost of the plan.

![Figure 7: Cost Possibilities of the Freedom Dividend](image)

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
<th>Scenario 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost For All Adults</td>
<td>2,832,000,000,000</td>
<td>2,418,421,668,000</td>
<td>2,418,421,668,000</td>
</tr>
<tr>
<td>Less those that keep current benefits</td>
<td>-18,000,000,000</td>
<td>-18,000,000,000</td>
<td>-624,000,000,000</td>
</tr>
<tr>
<td>Savings from those that forgo current benefits</td>
<td>-133,000,000,000</td>
<td>-133,000,000,000</td>
<td>-356,200,000,000</td>
</tr>
<tr>
<td>Total Additional Costs</td>
<td>$2,681,000,000,000</td>
<td>$2,267,421,668,000</td>
<td>$2,062,221,668,000</td>
</tr>
</tbody>
</table>

**Scenario 1.** In scenario 1, I use data provided by Max Ghenis (2019) from The UBI Center. His calculation begins with the cost stemming from providing $12,000 a year to 236 million adults in the U.S.. He estimated that 2 million current welfare recipients would opt to keep their current benefits since they are higher, saving $18 billion (Pricing out the freedom dividend, para. 1). Next, he determines the cost savings to the federal government stemming from the decreased costs of those that switch to the Freedom Dividend over their current benefits. His final calculation is that the Freedom Dividend would cost $2.68 trillion.

**Scenario 2.** In scenario 2, I kept Ghenis’s calculations the same except for the determination of the number of adults that would be eligible for the payment. Taking data from the U.S. Census Bureau (2017), I calculated the number of adults between the ages of 18-65 to be closer to 202 million, lowering the cost of the Freedom Dividend by over 400 billion dollars.

**Scenario 3.** In scenario 3, I continued with the estimate of adults from scenario 2, but for the sake of comparison, I recalculated the cost assuming that all of the current welfare recipients
would opt to the Freedom Dividend. The government spent $851 billion in 2018 on welfare benefits (Lexington Law, 2019). Those recipients would receive the $12,000 a year but would save the federal government $851 billion in current costs, ultimately reducing the cost by an additional $700 billion over scenario 2.

Scenario 4. In scenario 4, I inverted the analysis from scenario 3 and instead assumed that none of the current welfare recipients would choose the Freedom Dividend. Irving and Loveless (2015) reported that roughly 52.2 million Americans received benefits in 2012 (p. 2). Assuming all of them were to keep their current benefits, we would save $12,000 a year for each, resulting in cost savings of $624 billion. However, since the average amount received per month was only $404 (p. 13), it is unlikely that most people would stick with their current means-tested benefits over $1,000 a month of unrestricted money.

From the preceding analysis, I found that the additional cost of the Freedom Dividend on top of current welfare benefits ranges from $1.56 trillion to $2.68 trillion depending on the number of current welfare recipients that opt to choose the Freedom Dividend. This is useful to analyze since it is impossible to determine the exact number, and a range helps give us a broader understanding of the financial implications arising from the nuances of choosing which benefit estimations to use. To move forward with the analysis of economic feasibility, I am using the cost of scenario 2 since I found the population of eligible recipients, and the estimate of those who would opt out of their current benefits to be the most accurate. The result is that the Freedom Dividend would cost an additional $2.27 trillion a year.

Funding the plan. The details of his implementation are relatively vague, and as such, we will identify a few alternatives that could be used with the implementation of a VAT and his other sources of funding.
Analyzing the Necessity and Feasibility of the Freedom Dividend

### Figure 8: Funding Alternatives for the Freedom Dividend

<table>
<thead>
<tr>
<th></th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
<th>Scenario 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value Added Tax</td>
<td>952,000,000,000</td>
<td>1,428,000,000,000</td>
<td>1,904,000,000,000</td>
<td>1,904,000,000,000</td>
</tr>
<tr>
<td>Removing SS Paroll Tax Cap</td>
<td>133,000,000,000</td>
<td>133,000,000,000</td>
<td>133,000,000,000</td>
<td>133,000,000,000</td>
</tr>
<tr>
<td>Carbon Tax</td>
<td>123,000,000,000</td>
<td>123,000,000,000</td>
<td>123,000,000,000</td>
<td>153,750,000,000</td>
</tr>
<tr>
<td>Financial Transactions</td>
<td>78,000,000,000</td>
<td>78,000,000,000</td>
<td>78,000,000,000</td>
<td>78,000,000,000</td>
</tr>
<tr>
<td>Eliminating Preferential Taxing for Capital Gains and Dividends</td>
<td>7,000,000,000</td>
<td>7,000,000,000</td>
<td>7,000,000,000</td>
<td>7,000,000,000</td>
</tr>
<tr>
<td>Total Revenue Raised</td>
<td>$1,293,000,000,000</td>
<td>$1,769,000,000,000</td>
<td>$2,245,000,000,000</td>
<td>$2,275,750,000,000</td>
</tr>
</tbody>
</table>

**Scenario 1.** Scenario 1 comes from analysis performed by Pomerleau (2019) from the Tax Foundation with data provided by the UBI Center. He begins with a 10% VAT applied to a relatively broad base of goods and services, comprising about 66% of total GDP. He also calculated the estimated revenue to be gained by the other major sources of funding detailed by Yang. These include removing the cap on social security payroll contributions, implementing a carbon tax on companies at a rate of $40 per metric ton, a tax of .1% on certain financial transactions, and eliminating the preferential tax treatment for capital gains and dividends. He found that implementing these measures would raise $1.3 trillion, a far cry from the $2.27 trillion required to cover the Freedom Dividend (Pomerleau, 2019, Budgetary Effect, para. 2).

**Scenario 2.** Scenario 1 revealed that a 10% VAT and other measures would not be enough to cover the costs incurred, leaving over a trillion dollars to be covered. In the analysis performed by Mr. Pomerleau, the government would issue debt to cover the remaining costs. I decided to tweak the percentage of the VAT in order to determine a closer percentage needed to cover the costs. Therefore, in scenario 2, I left the rest of the data the same, but increased the VAT to 15%. This yielded an additional $500 billion, but still left a large gap to be covered.

**Scenario 3.** In scenario 3, I continued the idea of scenario 2, but instead increased the VAT to 20%, leaving a gap of $22 billion to be covered.
**Scenario 4.** In scenario 4, since there was only a small amount left to be covered, I decided to keep the VAT at 20% and to tweak the amount of the carbon tax levied on companies. In Mr. Pomerleau’s analysis, he stuck with $40 per metric ton, but since Yang proposes a starting tax of $40 per ton but an increase of $5 per ton for the first four years and then an additional 10% until the total tax is $100 per ton, I decided to calculate the revenue raised assuming a carbon tax of $50 per ton (Carbon Fee, n.d.). The resulting revenue covers the cost of the Freedom Dividend with an $8 billion surplus.

The above analytical comparison reveals that at the proposed 10% VAT, the Freedom Dividend would not be economically feasible. However, since Yang is not very detailed in the implementation for some of his proposals, he leaves room for speculation on the amount of revenue that can be raised by tweaking other revenue sources, such as the carbon tax. However, in order to fund the Freedom Dividend primarily with a VAT, the rate would need to be just over 20%. This is far above the proposed 10% that Yang advocates but is not that far from the rates imposed by other countries around the world.

**Disclaimer.** While my analysis relied mainly on the data provided by the UBI Center and the Tax Foundation, there are a number of other sources out there that have analyzed the costs of implementing a UBI plan such as Yang’s. Among these is the Congressional Budget Office, which found a 5% VAT levied on a broad range of goods and services would raise $360 billion at 5%, and $720 billion at 10% (Congressional Budget Office, 2018). Additionally, Toder and Rosenberg (2010) found that a 5% VAT on a broad range of goods and services would raise $355 billion, or $710 billion at 10% (p. 12). These studies represent the malleability in the implementation of a VAT and the corresponding revenues that could be generated given administrative adjustments during implementation.
Administrative Feasibility

We have looked extensively at the economic components of implementing a UBI in the form of Andrew Yang’s Freedom Dividend, but the other side of the coin is the administrative feasibility of implementing his plan.

**UBI Implementation.** Yang argues his unrestricted UBI is the least administratively complex way to implement such a disbursement plan (2018, p. 173). Since everyone receives the same amount, and there are no cutoffs or reductions to account for, it decreases the overall administrative complexity of disbursing the payments.

To get an understanding of the potential costs that the Department of Health and Human Services would incur in administering the UBI payments, I looked at the results of a 2016 study published by the Brookings Institute which compared a number of government assistance programs on the basis of the administrative cost and the amounts distributed for each one. Over the years analyzed, the Food Stamps Program distributed $25.8 billion with an administrative cost of $4.8 billion (ratio of 18.6%). The Temporary Assistance to Needy Families (TANF) program distributed $34.4 billion at an administrative cost of ~$4.39 billion (12.8%). The final comparison I am referencing is Medicaid, which distributed $300 billion in benefits at an administrative expense of $15.56 billion (5.1%) (Isaacs, 2008, p. 8). In comparing the previous programs, the expense ratios range from 5.1-18.6%. However, it is hard to come up with an exact expense ratio for the Freedom Dividend for a number of reasons. The first major adjustment to consider is that the Freedom Dividend would distribute considerably more in benefits than any of the existing programs. The second is that the Freedom Dividend would be much less costly to distribute per dollar paid out, since there would be no means-testing involved. Lastly, it is hard to find an exact number for the cost savings to be accrued from the decrease in administrative costs.
resulting from people opting for the Freedom Dividend over existing means-tested programs. I think it would be reasonable to assume the Yang’s plan would have an expense ratio closest to Medicare since it is the largest and least costly to implement of the programs analyzed. Assuming an expense ratio of 5%, and without consideration of the cost savings from other programs, an estimate of the administrative cost of distributing the cash payments would be $113.5 billion per year, adding a significant amount to a plan that is already over budget.

**Value Added Tax.** The other important administrative component of his plan is the value added tax. Compared to many other taxes, a VAT is simple to implement since companies keep track and document the tax on their own at each step of the process. This system is more efficient for the government since the burden is on companies to calculate and charge the tax. Plus they are incentivized to do so since they do not want to be the ones left holding the tax charges; they want to pass them down the line and get refunded for what they paid from the government (OEAD, 2018, p. 23).

Even though the VAT may be relatively simple, there are still considerable administrative setup costs to consider. Toder, Nunns and Rosenberg (2012) identified a number of expenses that would be associated with the new tax: “A VAT would require the IRS, or a new agency, to establish a new administrative apparatus, with its own forms, instructions, regulatory guidance, processing, taxpayer service, and collection and enforcement activities” (p. 29). Each of these activities would add to the price tag of Yang’s plan.

Additionally, there are some goods and services that need to be exempt in order to help support those at the lower end of the economic spectrum and prevent the regressive nature of the tax. Yang identifies groceries and clothing as such. The Congressional Budget Office (2018) also explains that a VAT tax could exclude goods and services with broad social benefits (para. 5).
They discuss preferential treatment for new residential housing, health care, and post-secondary education. In addition to selected exemptions to the VAT, some goods and services are harder to assign value to than others, especially in the digital economy (Toder, Nunns and Rosenberg, 2012, p. 11).

While the preceding exemptions are good and necessary, there are additional costs that arise when narrowing the tax base. Agha and Haughton (1996) found that the costs of implementing and ensuring compliance of VATs go up with narrower tax bases, multiple rates (preferential treatment for some goods), and exempting certain products (p. 307). This is a key consideration in implementation since Yang wants to exempt some goods, as mentioned above, and to tax luxury goods at a higher rate (Value-Added, n.d.). It is hard to determine the extent of increased costs here since his plan is relatively vague and we will not be able to get a useful understanding until he provided more specifics.

Another layer of complexity arises when considering international effects of the VAT. Implementation would not be isolated to the U.S., and there are important differences between assessing a VAT on a regional manufacturer in the U.S. and a multinational corporation operating all over the world. If countries have differences in their specific implementation of the international rules, this creates further complexities and opens the potential for tax avoidance or double taxation in some cases (OECD, 2018, p. 28). This is a particularly concerning problem considering that countries typically push back and compete for the right of taxing sovereignty when creating tax treaties. The more complex the implementation while working with other countries, the more expensive the plan will be.

The final issue arising from the VAT lies in assessing and collecting the tax. It is one thing to come up with projected numbers that a VAT would raise, but collecting the tax is very
difficult. This leads to a so called “VAT gap”, which is the difference between what countries expect to collect and what they actually do. According to Poniatowski, Bonch-Osmolovskiy, Duran-Cabré, Esteller-Moré, and Śmietanka (2019), the EU lost $152 billion in VAT taxes in 2017 (p. 19). This gap arose from a variety of causes including fraud, tax avoidance, bankruptcy, poor administrative execution, and miscalculations (p. 9). The gap is a recurring issue that the U.S. will have to consider and overcome if a VAT is used to fund the Freedom Dividend.

**Can the Freedom Dividend Do What Yang Claims?**

Yang proposes that his Freedom Dividend would have a myriad of economic and social benefits. From an economic perspective, if people have money, they will spend it. Additionally, if people have $12,000 more a year, they will more readily be able to pay their bills and cover their costs of living. In reference to Maslow’s hierarchy of needs, when these basic needs are met, people can move up the pyramid to pursue higher needs, deal with the next level of obstacles in their lives, and generally be better off.

In Andrew Yang’s (2018) book, *The War on Normal People*, he details eleven specific outcomes of the Freedom Dividend. I list them below and then group them into common themes for further analysis towards the end of this section (p. 169).

- It would be a massive stimulus to lower-cost areas
- It would empower people to avoid making terrible decisions based on financial scarcity and month-to-month needs
- It would be a phenomenal boon to creativity and entrepreneurship
- It would enable people to more effectively transition from shrinking industries and environments to new ones
Analyzing the Necessity and Feasibility of the Freedom Dividend

- It would reduce stress, improve health, decrease crime, and strengthen relationships
- It would support parents and caretakers for the work that they do, particularly mothers
- It would give all citizens an honest stake in society and a sense of the future
- It would restore a sense of optimism and faith in communities around the country
- It would stimulate and maintain the consumer economy through the automation wave
- It would maintain order and preserve our way of life through the greatest economic and social transition in history
- It would make our society more equitable, fair, and just

To examine the economic impacts of a UBI, I looked to the Roosevelt Institute study that Yang references in his book. Nikiforos, Steinbaum, and Zezza (2017) analyzed a number of scenarios in which a UBI of $1,000 was given to every American adult. The researchers found that a UBI of $1,000 a month would grow the economy by 12.56% and could increase employment by 4.5 million, but only if the UBI was financed by government debt (p. 12). The numbers are significantly less if the plan is funded by taxes, as Yang proposes. However, due to distributional effects, since poorer households have a higher propensity to use their income to consume, the economy would still grow as more of the money in the economy would be circulating (Nikiforos, Steinbaum, & Zezza, 2017, p. 7).

To analyze the claims of potential benefits relating to social outcomes, I found a variety of examples of past UBI experiments and compare the results to Yang’s claims.
In the 1970s, the Canadian government experimented with a guaranteed annual income. The Province of Manitoba implemented a program that was nicknamed the “Mincome experiments” which lasted from 1973-1979. The experiment chose 1,000 families living in the rural town of Dauphin and gave them varying amounts of income assistance based on their current income levels (Forget, 2011). The program had lost funding and was largely forgotten about until 2011 when Dr. Evelyn Forget went back to look over the data. She found that high school education rates for 12th graders in Dauphin increased significantly over the span of the mincome experiments and went back down to pre-mincome levels after it ended. She suggests this demonstrates that when students had more security about their family finances, they were more likely to continue in school (Forget, 2011, p. 291). Forget also went back over hospitalization records from Dauphin over the same timeframe and found that from 1973 to 1978, hospitalization rates decreased by 19.23% (Forget, 2011, p. 294).

In the 1970s and 1980s, the United States began experimenting with guaranteed income through negative income tax plans. There were separate trials ran in seven different states between 1968 and 1979, with guaranteed income ranging from around $17,000 to $48,000. The researchers found that there was no statistically significant decrease in labor in any of the studies except those in Seattle and Denver, which saw a 4% decrease in the employment rate (Marinescu, 2018, p. 12). Results also showed that attendance, grades, and test scores rose for children whose families received the income (Marinescu, 2018, p. 13).

In 1993, Duke University began a study tracking the mental and emotional health of white rural children in North Carolina compared to American Indian youth. Partway into the study, the government of the Eastern Band of the Cherokee Nation approved the construction of a casino in their territory, and twice a year, each adult of the tribe was given a portion of the
Analyzing the Necessity and Feasibility of the Freedom Dividend

earnings. This was an interesting series of events since it allowed the scientists to analyze the impact that the increased income had on different elements of the children of the tribe’s development. Among other things, the scientists studied the effects of the unconditional income on employment and working hours and the effects on health, education, and other social outcomes. Akee et al. (2010) found no impact on the number of hours worked, found an increase in educational attainment in children whose family received the money, and found a reduction in self-reported criminal activity of 22% for children aged 16-17 (as cited by Marinescu, 2018, p. 16). Costello et al. (2010) found increased mental health outcomes among recipients and that the children whose families received the payments were significantly less likely to develop alcohol or cannabis dependencies (as cited by Marinescu, 2018, p. 17).

In 1976, the Alaska Permanent Fund was established with money the state had received from oil royalties and sale proceeds. Every year, 10% of the cash flows from the past five years are distributed from the fund to all residents of Alaska who have lived there for more than one year. Jones and Marinescu (2019) compared Alaska’s employment compared to a number of other control states and found that “The unconditional cash transfer thus has no significant effect on employment, yet increases part-time work” (p. 24). This is an important element to consider since many consider guaranteed income to incentivize less work.

With $1 million provided by the Economic Security Project, Stockton, California, is currently providing 125 families living at or below the median income line $500 a month for 18 months to see how recipients spend the money (Beam, 2019). Mayor Stubbs committed to providing data throughout the experiment to help persuade other lawmakers as to the benefits of such a program. The first set of data was released in early October of this year, and the results provide some insight into how the money has helped recipients. It is important to note that 40%
of the funds were taken out as cash, so the researchers relied on self-reporting to account for the difference. In any case, here is what they found: over the first eight months of the program, 40% of the money went to food, 24% went to sales and merchandise, 11% went to utility bills, and 9% went to auto repairs and fuel (Beam, 2019, para. 11). These findings demonstrate two important things 1) The money received went back into the economy through consumption, indicating money distributed with a UBI would circulate through the economy and increase demand and 2) The majority of the money went to food, clothing, and bills, indicating the need families have for money at this level.

From January 2017 to December 2018, 2,000 unemployed Finns received a monthly payment of $634 (Reuters, 2019, para. 1). The purpose of this experiment was to see if the money would help the unemployed find a job and support them while they had insecure employment. The experiment found that those receiving the benefits were not any more likely to find a job than the control groups (Reuters, 2019, para. 7). This was not entirely unexpected, however, since money itself does not equip people with valuable skills necessary to find gainful employment. However, recipients did report being happier and having better well-being in every way (Reuters, 2019, para. 6)

Now that we have looked at a variety of examples of UBI, I have narrowed down Yang’s points into the three major categories that he emphasizes will come from a universal basic income. I list them below with summaries of what the above studies found.

First, he maintains that putting an additional $1,000 in people’s hands will spur economic growth. His idea checks out based on the findings of Nikiforos, Steinbaum, and Zezza (2017) which indicate that economic growth would result from a UBI plan. The Stockton study provides a real-life application of how people spend money. The people in Stockton spent most of their
 money, which supported the grocery stores, department stores, and other businesses around them.

Secondly, Yang holds that the Freedom Dividend would help cover people’s basic needs, enabling them to be healthier, attain higher education, and make better decisions. The Canadian mincome experiments support this, as reflected in the nearly 20% decrease in hospitalization rates in Dauphin. Additionally, from the Eastern Band of the Cherokee Nation, we find that the increased income led to decreased substance dependencies and better mental health. From the Finland study, we notice the boost in mental health and wellbeing in other domains of life, reflecting the holistic impacts that unconditional money transfers can have on recipients.

Lastly, Yang says that the Freedom Dividend would boost creativity and entrepreneurship, allowing people to take risks and pursue things they are interested in. The only study that provides insight into this was the study of the Finnish program, where one of the recipients had the time and relieved pressure to publish several books. He is quoted as explaining, “If people are paid money freely that makes them creative, productive and welfare brings welfare. If you feel free, you feel safer and then you can do whatever you want. That is my assessment” (Reuters, 2019, para. 24). This is by no means conclusive evidence, but they are indeed powerful words that support Yang’s claims.

**Problems Identified**

The primary issue arising from Andrew Yang’s plan stems from the lack of funding that was revealed in the analysis of the economic feasibility. The government ran a $779 billion deficit in 2018 (Pramuk, 2019, para. 1). According to the calculations from above, even with Yang’s proposed sources of revenue, the plan could increase the annual deficit by as much as $1.3 trillion, a 67% increase. It is hard to justify such a plan in the face of such mounting
government debt. Thus, the key to fiscal feasibility is ensuring the funding without increasing government debt. If the government cannot cover the cost with tax revenues, they will borrow money, and if they continue to run a deficit and cannot cover the costs of the debt, they may end up printing money, leading to problems of hyperinflation.

The next major problem with the Freedom Dividend is the issue of inflation. The argument here flows from the basic economic principles of supply and demand. When every consumer suddenly has an additional $1,000 to spend each month, consumer buying power goes up, and the demand for goods and services in the economy go up. Yang proposes that this increased buying power would be good for the economy since people will be buying more goods and services. Although this is true, the other side of the coin is that as demand shoots up, suppliers can raise their prices in step with that demand. In his book, Andrew Yang acknowledges it is likely that some companies will increase their prices in response to people having more buying power (Yang, 2018, p. 171-172). However, he argues that competition between firms will keep prices down and furthermore, that technology will continue to decrease the prices of most goods where it can do so (Yang, 2018, p. 182). I am not entirely convinced here, since, at least in the short term, technological improvements will not be adjusting to the instantaneous increase in buying power that would stem from the Freedom Dividend.

Another area that I think puts a hole in the current Freedom Dividend plan, and one that Yang has largely been quiet on, are the tax implications. Everyone will be receiving $1,000 a month, but they will not all be receiving $1,000 of increased buying power. The increased income would require special rules in taxation. He has not identified if it would be taxed in a similar way to Social Security, or if it would be treated as ordinary income. Assuming it is taxed as ordinary income, taxpayers with household income less than $24,000 would be exempt, so
Analyzing the Necessity and Feasibility of the Freedom Dividend

they would not have any taxes. However, after $24,000 of income, individuals would be taxed at their marginal tax rate. High income taxpayers could be taxed up to 37%, at which point they would receive $12,000 but only really get $7,600 of buying power after $4,400 of taxes are taken out. This effect has been left out of Yang’s current discussions, but if the administration wants the dividend to be tax exempt, they would need to add legislation along with the plan--legislation they have yet to propose.

An argument against the value added tax is that it is a flat tax, making it regressive as it disproportionately falls on lower income people who consume a higher percentage of their income. Andrew Yang counters this argument with two points. First is that since people will be receiving $12,000 a year, only those who consume more than $120,000 a year are worse off in the end (Yang, 2018, p. 171). Secondly, Yang proposes some exemptions that would reduce or eliminate the taxes on goods that constitute a large portion of lower income people’s incomes.

A concern with an unrestricted universal basic income is that poor people would spend the money in irresponsible ways. This mentality is the rationale behind means-tested benefits. However, I found two studies that contradict the premise of this argument. The first is the Stockton UBI experiment that I summarized in the last section. The study found that over the first eight months of the program, 40% of the money went to food, 24% went to sales and merchandise (attributable mostly to clothing and essentials), 11% went to utility bills, and 9% went to auto repairs and fuel (Beam, 2019, para. 11). This finding indicates that families who need the money have the best understanding of where that money should go. The money was not spent frivolously, but instead went to essentials. The other study was conducted by Evans and Popova (2014) of the World Bank, in which 19 quantitative studies of cash transfers in Latin America, Africa, and Asia were analyzed to see the impact on consumption of temptation goods.
Analyzing the Necessity and Feasibility of the Freedom Dividend

The researchers found that “...almost without exception, studies find either no significant impact or a significant negative impact of transfers on expenditures on alcohol and tobacco” (Evans & Popova, 2014, p. 3). Given the breadth of their research across the world, the evidence seems strong that the conception of poor people as poor decision makers is at least partially unwarranted, and an unrestricted UBI could affect great change in the lives of recipients.

In a similar vein to the last point, there is debate as to whether instead of giving people money directly, the government should use the money to develop and support government assistance programs that would ensure the resources are allocated effectively. However, my last point exposed that people receiving money typically understand the best uses for that money. Furthermore, the more the government is involved, the more expensive and sluggish the execution of goals becomes. Instead of hoping that the money will be spent well, the Stockton study revealed that all 500 of those dollars went to families’ direct needs.

Another argument against UBI is that if people are receiving money, they will become lazier and work less. Yang counters this argument by explaining that $12,000 a year is a supplement to work, not a replacement. $12,000 a year will be a boost to help cover basic needs, but it still allows for the incentive to go out and work to earn a decent living (2018, p. 182). Academic research supports him here. As explained in the preceding section on past experiments, when analyzing the Alaska Permanent Fund, Jones and Marinescue (2018) found that the program did not reduce employment (p. 2). Additionally, Banerjee, Hanna, Kreindler, and Olken (2017) investigated cash transfer programs from seven different governments across the world to determine if cash transfer programs increased laziness, as policy debates sometimes suggest. They found that, “Across the seven programs, we find no systematic evidence of the cash transfer programs on either the propensity to work or the overall number of hours worked,
for either men or women” (p. 157). This is a strong rebuttal to a common argument against the plan.

While going through all the research on Yang’s plan, one thing was in the back of my mind: why are rich people getting money too? It seems inefficient and unnecessary that Bill and Melinda Gates would receive more money than a poor single mother who must provide for three kids. This is a hypothetical situation, but it illuminates the way that I believe the Freedom Dividend sacrifices effectiveness for efficiency. If the UBI is to help those in need and who have been left behind by the current economic and social system, I feel that those who need it most should receive the most. Additionally, when we are talking about trillions of dollars in cost, we should be more prudent in the distribution of the funds. Will $12,000 a year really help the millionaires of the country? Debatable. However, that $12,000 could have been better used if it had gone to a family where the money would significantly increase their standard of living. With the high price tag of the program and critical issues it hopes to address, I do not think we should be looking for the easy way.

Finally, when considering the examples used in my analysis, one of the big problems with all of them was their limited scope. Organized mostly as trial runs, the results may not extrapolate so easily to the hundreds of millions of people that the Freedom Dividend would impact. We need larger sample sizes, the studies investigated so far are not representative of what would really happen if everyone in the U.S. received $12,000 a year.

**Discussion and Conclusion**

From my research and analysis, I have found that Andrew Yang’s plan for a Freedom Dividend may be necessary and helpful, but it is also economically infeasible in its current state. However, as technology continues to improve, these issues are not going anywhere. Even though
Yang’s plan is not feasible or complete right now, these are conversations we should be having and ideas we need to be investigating moving forward. There are a few important studies to keep your eyes on in the near future. Firstly, the Stockton trial researchers from the University of Tennessee and the University of Pennsylvania plan to study and release data on the physical and mental health effects of the transfers later in the program. Secondly, the government of the Indian state of Sikkim has announced plans to implement a UBI for each of its 611,000 citizens by 2022 (Ray, 2019, para. 2). This will be the largest rollout of a UBI plan to date and will provide invaluable insight into the effects of a UBI at a macro level. There may be varying perspectives out there, but as more people think about these issues and solutions, it sheds more light on the subject. The more people think about it, the closer we move to a resolution that will yield the best outcomes for our country’s future. So, what would you do with $1,000 a month, and what would your friends do with it? Go ask them and see what you find.
References


Analyzing the Necessity and Feasibility of the Freedom Dividend


https://doi.org/10.1787/ctt-2018-en


https://docs.google.com/document/d/1LDVjJCXe2owfVLTEhoTzagOoz53XMMF9eP-uYizubX-8/edit?usp=sharing