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The disruption and diversification of Higher Education Funding: Cryptocurrency for Higher Education Wealth Generation

Edward Lehner

CUNY Bronx Community College

John R. Ziegler

CUNY Bronx Community College

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Abstract

This work conceptualizes a process for cryptocurrency to diversify traditional methods of higher education funding in the United States. Higher education funding has seemingly reached an impasse, and opinions remain divided over both which societal parties should bear the educational costs for the vast majority of Americans and how to remedy the student debt crisis. Cryptocurrency funding augments traditional revenue streams, and shifts the discussion of education costs from expenses to a more robust conversation about innovative avenues to wealth generation as a potential solution to fund the mission of American higher education. Historically, higher education has been rooted in scarcity frameworks and a type of zero-sum proposition for funding allocation, and this conceptual paper acknowledges the the central concerns of higher education funding and explores these arguments as legacy discourses rooted in career preparation, accessibility and affordability, and arguments about the need for a broad-based education versus more technical skills training. Further, an alternative model to current higher education funding models is presented to embrace technological, disruptive wealth generation based on cryptocurrency to deploy this asset class to serve education needs by funding research, students, and the academy through an illustrated conceptual framework for funding implementation.

Keywords:

Cryptocurrency; higher education funding; masternodes; staking coins.

Introduction: The Coming Disruption of Traditional Higher Education Funding

If higher education is not already in the midst of what may be legitimately characterized as a funding crisis (Pew Trust, 2015), then it inevitably will be (Barr & McClellan, 2018; Grier, 2015; Roger & Baum, 2017). In response, this conceptual article presents a framework whereby cryptocurrency can serve as a wealth-generation model to open a new avenue in the vital, complex discussion around higher education funding. The existing conversation tends to pit investment in students, viewed as human capital, against the expenses of education, a discourse that is historically entwined with discussions about the workforce and corporate needs to recruit technically skilled workers (Alexander & Kim, 2017; Barr, 2004; Chan, 2017). In contrast, this article maintains that funding for higher education must be approached as a longstanding and ongoing issue not merely of human capital but also of access to higher education as a human right. We elucidate this position in five sections: 1) higher education as a human right and its alignment with career outcomes; 2) careerism, technological disruption, and a call for new funding models; 3) cryptocurrency as wealth generator: enacting disruption of higher education funding; 4) coin farming, revenue stream, how it works, and example model; and 5) limitations, future research, and conclusions.

Higher Education as a Human Right and Alignment with Career Outcomes

Viewing higher education as a human right does not mean that it cannot simultaneously benefit the nation and the individual. While Keller (2006), for instance, who examined an international sample of countries, concluded lower levels of education should be financially prioritized, she also avows, “College enrollment rates and expenditures thereon are important to political rights” (p. 32). Further, McMahan and Oketch (2013), examining citizens of the United Kingdom, quantified higher education’s effects on individuals’ life opportunities, arguing that higher education is a type of inalienable right and therefore must be accessible and affordable if industry is to access a pool of qualified and well-trained applicants. Similarly, McMahan (2009) has maintained that a generous higher education funding policy directly correlates with the public good and a modern human capital approach, an approach through which he argues for considering and valuing not only the market but also the non-market benefits of higher education (p. 6). He reminds us that higher education confers advantages beyond the economic, which can affect the welfare of households and communities, including of future generations (p. 2, 5).

Existing scholarship that examines human capital theory and its relationship to the economic growth of the nation state notes in the United States, citizens’ well-being, as well as the well-being of the nation state itself, is highly interconnected with the state’s investment in human capital (Clemes, Hu, & Li, 2016; McMahan, 2009; Neher, Patterson, Duffield, & Harvey, 2017). However, Jemielniak and Greenwood (2015) highlighted a growing neoliberal cast to social and economic policy related to higher education, policy which tends to underfund important projects for development of human capital in disadvantaged classes. For example, the

Pew Foundation (2015) observed that since the Great Recession, federal funding for higher education continues to decline, placing a growing financial burden on the states and ultimately, on individual students and families. Leachman, Masterson, and Wallace (2016) reported these increasing burdens and the concomitant decline in funding are now fixtures of the reality facing higher education leadership, and the almost certain persistence of these conditions is underscored by the fact that after nearly a decade of economic growth, educational funding has yet to reach even pre-recession levels (cite).

Since the end of World War II, higher education in the United States has greatly expanded and democratized a social institution that had previously centered primarily on providing opportunities for society's elite. By the early 1950s, as Thelin (2011) writes, higher education had rapidly expanded due to a unique combination of veteran enrollment, expanded federal funding, and unprecedented philanthropic support. Further, Hutcheson and Kidder (2011) highlighted how U.S. nationalism, combined with concerns over the Cold War, precipitated unrepresented university funding for math, science, and technological research. Even during what Freedman (1997) dubbed the 'golden era' of higher education (1945-1970), funding was mostly drawn from the federal government in the form of tax dollars and grants or from large charitable foundations. From these heights, American funding of higher education has, as Selingo (2013) described, fallen to near record lows with the brunt of costs now borne by students.

Currently, the American government's policies would seem to abdicate the responsibility to provide greater access to higher education for students, making the results of increasing calls to create options for free higher education appear doubtful. In contrast to the individual and communal benefits that McMahon (2009) described, the ongoing public disinvestment in higher education that so damagingly influences current funding practices preserves socioeconomic hierarchies that intersect with hierarchies of race and gender (Harackiewicz & Priniski, 2018). McMahon observed that the fact that public funding has not kept pace with rising costs places a greater economic burden on families, causing greater reliance on student loans and decreased participation by the underserved, namely lower-income and minority students (p. 1) (Emdin & Lehner; Lehner, 2007; Lehner, Thomas, Shaddai, & Heren, 2017). While arguably itself an inflation, the increased requirement of college degrees for a wide swath of employment opportunities is unlikely to reverse itself, much as the decline in government funding presents no signs of ending (Barr & McClellan, 2018; Pew Trust, 2015).

In the United States, the contention that free or heavily loan-subsidized education automatically strengthens the nation state is a complicated proposition, one that a number of scholars are currently interrogating. For instance, Bowen and Qian (2017), building in part on the work on Winters (2012a; 2012b), questioned the conventional wisdom in higher education circles that increased funding improves the state's economic growth. They also contested that free education straightforwardly develops human capital and that these educational opportunities are solely responsible for an individual's expanded economic opportunities. However, as Winters and Bowen and Qian themselves acknowledged, education is still commonly accepted to be the

most effective route to economic success. Additionally, even if education offers only a partial solution to economic advancement, we must consider both its less readily measurable benefits and our obligation to employ all available tools for a more equitable society.

Often, however, even when students have access to higher education, a misalignment exists between educational funding patterns and what employers require, leading to the ongoing problem of position for highly skilled workers remaining unfilled. For instance, Herman and Stefanescu (2017) demonstrated traditional higher education has little influence on the career outcomes of engineering students, a field with abundant corporate and entrepreneurial opportunities, primarily because the course of study precluded broader training on available careers and how the students could deploy their education (p. 314). Relatedly, Chan (2016) extensively studied the disjunction between students' understandings of the purposes of higher education and the job market's needs for highly trained technology workers competing in an expansive world economy. Chan noted the profound differences between preparing students to enter the workforce, as seen, for example, in the National Task Force's Report (2012), and a need to educate students to be good citizens (Lagemann & Lewis, 2012). These disjunctions create problems not only for individuals but also for businesses. Diosdado (2017) detailed the difficulties that companies face when unable to readily meet employment needs, including loss of revenue or growth due to vacant positions, and noted beyond possibly losing market competitiveness, companies with such vacancies also overwork and thus put a disproportionate strain on the employees that they do have, thereby risking the departure of their most loyal and talented employees. Even a detailed study such as the examination by McMahan and Oketch (2013) of the quantitative effects of education on the individual in the U.K. labor force does not, or could not, if applied to the U.S., account for the complex interplay between industry's employment needs and the individual's educational track toward employment or the counternarrative presented by Diosdado and Herman and Stefanescu. In both its curricula and funding allocation patterns, U.S. higher education reflects the ongoing and problematic split, as explained by Chan, between a broader education preparing the student for life and a more technical education centered on career preparation.

Careerism, Technological Disruption, and a Call for New Funding Models

As noted earlier, historically, a great concern regarding higher education funding is its reliance on tax dollars and expansive student debt (Dolvin, 2012; Christensen & Eyring, 2011; Selingo, 2013). In light of an ongoing and worsening student loan crisis, persistent funding cuts, and other economic pressures, it is time to seek new approaches to the complexities of financing higher education for U.S. citizens. Christensen, Horn, Caldera, and Soares (2011) argued that college and university education will be greatly transformed by technological disruption, potentially bringing about a more affordable type of education to the majority of Americans. According to their work, the nearly threefold escalation in fewer than twenty years of the average

price of college tuition not only signals an unsustainable cost trajectory but also indicates that the academy is ripe for technological disruption.

Following this report, Christensen and Eyring (2011) made the case that higher education will face significant change due to technological innovation, reshaping what is currently called the university. Lederman (2017) and Hess (2012) noted that Christensen has repeatedly contended that a number of colleges and universities will face technological disruption to such a great degree that many will face bankruptcy and closure. Admittedly, Lederman also notes that Christensen's predictions that half of traditional colleges or universities would meet this fate in under two decades, primarily due to online education, will not come to pass, despite an increase in closings. However, half of American higher education does not have to disappear for serious problems to be facing it from neoliberal austerity and challenges from other types of education providers. Whatever the exact time frame and extent of the disruption, the claims by Christensen et al. (2011) and Christensen and Eyring remain compellingly relevant: that higher education will be disrupted primarily because its business model has become outdated, it is unable to effectively meet its students' needs, and its collective leadership is not sufficiently prepared for the changes that colleges and universities will face. The arguments of Christensen et al. (2011) and Christensen and Eyring (2011) are not far afield from assertions by Greenwood and Levin (2005) that, with a growing separation between academic research and government policy and a practice of promoting faculty members who engage in arcane forms of research devoid of the political and social capital to actual influence change in their respective domains, higher education fails also to meet the needs of the communities that it supposedly serves.

Now, the fact that higher education seems to be misaligned with the needs both of its students and of society more broadly does not represent a new observation. Giroux, Giroux, and White (2018) maintained that the very notion of truth within a university is bound up with funding factors, and that narratives presented as truth can be manipulated in order to best secure that funding (in this case, as they describe, the truth about abuse in the Penn State athletics department was manipulated in order to preserve the funding and revenue streams brought in by the football program). Another influence on the production of truth within the academy is that academic researchers can often end up working at a remove from the changing world around them. While such work can of course be very valuable, it is also worth considering whether the kind of perspective thereby engendered influences, for example, the way that Keller (2006), McMahan and Oketch (2013), and an entire cohort of modern educational funding researchers rarely tackle the seemingly obvious and substantive issue of actual funding. Specifically, a good deal of educational funding scholarship centers on how to stretch fewer federal and state dollars into a substantive educational experience. Meanwhile, calls and proposals for improving that experience, much less for free and universal higher education, will unquestionably always be met with the question of how to afford such proposals.

A Call for New Funding Models

Keller (2006) and McMahon and Oketch (2013) teased out the strain of utopianism that runs through calls for free higher education, an outlook that sharply contrasts the neoliberal higher educational reforms that have swept the country (Jemielniak & Greenwood, 2015). Utopianism in educational funding research, while of course laudable, is more effective when paired with practical explanation of how such policies could be enacted. Utopianism alone loses axiological worth when public good is determined by neoliberal capitalism and risks, particularly in the humanities and social sciences, an overly reductive picture of the complexities of the lived world. Such an approach avoids responsibility for enacting advocated policies and for concretely mitigating the disenfranchisement of those whom its proposals are meant to aid. We, as educators, must engage with the political and ontological structures and realities governing these changes. Otherwise, calls for free educational opportunities have little chance of implementation in the face of neoliberal austerity, technological disruption, and a misalignment between the academy and community needs.

Surveying the the neo-liberal policy changes that are affecting higher education, we present one practical response. Influenced by Kincheloe, McLaren, Steinberg and Monzó, (2017), we have developed a funding mechanism to fund meaningful education projects by engaging the opportunities in the cryptocurrency financial markets. This work, similarly to Lehner, Hunzeker, and Ziegler (2017), is designed to engage state and national policymakers, community stakeholders, and higher education providers by providing them with an alternative perspective that centers on the higher education wealth generation rather than the zero-sum policies reflected in the current realpolitik of education funding.

Admittedly, the goals of this paper are far-reaching, perhaps deploying our own form of utopianism. Nonetheless, this work purposefully sets out to provide models, both conceptual and financial, that have the power to enact change. Specifically, the model below presents a proven strategy to generate United States Dollars (USD) that can be used for the specific purposes of higher education. In discussing this model, we deploy critical theory, cryptocurrency frameworks for wealth generation, analysis of the financial markets, and open source tools in a strategy to challenge the status quo of the current student debt and tax dollar-funded higher education system.

Cryptocurrency as Wealth-Generator: Enacting Disruption on Higher Education Funding

A subsection of the educational funding literature, including the extensive work of Barr (1993; 2001; 2003; 2004; 2017), has proposed an alternative to the type of utopianism described above. This body of work consists primarily of practical models centered on student participation and detailed student loan repayment policies. Barr's body of work specifically, and this body of literature generally, is situated in the legacy discourse of cost sharing and underestimates the degree to which governmental funding for higher education is dramatically shifting and being disrupted (Christensen et al., 2011; Selingo, 2013). Additionally, Barr (2017) in particular

combines cost sharing with the principles of regulated competition that resembles the ardent call to allot public education resources through competition. Barr described this process, writing that “consumer tastes are diverse and degrees increasingly diverse. Thus, it can be argued that students are mostly well-informed, so consumer sovereignty is more useful for post-compulsory education than for earlier education. Though that argument is generally robust, it frequently does not apply to students from poorer backgrounds” (p. 4). Barr’s (2017) proposal is neoliberal in the ways in which it employs business terminology to describe the public’s educational resources and students’ approach to them. Shore (2008) described neoliberalism’s attempt to privatize public goods, and Barr’s proposals fall clearly within this realm. Neoliberal higher education policies tend to stress austerity, budget cuts, and for-profit higher education models, the latter currently enjoying a renaissance of governmental favor in the United States. Neoliberal policies are non-public and profit-seeking by their very definition, and the notion of free education stands at odds with the neoliberal practice of commodifying public resources.

In terms of for-profit higher education institutes, a number of academic researchers, and policy advocates in particular, have written about this systemic problem. However, the question must be asked: what incentives are there to radically critique the current higher education funding model? Although contradictory to the suppositions of this work (Christensen et al., 2011; Christensen & Eyring, 2011; Greenwood & Levin, 2005), there seems to be too few reasons for the tenured faculty to seriously address the grave concerns of higher education funding. Lehner and Finley (2016) contended, for instance, that university researchers often follow a careerist path, focusing on publishing in high-ranking academic journals and collecting funding from traditional sources, practices that contribute little to the longer-term mission of higher education but that are encouraged by the corporatization of academia and its emphasis on easily quantifiable results.

Going Beyond Cost Sharing and Privatization Models

This cryptocurrency funding model will not redress the complicated arguments and valid assertions around the benefits of cost-sharing or, for that matter, the disadvantages of this practice in higher education. Great importance inheres in the conversations, debates, and scholarly literature centered around the purposes of higher education and its relationship to a knowledge-driven and democratic society (Keller, 2006). What our model does is to add to the conversation new forms of wealth generation for higher education, the proceeds of which can be deployed consistent with the mission of the beneficiary institution and without reliance on the currently predominant external sources of funding (Lehner et al., 2017). The model is framed from the perspective of catalytic authenticity (Lincoln & Guba, 1989) combined with the principles of technological distribution (Christensen’s et al., 2011), and it configures open source tools to be employed as technological disruptors. The model has been tested, and its methodologies have used cryptocurrencies and investment strategies to generate new capital, in U.S. dollars (USD), capital that can be used for the purposes of higher education.

Lehner et al. (2017) described how a group of educational researchers and Wall Street bankers developed a cryptocurrency fund that generated over a 400% return, in spite of a volatile market. This initial model was created to serve as an alternative funding mechanism for scientific research since its returns, and initial capital allocation, were not tied to traditional governmental or industrial sources. In this first cryptocurrency funding model, Lehner et al. focused specifically on funding basic scientific research, critiquing current science funding models and explaining the potential function of a cryptocurrency fund as a portfolio diversifier. This paper extends Lehner et al. and contends a similar strategy may be deployed to (a) fund higher education costs across the academy to benefit American college students, (b) alleviate some of the need for traditional governmental assistance and other forms of subsidy, and (c) reduce inequity by reducing higher education's dependency on local, state, and federal revenues.

Cryptocurrencies are purely digital assets, as Burniske and Tatar (2017) explained. These cryptographic assets are unique in that they based on cryptography and cannot be duplicated or infinitely inflated, as fiat currency can. Blau (2018) argued that cryptocurrencies function in storing value makes them an asset class, one created by Bitcoin, or, more precisely, the open source code in which it was written, and one that Burniske and White (2017) saw as uniquely immutable because of its characteristics. Cryptocurrencies, including Bitcoin, can be leveraged against other asset classes, providing beneficial financial diversification for higher education. This research demonstrates how cryptocurrencies' wealth-generation potential can change the dynamics of higher educational funding, potentially shifting the emphasis from away from tax dollars, student contributions, and student debt.

Below, we outline an already proven approach to an actively manage cryptocurrencies which yields both compound interest and coin appreciation. This fund that was developed by a group of academics and bankers who used USD to purchase enough of the selected coins to set up the initial investment positions. The pooled cryptocurrencies were then invested to earn lucrative dividends, using an active investment strategy enacted primarily with open-source tools, such as Linux's Ubuntu, PuTTY, and Unix. This fund is predicated on cryptocurrency valuation modeling, combining traditional valuation models with the data derived from an expansive Google Cloud Project. Over a one year period, this strategy yielded exponential returns, yielding well above 400%.

Wealth Generation vs. Endowment Growth

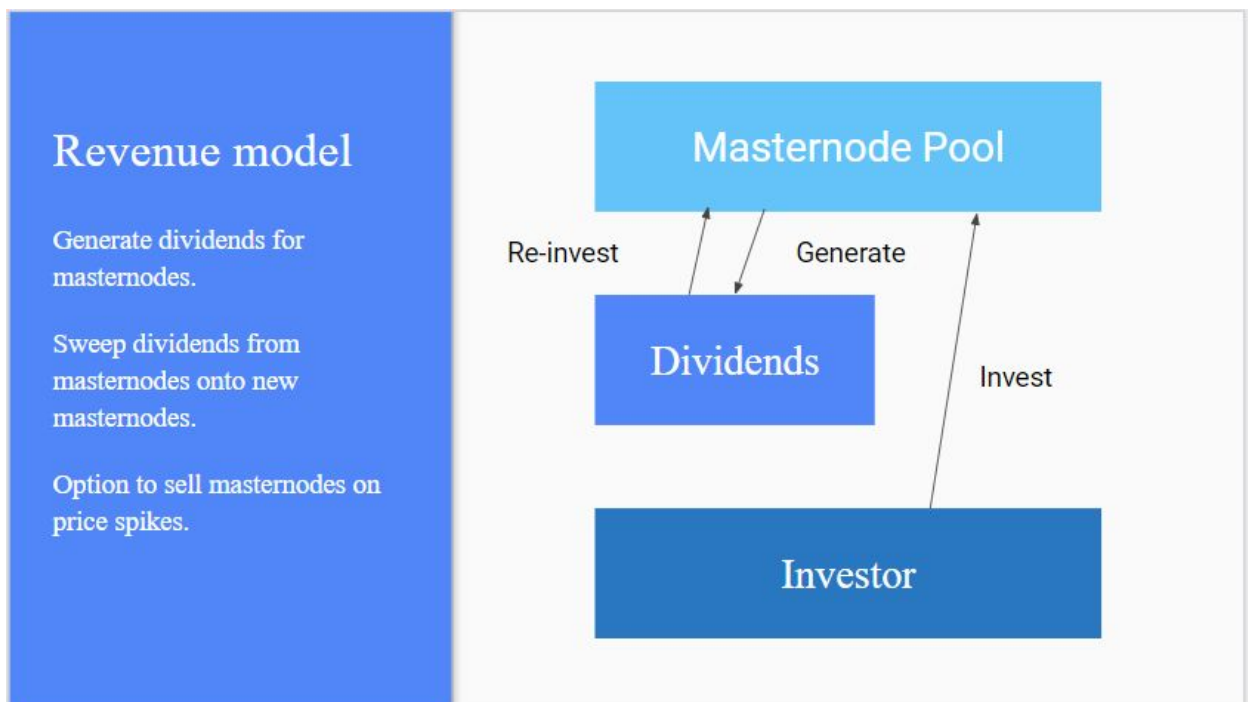
From a less technical perspective, this fund's strategy coheres with Reiss's (2017) notion of dividend reinvestment. Reiss detailed that one way to generate wealth is by investing into dividend producing assets and reinvesting these dividends into the same strategy. Reiss's work, combined with our valuation metrics and Google Cloud Project data, informed the coin selection that later populated this fund. Coins that use the the proof-of-stake (PoS) algorithm were chosen because proof-of-stake moves beyond Bitcoin's straightforward proof-of-work (PoW) model, which rewards only mining that requires expensive computer hardware and a disproportionate

amount of electricity. Once processed through valuation metrics, the portfolio ultimately consisted solely only coins that returned high-yield dividends. Staking cryptocurrencies are backed by the complexity of cryptography while simultaneously earning dividends, and even though cryptocurrencies are prone to volatile price extremes, a staking coin's dividend features can offset extreme price fluctuations. The open-source tools used allowed our fund to generate dividends by hosting what are know as network full nodes, resulting in the fund receiving a portion of the block reward. Predicated on Lehner et al. (2017), this paper explains the process of this innovative deployment of staking coins below.

Coin Farm Revenue Model, How it Works, and Example Model

At the heart of this model, illustrated in the three figures below, rests the fact that certain cryptocurrencies can be invested to yield dividends for higher education. Below, we map out a conceptual process, based on Lehner et al. (2017), that potentially could yield a strategic framework for creating a cryptocurrency farm for higher education wealth generation.

Figure 1



The first diagram (see Figure 1) details the revenue model and how a farming models generates new cryptocurrency. While Lehner et al. (2017) provided two examples of

cryptocurrencies (Dash and PIVX) to deploy in this fashion, this type of framework can be utilized with over 50 different cryptocurrencies, all generating substantial dividends. The investor box in Figure 1 can represent either an individual investor or, more likely, an institutional investor, such as a college of university, which it is particularly hoped adopt this model. The revenue model shown in Figure 1 illustrates the process of sweeping earned dividends from the nodes, either to add a node or to spend the collective dividends. For example, with Dash, only 1,000 coins are required to run a full node, and as the node accrues coins, the dividends can be saved to start a new node or accordingly spent by the institution. In terms of dividend growth, we describe the details related to how quickly a new node can be generated (see Figure 4). What is important to the discussion of the proposed framework is the degree of dynamic interaction between generating new coin and sweeping new coin into new nodes, an interaction captured in the section of Figure 1 that represents the reciprocal relationship between the coin farm and the dividends. The dynamic interaction between the generation of new coin and the creation of new nodes constitutes a type of compound interest.

The power of this conceptual model lies in that if a number of institutions collaborate, running their own coin farms, the value of each coin could grow exponentially. While such collaboration obviously would require a radical rethinking of business-as-usual, the exponential dividend coin growth that it generated could be reinvested into the farm, providing the dividends in the manner illustrated above. Additionally, an institution could dedicate its dividends, or portions thereof, to student scholarships, faculty funding, or other areas of funding consistent with its vision. Beyond simply benefitting one institution, newly generated coin, or new nodes, could be shared. This sharing of nodes, paradoxically, increases the power of the network and could simultaneously address educational disparities. As will be covered in the discussion portion of this paper, for example, the Council for Aid to Education (2018) recently released its annual endowment report, noting that already highly supported schools, such as Stanford and Harvard, continue to receive the largest amount of USD contributions. Although this type of news is now commonplace, the notion of an institution sharing its dividends in USD remains unheard of, primarily because fiat currency has already achieved its network effect. However, in staking coins introduce the promising possibility for a wealthy institution to share its nodes, thus increasing its own value. The notion that cryptocurrency grows in value when it is shared derives from network-effect principles such as Metcalfe's (2013) and Reed's (2001) laws. Although network effect is not the focus of this work, we propose additional research to further elucidate how this phenomenon occurs and how it can benefit higher education.

Figure 2

How it works

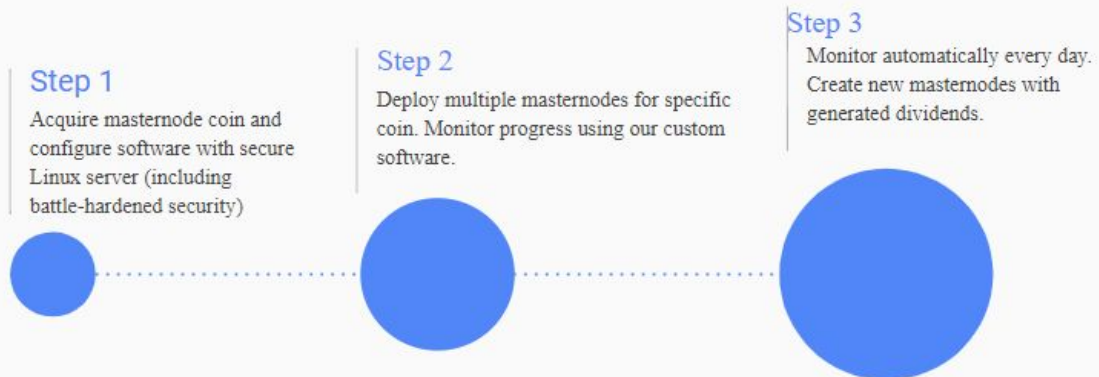


Figure 2 outlines the process of acquiring coins, setting up nodes using open source tools, and writing scripts for reporting in order to monitor progress for each respective node or farm of nodes. For example, step one of figure 2 focuses on the coin-acquisition process, which involves metrics for cryptocurrency coin value. Although the specifics of coin valuation lie beyond the scope of this conceptual paper, valuation is a critical part of this process, and we will call for more research on valuation methods in our conclusion. Step one also includes the garnering of funds and assumes that institutional investors are acquainted with procuring cryptocurrencies. Traditional ways of garnering cryptocurrencies are expensive, and more detailed research, which we will also call for in the conclusion, should investigate this process to better serve the needs of institutions.

Conceptually, Figure 2 depicts the process from start to finish, in a broad framing of an intricate process that will be detailed in our ongoing research, and is illustrative of the process, including noting the need for wrapper scripts or some other type of automated reporting. The automated reporting is not simply for an institutional investor who may be running its own nodes, but, depending on the way that it is coded, could also report out a number of institutions, creating an accountability measure to ensure that those who committed to running nodes are in fact doing so. This idea of group accountability may vastly increase the value of the network, and also needs more research and deeper and more nuanced framings of Metcalfe's (2013) and Reed's (2001) laws. Peterson (2017), for instance, has postulated that Bitcoin's value adheres to the social network laws touched on above; however, deeper investigation is required to apply them to the staking coin ecosphere.

Figure 3

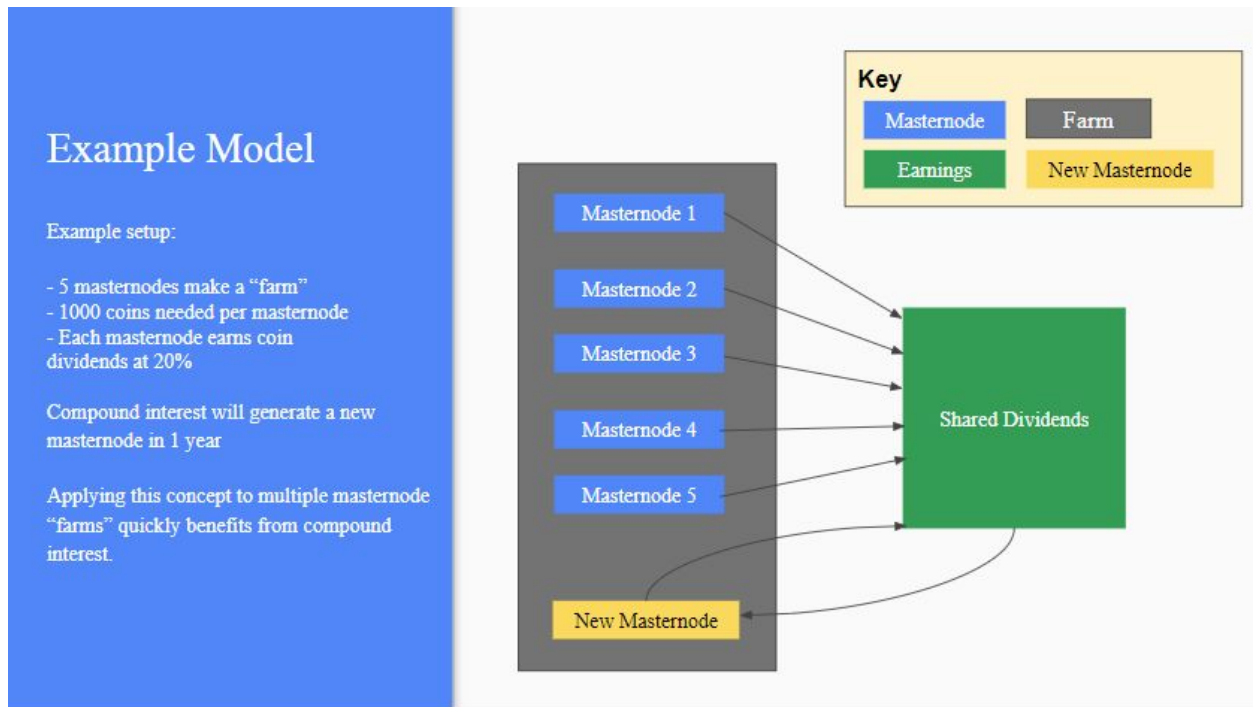


Figure 3 illustrates in finer detail what is presented in Figures 1 and 2. In doing so, it focuses specifically on the operation of a coin farm solely dedicated to one cryptocurrency. Figure 3 clearly depicts only one deployment of a specific staking coin that provides compound interest, and under the example model illustrated to the far left, the figure outlines a Dash farm, starting with only 5 nodes. The model shows how the nodes’ collective dividends, as shown in the middle section of Figure 3, can be used to start a new node. Lastly, the earned dividends, shown to the right, can be allocated according to institutional needs. While this model is conceptual, similar frameworks have been prototyped and tested by past researchers in conjunction with software engineers and bankers, , resulting in significant appreciation in USD; although, as a prototype, it should be viewed as a portfolio diversifier at this time and requires additional testing.

Figure 4. Total Number of nodes (N) and days to create a node (Q) over time in days. (T)

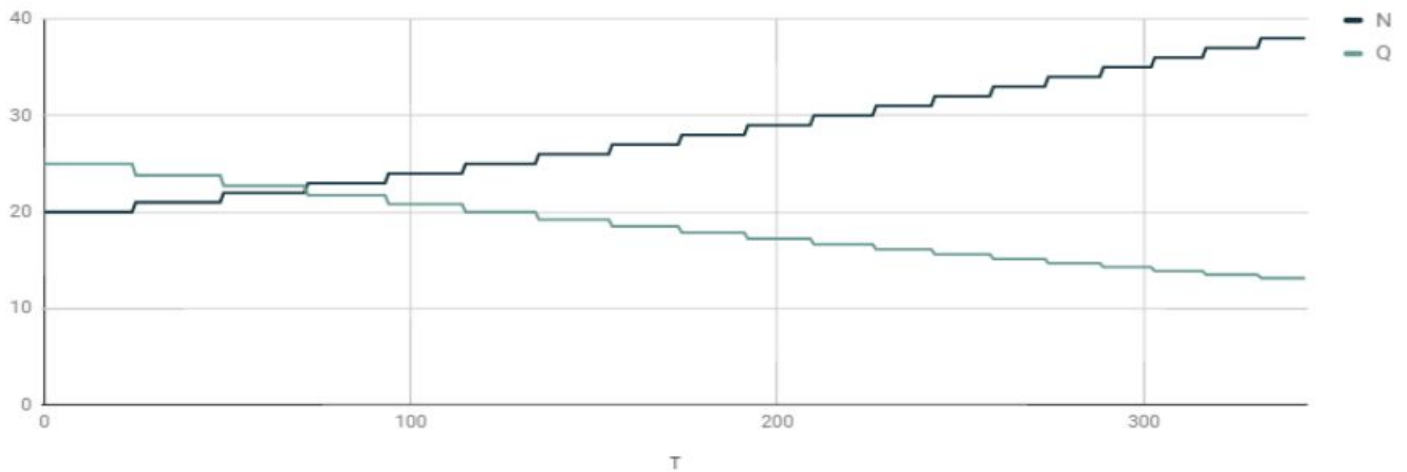


Figure 4 highlights how quickly new nodes can be generated. The dividend management process can be detailed using the mathematical model below. For clarity, the model makes very conservative investment assumptions and assumes linear coin generation amounts. The model uses the following variables, with initial values noted parenthetically.

N = total number of nodes (starts at 20 nodes)

E = average number of coins generated per node per day (fixed : 10)

M = coin collateral required to run a node (fixed : 5000)

Q = days to create a new node from generated coins on existing nodes, literally $M/(E * N)$ in this formula (starts at 25 days)

The graph above shows that, as time passes in days (T), the days to create a new node (Q) decrease, while the total number of nodes (N) increases. If the number of initial nodes is large enough, these nodes will begin to generate a new node in fewer than 25 days. New nodes are added to the initial node pool to generate more coins. Since the larger that N is, the fewer days it requires to generation a new node, as time passes, new nodes grow exponentially as a result of compounding coin dividends.

Limitations, Conclusions, and Future Research

While the complexities of understanding and evaluating proof-of-stake cryptocurrency and their relationship to a network effect may seem foreboding to the uninitiated, adopting the kind of model explained above can help to reduce difficulties of participation in the market and thus to open up a new way not only to gain but to reconceptualize educational funding. From small-scale interventions such as individual scholarships or flexible funding to help higher

education more quickly adjust to the needs of the labor market without abandoning the core mission of liberal education to large-scale solutions like the potential for multiple institutions to collaborate on investment, forays into the sphere of cryptocurrency hold promise for improving the position of the academy in an age of neoliberal austerity.

There are, of course, concerns that arise, primarily about volatility and, relatedly, emerging regulation, itself currently a somewhat unpredictable process. However, neoliberal capitalism is extremely adept at absorbing the transgressive into the mainstream and repurposing it for its own ends (witness, for the recent example, Chrysler use of a sermon by Martin Luther King, Jr. whose complete texts criticizes consumerism, including automobiles specifically, to sell trucks in a 2018 Super Bowl commercial). While the problematic nature of this mainstreaming is a discussion for another time, consistent success suggests that whatever the downside of government and the corporate banking increasing involvement in cryptocurrency trading, it may likely bring added stability to the market over the long term.

In this work, we underscore how staking coins are potentially lucrative ways to provide funding for higher education. The success of the coin farm prototype model is promising and invites further research and development in the areas enumerated above in order to limn more clearly the strategy's long-term feasibility and applications. As this research is done, colleges and universities, and development offices and endowment officials specifically, would do well to become better acquainted with the wealth-generation properties of cryptocurrencies. More research on coin valuation, procurement methods, collaborative coin farming, and the network effect are all required and may further address current and potential concerns and obstacles for funding higher education with cryptocurrency. So, too, many studies of the results of specific implementations of the proposals contained in this paper continue to advance innovation in this area, which may facilitate further disruption.

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