



## **Good Dollar Experiment**

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**Abstract:** In this short position paper, we evaluate relevant tendencies in global economic trends and discuss the application of redistributive monetary policy as fiscal stimulus. We review the historical antecedents and present literature on universal basic income (UBI) and related policy proposals. We present the research agenda and political position for the Good Dollar experiment: building open-source solutions for the practical implementation of UBI policy with blockchain technology.

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## **Introducing the Good Dollar Experiment**

The Good Dollar experiment is a research programme dedicated to the study of universal basic income (UBI) and income inequality. The principle vision of the Good Dollar experiment is the exploration of blockchain technology for the practical implementation of UBI policy. In this short position paper, we explore the historical origins of UBI policies, survey contemporary empirical studies and evaluate concerns raised by scholars and observers. We position the Good Dollar experiment and elaborate on its vision, long-term objectives, and research agenda.

## **Introducing Universal Basic Income**

The concept of broadly applicable redistributive fiscal policies – known collectively as citizen’s income, unconditional income or, most recently, the ubiquitous term universal basic income (UBI) – has captured the imagination of academics, public personae and policy makers. [56] UBI is a widely applicable fiscal policy in which all citizens, regardless of economic standing or civil status, are provided unconditionally with periodic cash payment. While a majority of the Organisation for Economic Co-operation and Development (OECD) countries have experimented with small-scale, targeted welfare programmes, none have hitherto made unconditional payments a fundamental part of their offering. The rising popularity of these programmes in contemporary discourse reflects a rapidly changing political landscape. An inexorable upward tendency in both income and wealth disparities, following growing trends of unemployment and stagnation in productivity growth, marks a critical juncture in global economic development. Following long-term trends for outsourced production and workforce automation, [3, 19] observers across the board caution against the consequences of political polarisation, fuelled by asymmetric unemployment patterns and

stagnating growth. UBI policies have been aimed at mitigating the economic effects of income and wealth inequality, traditionally. In recent years, this application has become even more relevant considering the rising inequalities reported in both developing economies and OECD countries. [19, 26, 54, 60]

### **Historical Antecedents for Unconditional Payments**

The general notion of an unconditionally guaranteed source of income owes theoretical antecedence to a broad array of thinkers. Commentary has been made by luminaries in the history of economics, politics, and beyond. In this section, we review the central tenets of the notion of a 'universal' basic income subsidy from an historical perspective. The concept of an unconditional citizen's income can be traced all the way back to the turn of the 17th century in the political writings of Thomas Paine, [7, 51] and has fluctuated in and out of the public sphere since. The first record documenting a large-scale implementation is the Speenhamland system: a practice of economic relief for the poor that was adopted over much of England following a decision by local magistrates at the Pelican Inn, Speenhamland, near Newbury, Berkshire, on May 6, 1795. In addressing increasing rural poverty, the Justices of the Peace in Speenhamland voted to tie the weekly wages of the labouring population to the price of a loaf of bread and the size of a family, in the attempt of providing a minimum level of subsistence for the parish. [7]

### *In the Shadow of Speenhamland*

This political gesture by the local magistrates has been interpreted by a number of scholars, perhaps most meticulously by Austro-Hungarian economic historian Karl Polanyi in his seminal work *The Great Transformation* (1944). [54] Polanyi argues that, in the absence of a labour market, employers will simply lower wages correspondingly. As such, the Speenhamland system effectively impoverished the population by producing a downward pressure on real wages caused by a de facto displacement of fiscal responsibilities from the employer to the state. Lacking the capacity to unionise in the face of an opaque compensation system like the poverty law, he argues, the scheme effectively installed a new income ceiling and further decreased productivity. While Polanyi's work is not often linked to a significant impact on fiscal or monetary policy, his Speenhamland analysis is said to have had a somewhat curious impact on Richard Nixon's administration's 1968 fiscal reform. A crucial part of the administration's "family assistance plan" was a guaranteed annual income plan for impoverished families. [43] Although the plan was ultimately rejected in the United States Senate, president Nixon was reportedly swayed to reconsider the unconditional income component at the 11th hour, thanks to a memo detailing Polanyi's historical analysis. [7, 51] Polanyi's critique echoes the Marxist narrative presented in the first volume of the German philosopher's *The Capital volume 1(1867)* [39]. Here, Marx argues that the unilateral wage reductions observed at the time, effectively shifts the cost of production from the farmers to the parish. While the Speenhamland poverty system has been historically associated with diminishing productivity and decreasing wages, recent publications submit a conflicting evaluation, citing new and detailed empirical evidence. Historians argue that an economic contraction in England after 1815 is likely to have been intensified by a return to the gold standard, increasing agricultural unemployment and rural poverty. [7] The implementation of bread scales in rural England was not

widely implemented and did, in fact, affect local fiscal development positively, in the years following the Napoleonic Wars. A number of factors, unknown to the 20th-century scholars like Polanyi, have since been shown to have exercised a significant impact on wealth allocation and fiscal climate of the area, including agricultural crises and economic depression. [7,] While historians argue that the Speenhamland affairs have been unjustifiably generalised by the 20th-century scholars, their evaluation of the events is symptomatic of a more general ideological discussion. Disregarding the empirical merit of Polanyi's analysis of the sources available at the time, his work can be interpreted as a counterargument to the contemporary Austrian economists Ludwig von Mises and Friedrich Hayek, against whom Polanyi directed large parts of his critical work in economic anthropology. [39, 7] Being personally influenced by post-war socialist ideology, Polanyi sought to challenge the Austrian view of the Speenhamland system, as a confirmation of the damaging consequences of state-interventionism.

### *From Vienna to Chicago*

A logical consequence of the neoclassical view on economics, as presented by Mises and Hayek, is the notion that any state-sponsored intervention is bound to depress the pure efficiency of the market. This view, now widely associated with neoclassical economics, has exercised a significant impact on OECD fiscal policy since the move away from Keynesianism, which succeeded the stagflation years in the 1970s. [33, 62] The Austrian school of economics, founded in 1871, was instrumental in the development of the influential American economist Milton Friedman's views on individual liberty and the free market. Extending the Hayekian school of thought, Friedman held several views on redistributive fiscal policy throughout his career. Most famously, his negative income tax certainly shares characteristics currently associated with contemporary UBI

programmes. Any individual, Friedman maintains, should be entitled to receive a viable minimum income, with no strings attached. In this policy, presented in the 1962 book, *Capitalism and Freedom*, a notional threshold is set on an annual basis. Taxpayers will be liable for any additional income above the threshold, while low earners will be subsidised residually until their aggregate earnings reach the threshold. While radical, these novel ideas took hold of public imagination and earned Friedman a place in the spotlight, a platform he readily used to influence policy.

While Friedman's work remains influential in contemporary monetary and fiscal policy, his ideas seldom saw full-scale implementation in their original form. Nevertheless, Friedman's accessible writings and pedagogical approach to economics sparked lively debate and influenced both policy and public discourse on economics in a variety of ways. [46]

### *Justice and Fairness in the Original Position*

In the years following the publication of Friedman's work, the notion of a social minimum income was addressed broadly in political and analytical philosophy. Most notably, the Rawlsian principles of "justice as fairness" based on the "original position" [52, 53] – set forth in *A Theory of Justice* (1971) – formalised a notion of fairness as an arrangement of socio-economic inequalities such that conditions are for the greatest benefit of the least advantaged and attached to offices and positions open to all under conditions of fair equality of opportunity. John Rawls' analysis of distributive justice is extended in Ronald Dworkin's "hypothetical insurance market", a thought experiment in which the reader is tasked with imagining the choice of insurances an individual may choose in the "original" condition, with no prior knowledge of the life they are about to live. [17, 18] The notion presented by the Rawlsian school of political philosophy is the simple proposition that, given no prior knowledge of a life and socio-economic standing, most individuals would organise conditions

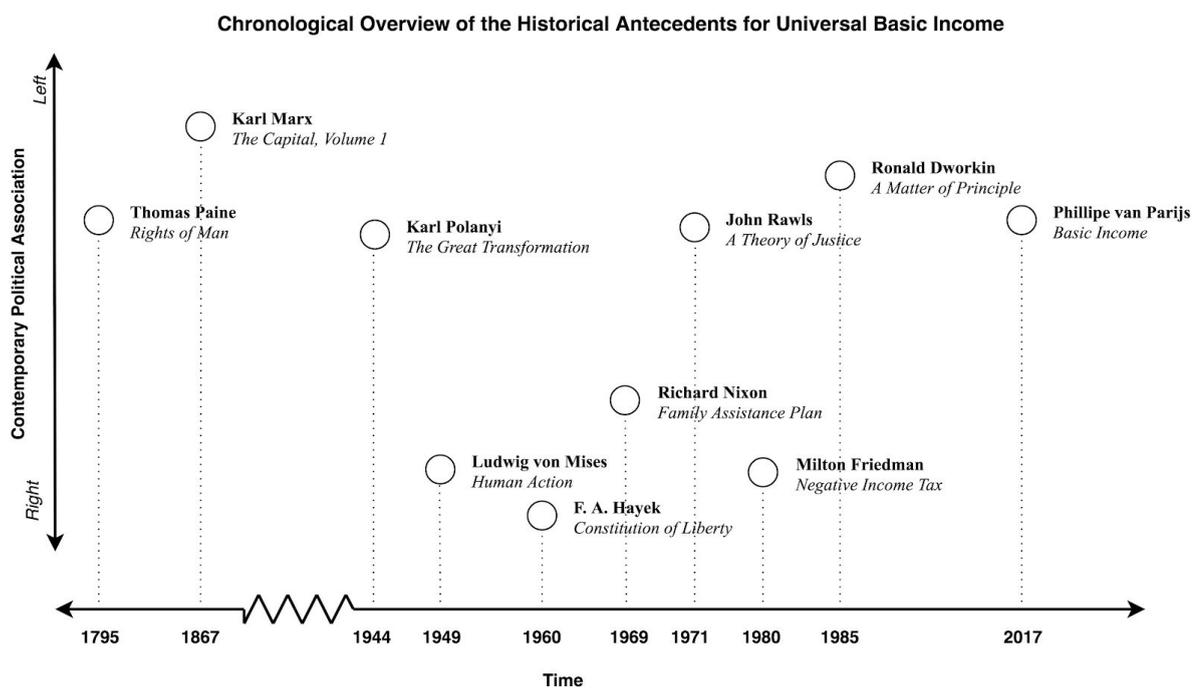
such as to maximise average welfare, with the constraint that no individual falls below a certain threshold value. These results have found support in psychological trials emulating the “original”, pre-individual position, as theorised by Rawls. [21] Here, it seems, subjects tend to act with a risk-averse orientation, when presented with the probability of living a meagre and impoverished existence against the odds of being born into wealth.

### *Contemporary Literature*

Among the growing number of proponents of these and associated ideas, Belgian political philosopher and political economist Philippe van Parijs has perhaps been the most outspoken advocate of the concept. Through a series of publications, [50] books, [59] and lectures [57], van Parijs has sought justification for his claims on basic income policies through a Rawlsian conceptualisation of justice. His latest work: “Basic Income” [59] collects a series of arguments and discussions refining various ethical and fiscal elements of UBI policies.

Van Parijs sets a somewhat higher UBI mark than previous proponents, arguing for a theoretical payment of 25% of quarterly gross domestic product (GDP) per capita – estimated at a monthly subsidy of \$1,163 in the United States. van Parijs argues that a dominant advantage, outside of the realm of ethical and moral justification, is the move beyond what he deems a regressive mindset on public assistance programmes. The majority of today’s welfare states, he argues, have a prevalent cultural bias against recipients of subsidies. These culturally damning allegations serve to the detriment of public discourse, as politicians utilise rhetorical scapegoating strategies in dividing the population against itself. [59] According to van Parijs, Implementing broad-scale fiscal redistribution strategies, would effectively promote egalitarianism in the political sphere, as racial, gender or income-class specific differences will no longer find justification in an economic

dimension and thus, will no longer be susceptible to manipulative rhetoric defining social groupings as abusers of public benefits. Indeed, the notion of cultural and political equivalence raised by van Parijs resonates with the poignant analysis produced by American civil servant and scholar Martin Luther King, Jr.. Throughout his career, King argued for economic differences as a dominant force in cultural and racial separation. [8] While such claims may appear utopian or far-fetched to the conservative reader, proponents point towards the rapid growth of technological advancements and the significant effect these developments have had on cultural, social and economic matters. Thus, van Parijs argues, radical financial and economic change is not only permissible but achievable in the short term. [57, 58, 59] Recently, ethical claims of this nature have found support with public figures, where technology-entrepreneurs and industry reformers have come out in support of the concept. For example, Facebook chief executive and chairman Mark Zuckerberg and Elon Musk, co-founder of Tesla, PayPal, and SpaceX, have delivered passionate accounts for unconditional income policies, rooted in the concerns for the effects of automation on the labour force.



## **Empirical Research: UBI in Action**

### *Rising Concerns for the effects of Workforce Automation on the Labour Market*

Recent years have seen a rising interest in UBI policies from nation states and academic institutions. While the reasons differ depending on the socio-economic contexts, a general set of concerns appears applicable across the globe. UBI research is frequently spurred on by advancements in work automation, a phenomenon inspiring pessimism for long-term employment growth. Adding to the sources of concern, workforce automation is predicted to have a largely asymmetric impact on the labour markets, affecting low-income workers immediately while, ostensibly, sparing high-income earners in the near short term. [3, 22, 35] The fiscal impact of automation accentuates the existing concerns for the impact of globalisation and outsourcing. [28, 35, 36]

These technological developments arrive at the back of a growing concern for the overall efficiency of welfare programmes. While the practice of partially supplementing income, contingent on a string of social factors, certainly does alleviate poverty, researchers have pointed towards the discernable array of inefficiencies produced by welfare programs in developed nations. [14, 20, 30, 37] Perhaps unsurprisingly, behavioural studies have indicated a loss of control as a significant factor in the success rate of structural welfare programmes. [16, 20, 31] Ostensibly, experiences of paternalism exercised in the governmental supervision of welfare recipients, may result in a demeaning experience auxiliary to depression, lack of motivation and feelings of ineptitude. [16, 20, 31] Combined with the Kafkaesque magnitude of some administrative bureaucracies, the role of public official appears to have become an undesirable job in some developed economies. [38] Thus, researchers argue, the time is ripe for a universal reform in structural welfare programming. [9, 29,

30, 38, 42, 61] Several countries with widely differing economic, social and cultural compositions have ventured into the exploration of unconditional income programming. For this paper, we review selected empirical evidence produced on the subject in recent years.

### *Universal Basic Income in Finland*

Among the most advanced and well-funded case studies, the recently terminated Finnish experiment is perhaps the largest implementation of an unconditional income programme to date. While the scientific community is still awaiting conclusive results, as researchers prepare a general report for publication in 2019, preliminary observations have been published throughout the trial period. In short, the Finnish right-centre government elected to subsidise a selected number of citizens with a notional monthly income of €560 (£490) for a trial period of two years. The programme was structured as a randomised sample of 2,000 mandatory participants between the ages of 25 and 58. Alongside a number of implications involving local taxation, the preliminary results reveal only marginal improvements with low-level allowances, due to issues relating to public bureaucracy. Still, the researchers argue that a regular and unconditional source of income for people with uncertain income flows stemming from numerous social security programmes would simplify the current benefits system by merging the payments into one unconditional lump of cash. This may remove fiscal obstacles blocking low-income citizens, as income-tested benefits may involve a series of uncertainties in the period surrounding the acceptance of a job offer. These simplifications, may benefit social mobility for recipients of non-complex (unwedded, without children) income packages. [56, 62] The Finnish case study has attracted interest due to the complexities in the existing local welfare policy. Finland has long been recognised for a highly advanced welfare system, prevalent in northern Europe and Scandinavia. While it is not surprising

that the Finns should be the first nation state to trial large-scale unconditional income policies, the inherent issues of the existing welfare programmes and the tailored taxation programmes makes for a complex case study with multiple local dependencies and stakeholders.

#### *Mitigating Bureaucratic Complexity in Rural India*

In the most recent publication of the acclaimed *Fiscal Monitor* series, the International Monetary Fund (IMF) explored the impact of UBI-related policies on gasoline subsidies in rural India. Here, issues around the bureaucratic complexity of targeted subsidies has been a frequent cause of friction, as corruption and inefficient management weighs heavily on the practical impact of large-scale subsidies for vital commodities as food, water or gasoline. [12] The researchers argue that the fiscal revenue yield from eliminating tax subsidies could potentially be larger than the fuel subsidies reported on budget. In lieu of further subsidising gasoline expenses, a speculative UBI equivalent to about 20% of median per capita annual consumption could serve the community better than the existing and heavily conflicted Indian welfare system. Although such a transfer is considerably more modest, researchers argue, it may incur a fiscal cost of approximately 3% of Indian GDP. [12] While the implementation of a UBI-related programme in rural India would obviously be constrained to a host of regional factors, the researchers argue it would improve regional coverage, the progressivity of resource allocation towards the intended targets, and the generosity of the benefits received by lower-income households.

#### *Alleviating Homelessness in Central London*

In 2010, the City of London trialled a personalised budget, aimed at testing new methods for alleviating homelessness in the British capital. The associated researchers reported a significant

success rate, concluding the trial with seven of 15 individuals in steady accommodation and receiving counselling by the end of the evaluation period 13 months later. [31] These results partially affirms the claims made by behavioural studies in welfare economics [9, 11, 16]. Here, researchers report keywords such as “control”, “personal engagement” with the programme coordinator, and “elements of choice” as the decisive factor in the rehabilitation of rough sleepers and other recipients of structural welfare programs.

### **Criticisms of UBI**

Through the historical debates on the fiscal, political and social effects of an unconditional income, a number of arguments for or against the concept have been raised. In this section, we consider a number of prevalent arguments for and against the unconditional income policies. We categorise critical perspectives in the extant literature as motivated by either financial, bureaucratic or behavioural concerns and evaluate the validity of these, and related claims, in the light of the historical review and survey of empirical literature above.

#### *Fiscal Concerns*

An initial concern, often re-iterated by policy-makers, is the vast systemic impact these and related policies may have on a national economy as a whole. As argued by Polanyi, an unconditional income source for low earners may exercise a downward pressure on real wages, as employers will no longer have to justify wages as a means of sustaining a minimal quality of life. Political discourse on minimum-wage requirements may be decoupled from the debate on wages and the poverty limit. Unless recourse to unionisation exists among the working class, as Polanyi argues, an

unconditional income could be effectively transferred to the employer. While this concern may not appear relevant in the context of the complex labour markets of today, observers ought to consider the state of the economy before rejecting the relevance of these concerns entirely.

### *Methodological Concerns*

A discernibly more methodological critique of the basic income principles is the axiomatic dependency on efficient markets [23, ]. Indeed, the majority of the arguments raised by prominent figures such as Friedman, rests on the neoclassical assertion that markets are efficient and that price always signals value. While the evidence for and against these hypotheses was sparse at the time, concerns raised by behavioral economists may form an opposition to these assertions. If markets are not that efficient after all, we may ask, should we base our fiscal policies on the assertion that consumers will behave as predicted – and what happens if they don't?

### *Bureaucratic Concerns*

As we saw in the case of the Finnish experiment, existing complications in local taxation or welfare programmes may also play a significant role in the practical implementation of basic income programmes. Outside of purely economic concerns, an issue raised by detractors is the scale of the bureaucracy required in the execution and monitoring of cash transfers. Considering the well-documented existing inefficiencies in contemporary welfare programmes, the allocation of resources, monitoring of participants and enforcing of policies is bound to be a cumbersome task for public officials. [9, 20, 29, 38] While recent development in the digitisation of public welfare and taxation systems may inspire faith in technological development, public-sector administration may be cause for concern. If we, as van Parijs argues, harbour ambitions of a globally applicable

redistributive fiscal policy, the associated bureaucracy is bound to grow beyond our means. Nevertheless, as we saw in the case of the IMF estimations for the Indian economy, an unconditional income may serve as a relief to the bureaucratic complexity associated with subsidies and other relief programmes in rural or poverty-stricken economies. While the implementation of any fiscal policy programme involves a number of complexities, the simplified aspects of a single monthly or bi-weekly cash-transfer significantly reduces the administrative overhead associated with the practical application of subsidies.

### *Behavioural Concerns*

Perhaps the most familiar critique of unconditional income policies is the – somewhat conservative – argument that giving people free income will cause a decrease in productivity, as recipients of income subsidies would simply opt out of the economy and live off their stipends. Such claims are naturally too complex to prove or disprove, due to their contingency on a large array of culturally embedded norms, traditions or expectations. While, as is often the case in economics and political science, the implications and success of unconditional income policies are largely dependent on the targeted fiscal system and social context, we have seen meaningful arguments against behavioural concerns in the empirical evidence surveyed above. Set against a background of the existing welfare systems, it seems, the unconditional nature of the payments received in UBI programmes may very well be a major cause of the improvement, providing recipients with feelings of control and choice. As evident in the case of the London study [31], those perhaps most likely to be at risk for the behavioural concerns listed above appear unexpectedly susceptible to positive change given an unconditional income and the control to create their own path to growth. Thus, it seems, similar to

welfare policy, conclusions relating to behavioural, cultural and social implications of fiscal policies remain an empirical question.

Additionally, pre-existing cultural and social patterns in society may be enforced as a result of the lack of dependencies on labour-force participation. This may further validate cultural gender specific separations and deepen the divide between genders. Specifically, women may be more likely to succumb to cultural or traditional pressure and withdraw from the labour market if not provided with adequate incentive to work. Nonetheless, such concerns are highly contingent on socio-economic factors and the complexity of the local environment. Indeed, the opposite may be true, in some cases as argued by [2]

### **The Good Dollar Experiment**

The Good Dollar experiment is sponsored by leading global investment platform eToro as it's first funding partner. The team is tasked with the development of open-source solutions making the practical implementation of UBI possible with blockchain technology. Good Dollar's mission is to build open-source solutions for efficient allocation of resources according to principles informed by research on UBI and related policy proposals.

### **Why Blockchain Technology?**

The emergence of blockchain technology is arguably an innovation, the full implications of which we have not yet understood. [24] The presence of a transparent, immutable ledger of account, capable of executing scripted smart contracts, capturing significant complexity, provides the necessary tooling for a novel implementations of broadly redistributive fiscal policies.

We identify a number of properties in blockchain technology, as specifically appealing to UBI researchers and policymakers:

**a) Transparency, Traceability and Accountability**

Blockchain technology is inherently transparent and pseudonymous. This system property affords researchers and policymakers a new set of tools for tracing and improving accountability measures in UBI implementations. Not only does this adequately alleviate occasionally excessive costs associated with the burgeoning bureaucracy required in the execution related social and fiscal governance, it also enables seamless know you customer (KYC) and anti-money laundering (AML) procedures.

**b) Programmable Money**

The notion of “smart contracts” – that is, small scripts of code executing conditional transfers – allows policymakers to automate essential tasks related to the distribution and collection of funds. A smart contract is, essentially, a set of simple commands conditioned on a set of observables and executed by the blockchain. This will allow policymakers to define certain conditions and terms for the real-time allocation and distribution of funds defined by certain measures. This feature will be essential for the development of the Good Dollar initiative, as the radical transparency noted above allows the programme to access full information on the state of the system at all times. As we saw outlined earlier in this position paper, the majority of contemporary empirical data on UBI reports issues of a bureaucratic nature related to the efficient allocation of

funds. These issues are well known in economics and a difficult to mitigate in unresponsive systems, such as the current fiscal infrastructure sorting and tracking taxation. Utilising a blockchain, we can ascertain near-perfect information on the present distribution of funds and allocate recipients subsidies accordingly. Policymakers can draft and define instant transfers to citizens conditioned on the exact contents of their accounts and their expenses, interest rates and loan payments can be automated and good behaviour incentivised with full transparency and incorruptible logic.

**c) Incorruptible Bureaucracies**

The features defined above make blockchain technology a perfect fit for the implementation of redistributive fiscal policies, such as UBI, in areas suffering from issues with corruption or bureaucratic inefficiency. Researchers and local policymakers can define immutable logic for the correct and automated distribution of funds on a near-instant basis. While all distribution of funds is subject to revision, researchers can disregard previously dominant concerns on the execution risks associated with a UBI policy in nations threatened by corruption or in political risks. End-to-end traceability of all subsidies or allows researchers to define the expenditures and habits of the recipient with precision, which will in turn lead to a more efficient allocation of capital.

## **The Good Dollar Research Agenda**

The guiding vision of the Good Dollar experiment is to mitigate and alleviate the socio-economic impact of wealth and income inequality on a global scale. By attempting to achieve these ambitions, the team is committed to providing communities with the tools and methods to self-organise and promote growth and productivity through local initiatives. As part of the Good Dollar experiment, we are accepting applications and research proposals from local projects working on practical implementations of UBI. Through the course of the coming quarters, the Good Dollar experiment will be hosting hackathons, conferences and funding research on the topic. As associated projects mature, Good Dollar will be releasing open-source tools for the implementation and execution of local or global UBI programmes. Good Dollar plans to assist local communities, non-governmental organisations and governments in experimentation with and implementation of UBI policies utilising novel blockchain based solutions.

The Good Dollar vision is contingent on a set of essential component building blocks. While blockchain technology offers a host of advantages in improving transparency and efficiency, our immediate efforts will be aimed at developing the the following aspects of blockchain technology:

- a) Social Identity: How can we discern individual identities in a blockchain-based paradigm?
- b) Social Interest: How can community participation and engagement create surplus value?
- c) Social Governance: How can economies become partially or wholly self-governed?

## **Join the effort**

We are seeking builders and scientists, experts in identity and privacy, governance, local and global adoption of financial products, and wealth distribution. If you could contribute to our research or design, please don't hesitate to reach out. E-mail: [builders@gooddollar.org](mailto:builders@gooddollar.org).

Additionally, we are looking for ambassadors, philanthropists, NGO partners, and general do-gooders. If you're passionate about using technology for social good, please get in touch, and help us shape the future. E-mail: [dogood@gooddollar.org](mailto:dogood@gooddollar.org).

For anything else contact us at [hello@gooddollar.org](mailto:hello@gooddollar.org).

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