Policy Brief: Implementing Nationwide Universal Basic Income

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Introduction

One of the first to suggest a universal basic income was philosopher and political activist Thomas Paine in 1797. He advocated for a "ground rent" of £15 for everyone over the age of 21 and £10 for everyone over the age of 50. He wrote that "every person, rich or poor" should receive benefits to "prevent invidious distinctions."[1] Another advocate for universal basic income was Rev. Martin Luther King Jr., who started an initiative called the Poor People's Campaign. The campaign focused on economic justice and asked the federal government to pass a 30 billion USD anti-poverty bill which would have provided a guaranteed basic income for all Americans.[2] Adam Przeworski, a current professor of political science at New York University, said, "certainly making people toil unnecessarily, just so they can be paid something without others complaining and so they will not hang around with nothing to do, is to substitute one deprivation for another."[3] According to the United Nations, more than 780 million people across the world live below the international poverty line and more than 11% of the world's population lives in extreme poverty.[4] One of the predominant work environment themes we see going unaddressed in the 21st century is the increased automation of construction, services and

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[1] Parlier, S. (2019, June 27). Thomas Paine on Universal Basic Income. Retrieved from https://heavy.com/news/2019/06/thomas-paine-ubi/

[2] Aron, N. R. (2018, April 5). As one of his final acts, Martin Luther King fought for a basic income for all. Retrieved from https://timeline.com/mlk-wanted-universal-basic-income-as-his-last-campaign-b0ba61aa77b8

[3] David Calnitsky, Jonathan P. Latner, Basic Income in a Small Town: Understanding the Elusive Effects on Work, *Social Problems*, Volume 64, Issue 3, August 2017, Pages 373–397.

[4] United Nations. (n.d.). Ending Poverty. Retrieved from https://www.un.org/en/sections/issues-depth/poverty/

manufacturing coupled with the advancement of Artificial Intelligence (AI) which has "led to the displacement or under-employment of millions of workers with adverse impacts on wages, income and wealth inequality, and social and political stability."[5] Universal Basic Income (UBI) is a way to protect workers from the shift to automation and AI. While most basic income experiments focused on mostly towns, cities or provinces, it is possible to implement UBI across a nation using biometrics and a government issued digital currency.

Background

One of the largest basic income programs is ongoing in the state of Alaska in the United States, and was established in 1980. The Alaska Permanent Fund Dividend (PFD) program is designed to "save a portion of nonrenewable oil revenues for future public needs… [and] allocate at least one-fourth of royalties and other payments" the state gained from its role as resource owner of the Permanent Fund.[6] The amount residents receive each year varies, with most somewhere between 1,000 USD and 1,500 USD. This is considered taxable income at the national level, which would not be the case under a proper national UBI program. Compared to basic income studies, the PFD program is unique in that it's available to virtually everyone who lives in Alaska except for recently convicted or incarcerated individuals. As we transition from fossil fuels however, the PFD will have to either adapt to funding from renewable energy sources or cease to exist. This problem would not affect a government UBI program, as it could have funding from value added taxes (VAT), financial transaction taxes, carbon fees, or higher tax rates on multinational corporations. A UBI program would reduce the need for government welfare programs such as the United States' Supplemental Nutrition Assistance Program (SNAP), since individuals would be more likely to be able to buy nutritious food. Finally, because UBI programs infuse communities with money they inherently increase the local

[5] Gilbert, R., Murphy, N. A., Stepka, A., Barrett, M., & Worku, D. (2018). Would a basic income guarantee reduce the motivation to work? an analysis of labor responses in 16 trial programs. Basic Income Studies, 13(2).

[6] Berman, M. (2018). Resource rents, universal basic income, and poverty among Alaska's Indigenous peoples. World Development, 106, 161–172.

velocity of money, which helps local economic growth, since almost 50 percent of money that is spent locally stays within the community.[7]

Digital currency has been making strides in the last few years. There are over 1600 digital currencies on the market right now and more are created every day. Private companies are experimenting with them; in June 2019 Facebook announced their digital currency, Libra, will be released some time in 2020. The Chinese government — which controls the second largest economy in the world — is expected to issue their own digital currency in late 2019 or early 2020. This will enable frictionless transactions with fewer intermediaries taking fees for processing. As sovereign countries move toward digital currencies, it is important to note that they can also keep track of digital identities thought integrated systems called Identity Management (IdM) Systems. These IdM Systems often use multiple forms of biometric information to ensure identity security.

The use of biometric technology is essential for the implementation of UBI. Biometric systems ensure the ability to identify people using their physiological or behavioural differences. These kinds of systems "do not rely on reproducible information, and therefore they are not liable to risks characterizing passwords and keys. Many smartphones already have this kind of technology, allowing their users to unlock their phone with facial recognition or a fingerprint scanner. Fingerprints, facial recognition and DNA are all methods that can be used to safeguard the UBI program from bad actors, and using multiple combinations of biometric confirmations will allow further protection.

Recommendations

- Distribute chipped passports with a PIN number to every resident in the country while noting or cross referencing citizenship, voting eligibility, etc and collecting biometric information
- Issue a government-backed digital currency tied to fiat (paper) currency at a ratio of 1:1

[7] The Multiplier Effect of Local Independent Businesses. (n.d.). Retrieved from https://www.amiba.net/resources/multiplier-effect/.

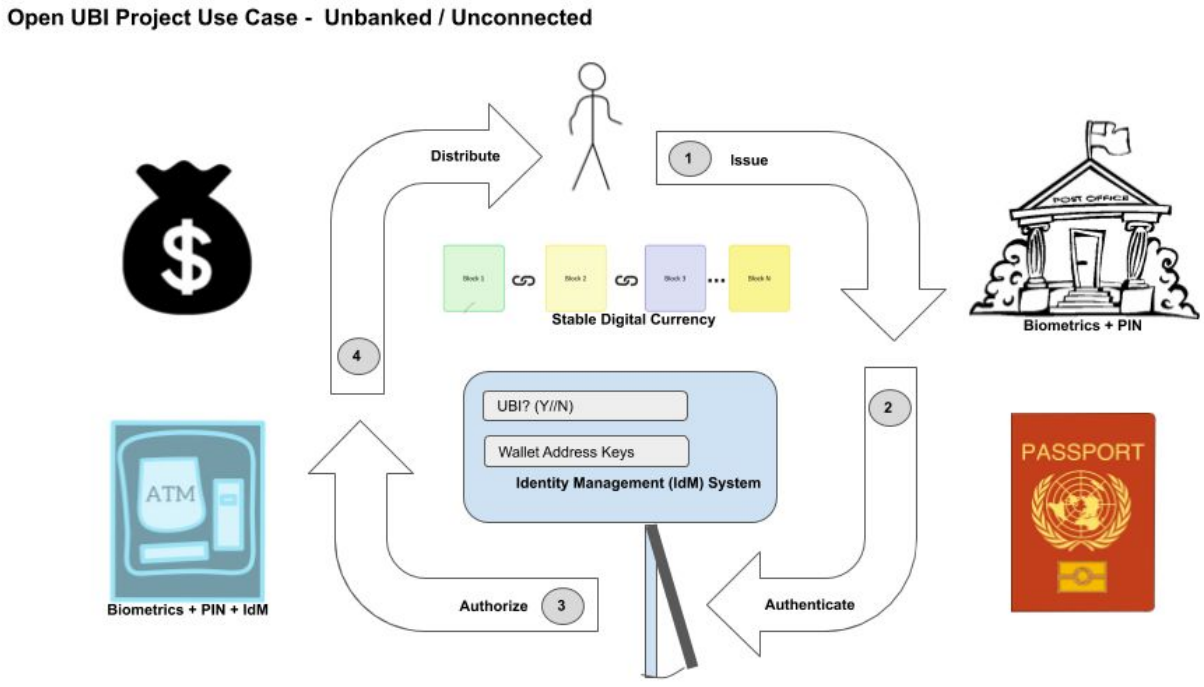
- Create an IdM system to store and manage UBI eligibility and biometric information
- Implement ATM-like kiosks designed for distributing UBI payments and upgrade Point of Sales (PoS) systems to allow direct transfer of digital currency to businesses for goods and services
- Determine the monetary amount of basic income needed to equal or exceed the nation's current poverty guideline for an adult living in the country, allowing for basic needs without decreasing the need to work
    - For example, in 2019 the poverty guideline in the United States was 12,490 USD annually per adult; dividing the annual amount into monthly payments, the minimum UBI payment for the US should be 1,040 USD[8]
- The UBI payment should be excluded from income based taxes and adjusted annually to account for all types of changing economic conditions

Discussion

When implementing a basic income program, most studies have singled out individuals for basic income, but it is critical that we note how UBI differs from Basic Income (BI). A Basic Income program identifies who gets unconditional income, but Universal Basic Income identifies who does not get unconditional income. One of the most difficult parts of a UBI program is distribution: the easiest way to deliver funds to citizens while preventing exploitation of the system. A combination of biometric technology, chipped passports and digital currency will allow us to achieve this goal using existing solutions in a slightly different configuration. The first step to implementing UBI is to give every person residing in the country — regardless of citizenship — a passport with an embedded chip like those in many credit cards today which is tied to their biometric information. When the passport is issued, the government gathers and crosschecks information such as citizenship, eligibility to vote, veteran status, disabilities, and if the individual has committed a felony. The person then establishes a PIN number to sign over the digital wallet secret key, keeping their key (private from even the government) stored in the IdM System, further preventing fraud by adding an additional layer of authentication. The government's IdM system also securely contains biometric information and provides the authorization checks for different services with the government like those required to receive

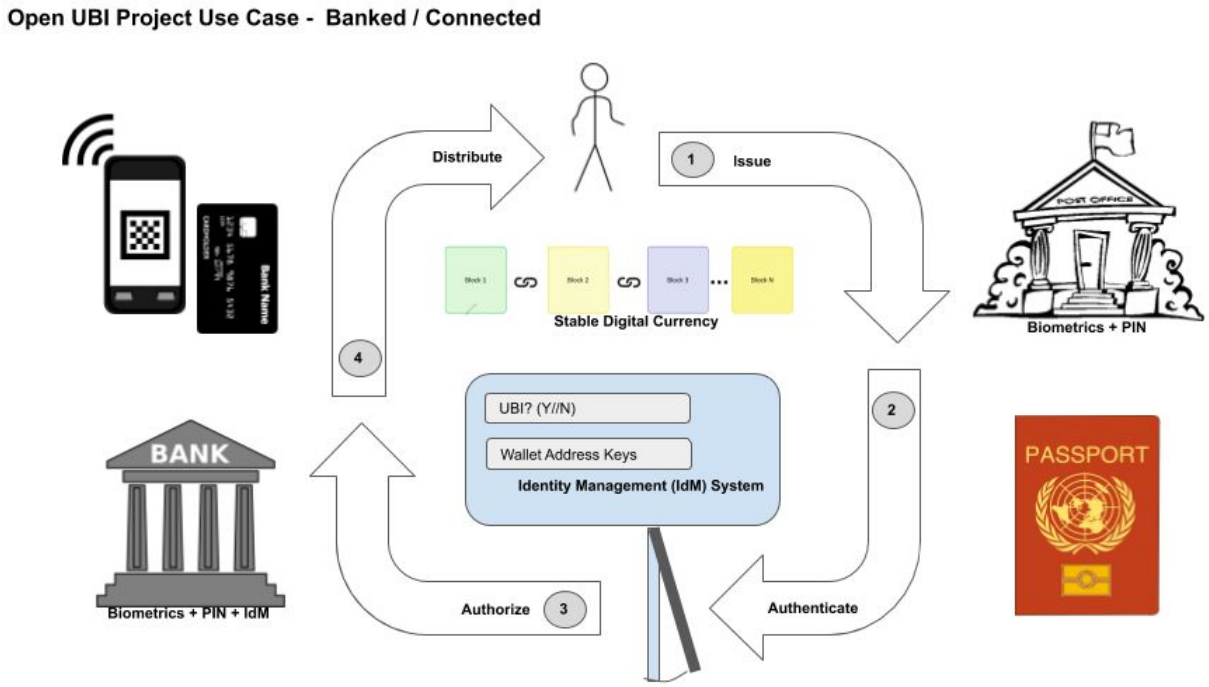
[8] 2019 Poverty Guidelines. (2019, May 22). Retrieved from https://aspe.hhs.gov/2019-poverty-guidelines

UBI.[9] Depending on each country's current IdM system, it will be up to the country itself to implement specific policies that would meet the requirements of multiple biometric authentications needed for the authorization of UBI funds. The next step is the creation of a government-backed digital currency which is tied to the country's fiat (paper money) at a ratio of 1:1 and generates a unique digital wallet address to each approved chipped passport so it can be used for UBI distribution deposits. Secret keys for each person's wallet will be encrypted and stored in the government's IdM system with a combined key that includes the individual's PIN. Because the national government can issue the digital currency on a blockchain or distributed ledger of its choice, it will enable them to lock the accounts of bad actors violating Know-Your-Customer and Anti-Money-Laundering (KYC/AML) regulations. When it comes to the actual distribution of UBI funds to each person, the government will simply fund the wallet addresses tied to eligible UBI recipients by making a deposit to their secured wallet. Once that is completed, there are several ways to exchange the digital currency.

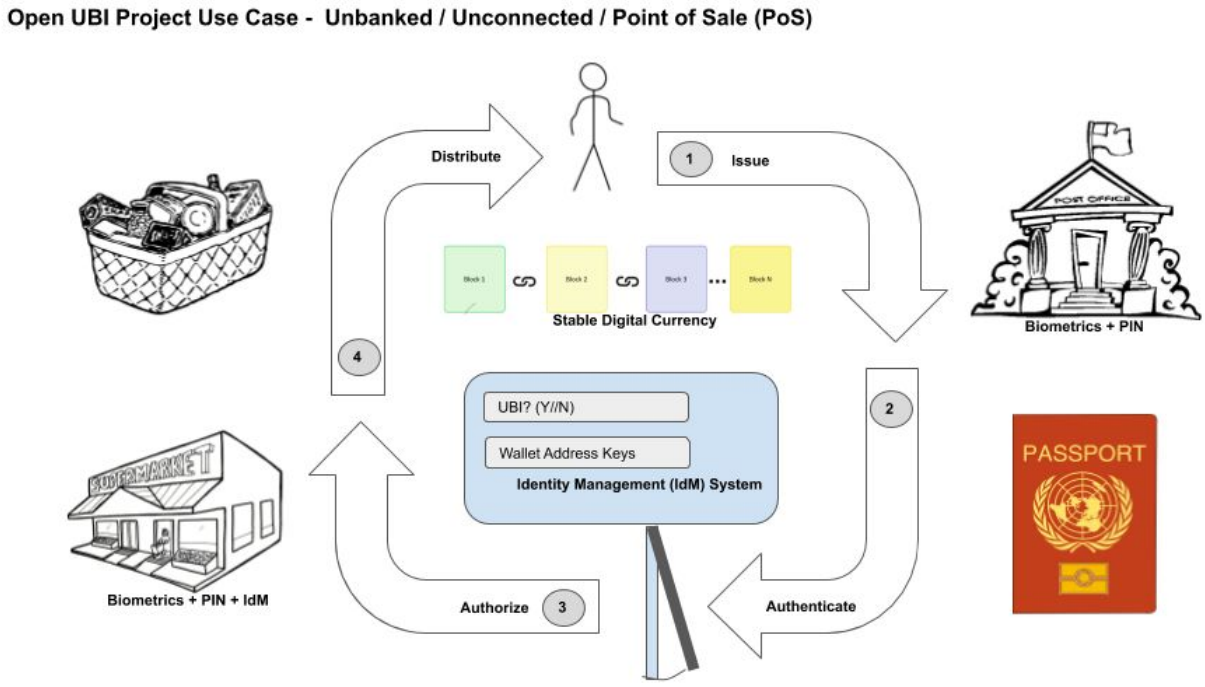


[9] Other uses for chipped passports could include voting, tracking gun ownership or even tracking human health conditions

For those who do not have a bank account or seek additional consumer privacy, ATM-like kiosks available in common places like a federal post office would allow them to make a partial or full withdrawal of UBI funds in fiat. The kiosk would access the individual's digital currency wallet upon validation of the PIN using the chipped passport and biometric information.



For those who have bank accounts, a full or partial UBI distribution could be made by direct deposit after going to a kiosk and entering bank routing information. The kiosk would set up a forwarding payment destination with the bank information, biometric data and the PIN number.



To further ease the use of UBI funds, PoS systems could be updated to accept the government's newly issued digital currency. The PoS devices would need to be certified by the government to guard against fraud, and it would scan biometric information and require a PIN number before sending funds to businesses providing goods or services.

Numerous studies have found positive effects of basic income even if not implemented universally. With the Alaska PFD, the yearly payments have had significant effects on the residents of Alaska, particularly its indigenous population. Since 1990 poverty rates for Alaska Native seniors have dropped dramatically:

> Considering only non-PFD income, poverty rates for rural Alaska Natives age 65 or older would have fallen by nearly 50 percent… Including PFD income, the decline was even larger from 20.1 percent to 7.6 percent, or 59 percent. If the PFD were eliminated, poverty rates for rural Alaska Native seniors would increase by 72 percent.[10]

This study also found that the PFD reduced deep poverty among rural Alaska Natives as a whole by 38% over the period 2011-2015. However, looking at the cost in terms of income only ignores

[10] Berman, M. (2018). Resource rents, universal basic income, and poverty among Alaska's Indigenous peoples. World Development, 106, 161–172.

"improvements in productivity and savings in health care costs arising from improved physical and mental health."[11] A study in Namibia had phenomenal results, including "significant decreases in household poverty, child malnutrition, underweight children, household debt, crime… [as well as] increases in economic activity, access to medication and healthcare, school attendance and household savings."[12] Some skeptics of UBI predicted increased alcohol consumption, but people receiving UBI drank the same as typical Namibians. Another positive effect was an increase in labor-effort responses, which means people receiving basic income worked more. This is a striking contrast to Negative Income Tax (NIT) experiments which often find decreases in labor effort. A project in India had similar results. The researchers saw significant decreases in illness, child labor and household indebtedness while increases in food consumption, medical treatment as well as school attendance and performance. Women transitioned into different occupations, and some already working one job acquired a second one. Recipients invested in self-employment activities.[13] Like the Namibian study, they found that people who received basic income payments drank alcohol at the same rate as those who did not receive payments.

A neoclassical-based economic counterargument to a UBI program is that people act in self interest and thus would be unwilling to pay for a stranger's basic income. However, "people vote, donate blood, engage in acts of heroism, and refuse to defect in single-play prisoner's dilemma games. None of this would be possible if people were only motivated by self interest."[14] Another argument is that it will reduce the labor effort so substantially that the government wouldn't be able to collect enough in taxes to fund the UBI program. A Canadian study in Dauphin, Manitoba aimed to find the effects of a UBI program which "simulate[d] a delivery and administration system where costs, community participation and experience would resemble, at

[11] Berman, M. (2018). Resource rents, universal basic income, and poverty among Alaska's Indigenous peoples. World Development, 106, 161–172.

[12] Widerquist, K. (2018). *A Critical Analysis of Basic Income Experiments for Researchers, Policymakers, and Citizens*. Springer International Publishing.

[13] Widerquist, K. (2018). *A Critical Analysis of Basic Income Experiments for Researchers, Policymakers, and Citizens*. Springer International Publishing.

[14] Lewis, M., Pressman, S., & Widerquist, K. (2005). The Basic Income Guarantee and Social Economics. *Review of Social Economy, 63*(4), 587-593.

the community level, a Canada-wide program."[15] Dauphin was selected because it reflected provincial averages for factors like population growth, average income and family size. It found that a modestly-sized basic income generated an 11.3% reduction in labor market participation among participants, 30% of which is caused by social interaction effects, far from the social disintegration predicted by critics. Young and single-headed households were more likely to leave the labor market rather than dual-headed households, but "youth and singles were more likely to be: (1) considering education or training; (2) single parents engaged in care-work activities; or (3) elderly or in poor health."[16] Additionally, when people's basic needs are secured outside the market, they can invest time in important activities such as care work, education, community engagement or artistic efforts. These alternative activities are highly productive within society and improve collective wellbeing, but conventional wealth measures are unable to determine their value as sources of wealth.[17] Another study which examined labor responses across 16 trial UBI programs found that, when using a 40-hour workweek as a standard, 93% of findings support the prediction that a Basic Income program would have a limited impact on work activity when the criteria are set to between 2.1 and 5% decline in labor force participation or less than 1 to 2 hours of reduction in a 40-hour workweek.[18] These results are also consistent with work motivation theories and research that demonstrates individuals are psychologically fulfilled by work-related activities and motivations for work extend beyond financial rewards.[19] Another possible counterargument is that it would be difficult to determine who is qualified to receive basic income and who is not, and thus would be open to fraud and bad actors. Assigning a chipped passport tied to biometrics for every person residing in the country would allow governments to record information like citizenship and eligibility for UBI and only designate digital currency wallet payments to passports eligible for UBI. Combining a recent photo,

[15] David Calnitsky, Jonathan P. Latner, Basic Income in a Small Town: Understanding the Elusive Effects on Work, *Social Problems*, Volume 64, Issue 3, August 2017, Pages 373–397.

[16] David Calnitsky, Jonathan P. Latner, Basic Income in a Small Town: Understanding the Elusive Effects on Work, *Social Problems*, Volume 64, Issue 3, August 2017, Pages 373–397.

[17] David Calnitsky, Jonathan P. Latner, Basic Income in a Small Town: Understanding the Elusive Effects on Work, *Social Problems*, Volume 64, Issue 3, August 2017, Pages 373–397.

[18] Gilbert, R., Murphy, N. A., Stepka, A., Barrett, M., & Worku, D. (2018). Would a basic income guarantee reduce the motivation to work? an analysis of labor responses in 16 trial programs. Basic Income Studies, 13(2).

[19] Gilbert, R., Murphy, N. A., Stepka, A., Barrett, M., & Worku, D. (2018). Would a basic income guarantee reduce the motivation to work? an analysis of labor responses in 16 trial programs. Basic Income Studies, 13(2).

biometric information and a PIN number with highly-secure digital currency wallet addresses will make it difficult for bad actors to scam recipients.

An important reason activists advocate for UBI is because "cognitive and immaterial labor tends to spread over the whole of social time and erode[s] the usual borders between labor time and 'free time,'" and this labor is difficult to measure quantitatively. This could also be interpreted as "underground labor," part of a forced economy.[20] Social labor is a productive contribution to society, but because it escapes the traditional criteria of measuring labor monetarily, it is unpaid labor. A UBI program would allow governments to reimburse their citizens for the unpaid — but integral to society — social labor they perform every day. It also "protects everyone from destitution without the overhead costs, humiliation and many of the disincentive efforts of the current conditional wealth system," ensuring everyone a small amount of money in a crisis, while being structured so that recipients are always better off earning more privately.[21]

Conclusion

As automation and artificial intelligence improve, they will eventually take on jobs that were once thought only to be possible through human labor and intelligence. A UBI program would allow governments to put a safety net under their constituents in case they lose their jobs for this or other reasons. Implementing UBI on a national level is a large undertaking, but one that can be done securely using chipped passports, digital currency and biometric information. Best practices referenced here will need to be adapted for each individual country based on circumstances, and should be evaluated frequently to account for technological and societal changes.

[20] Monnier, J., & Vercellone, C. (2014). The foundations and funding of basic income as primary income. *Basic Income Studies, 9*(1-2), 65-69.

[21] Lewis, M., Pressman, S., & Widerquist, K. (2005). The Basic Income Guarantee and Social Economics. *Review of Social Economy, 63*(4), 587-593.