Cornell University, Ithaca, NY

Funding the Peer-to-Peer Ethos:

A Network Analysis Proposal of Bitcoin's Technical & Social Collectives

Research Proposal for:

INFO 4360: Communication Networks and Social Capital

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Introduction, Theory & Why This Question Is Open

Bitcoin is often described as "code + community." At its core, bitcoin boils down to 0s and 1s, yet money is a social kind (construction), and thus, Bitcoin's success is dependent on the community as a whole, regardless of any one individual in particular. Bitcoin is a decentralized, peer-to-peer (P2P) electronic cash system for transferring value in a trustless manner. It was introduced to the world 16 years ago in a grassroots (natural) manner. As such, its continued development and adoption relies on two key collectives: one collective building its technical infrastructure and one its social infrastructure. To date, these infrastructures have not been closely studied together, especially through the lens of network theories and methods. Yet, it is critical to pursue this study to understand if the two key infrastructures in bitcoin reinforce each other or reveal structural misalignments, hindering the adoption of bitcoin through its intended grassroots, P2P, ethos.

In this paper, I will provide a research proposal to explore how the geographic dispersion of funding helps/hinders the goal to bring about this P2P electronic cash system from a grassroots ethos. I will explore if funding flows to areas with previously strong grassroots activity or if grassroots adoption happens independently of funding support. To begin, I will observe which geographic regions and projects receive the most Bitcoin-related grants and funding and where the majority of in-person Bitcoin gatherings occur. Critically, along the way, I will note the date of initial funding and founding. From this data gathering, I will be able to visualize if there are regions with strong peer networks but little funding or well-funded areas with weak peer networks. Alternatively, perhaps regions with strong funding and P2P communities are correlated.

Specifically, I will ask: *Do regions with stronger grassroots Bitcoin activity have greater degree centrality, receiving more funding ties than regions with weaker grassroots activity?* It's my hypothesis that, yes, regions with more grassroots Bitcoin activity will have higher degree centrality, more incoming funding ties, in the network. However, it could be that: grassroots activity happens independently of funding, suggesting a structural hole between the two collectives, or funding precedes grassroots activity, indicating a top-down model and a mis-alignment with bitcoin's initial ethos. Also, funding sources might be limited by bounded rationality and not see or prioritize the strongest grassroots projects; there might be a "vibrancy vs. visibility" dilemma[1], especially given how privacy is such a core tenet of Bitcoin. And, funders might take into consideration the moral character of the persons behind the projects, and if they know a person repeatedly acts as promised, in a trustworthy manner, they might be more inclined to keep funding them. Unfortunately, that might result in a "rich-gets-richer" dynamic, where certain regions/projects attract more funding at the expense of others, reinforcing any structural holes. Organizations like the Human Rights Foundation act like brokers and do a really great job of bringing together funders and founders/ community leaders. I doubt there will be much "satisficing" on behalf of funders because 1) bitcoin has a 40-year pre-history; it didn't just "appear" one day and 2) because bitcoin is finite, people are very conscious about spending money on value, not just on what might be "good enough."

Why This Question Is Interesting

An October '24 report showed only $8.4 million in funding from 13 organizations for Bitcoin Core Developers in 2023, supporting a $2 trillion market cap. Networks are important to this setting because Bitcoin development is sustained by a decentralized funding network rather

[1] Essentially, some groups might not be public to preserve privacy but are very active and they could be missed.

than a single organization. Unlike traditional software projects, Bitcoin's open-source nature means contributors rely on various sources of funding, including grants, venture capital, corporate sponsorships, and crowdfunding. Further, over the past 16 years, bitcoin's "social layer" or its "Layer 0" has become increasingly visible, moving from the original "Bitcoin Mailing List" to in-person meetups, circular economics, Bitcoin houses/ spaces, and conferences, showcasing bitcoin's ability to help individuals and communities build financial security outside of traditional, and often exclusionary and exploitative, systems. Bitcoin's decentralization and permissionless[2] values throughout its technical and social infrastructure are a feature, not a bug, yet they raise important questions, especially in the long term. Specifically, what sustains decentralized systems?

The bitcoin timechain (blockchain) is the most secure and transparent ledger our world has seen. Yet, the first of its kind, this network analysis will aim to make visible what often remains invisible, in this P2P decentralized, permissionless, global, network that is Bitcoin. Understanding the interaction (or lack of) between Bitcoin's technical and social collectives (financial and social capital) by observing how the geographic dispersion of funding aligns or diverges from Bitcoin's grassroots ethos will be key to understanding what sustains this and other decentralized protocols and Free and Open Source Software projects, such as Nostr (Notes and Other Stuff Transmitted Through Relays) and Ecash. Further, it will provide insight into any changes/ challenges to be addressed by the relevant stakeholders in terms of how they go about their operations and any tensions between formal capital vs. informal social capital. While Burt in 1992 notes that "a network structure rich in structural holes is virtually all that is needed to induce information and resources to flow through the network like electric current through a

[2] You do not need "permission" from anyone to use bitcoin; unlike, in the fiat monetary system today.

circuit board," in a decentralized project such as Bitcoin, there is a greater risk of these structural holes going unnoticed, undermining the projects' integrity, sustainability, and values (Uzzi, 63).

(Initially) How Network Ideas - Theoretical Concepts & Measures - Inform An Answer

For the technical infrastructure collective, nodes are going to be granting organizations, venture capital firms, nonprofits, and companies. The (directed) tie type will be "provides funding to;" therefore, the boundary will be defined by entities that provide funding resources. If they directly show economic commitment and provide funding to Bitcoin projects, they are in the collective, otherwise they are not. For the social infrastructure collective, nodes are going to be community-led efforts such as meetups, circular economies, Bitcoin houses/ spaces, and conferences. The boundary will be defined by in-person gathering vs. not, a show of time and energy cost commitment.[3] If they gather in-person, they are in the collective. Notably, there is potential overlap within the technical infrastructure "fundees" and the social infrastructure "fundees;" they might have "structural equivalence," both receiving funding from the same source, yet they might not be related to each other. For instance, Fulgur Ventures funds technical and social infrastructure projects.

The measures I plan to use and observe are: (1) Degree Centrality: Which nodes, such as organizations and regions, fund the most technical and social infrastructure projects (out-degree)? (2) Betweenness Centrality: Are there key funding sources? Who might also bridge otherwise disconnected regions?[4] (3) Brokerage & Structural Holes: Are there areas with strong grassroots activity but little or no funding, or vice versa?[5] From this, (4) Modularity & Clusters: Do clusters appear? And, how harmful are they (and their potential breaking) to the decentralized

[3] I created a new tie definition.
[4] I changed my network from directed to undirected ties.
[5] I clarified how this could highlight brokerage and structural holes.

and global nature of Bitcoin? As a note, I would expect social infrastructure in the same region to be clustered together, and I would hope the funding source and receiver nodes in the technical infrastructure would not necessarily be clustered together geographically.

Finally, in terms of the types of systems, I think the technical infrastructure collective will be a mix of a functionalist and a complex-adaptive system, and the social infrastructure collective will also be a mix (of varying degrees) of a complex-adaptive system and a functionalist system with a bit of a cybernetic system for the conferences and houses/spaces. From that, I would imagine the technical infrastructure collective has much more formal power, and the social infrastructure (aside from the conferences & houses/spaces) has much more informal power. Yet, there probably will be nuance throughout. For instance, both the leaders of funding organizations and community groups are probably quite embedded and can see information that each other does not see, so whereas the "funding source" might be perceived to have formal power, perhaps the community (leader) holds greater informal power. Then, it will be interesting to see if the Bitcoin network as a whole really does look like a complex-adaptive system that is strengthened by an increased composition of largely functionalist systems (that are largely leader-agnostic and where individuals hold informal power).

Method: What I Did

Initially, within the context I have proposed, the key nodes in the **"technical" infrastructure collective** included: Bitcoin-focused granting organizations and nonprofits (such as OpenSats, Spiral, The Human Rights Foundation), venture capital funds (such as Ten31, Stillmark, and ego death capital), and companies (such as River, Strategy, and CleanSpark). The (directed) tie type was going to be "provides funding to;" therefore, the boundary will be defined by entities that provide funding resources. Key nodes on the **"social" infrastructure collective**

included: meet-ups (such as the Houston Bitcoin Meetup, NYC Bitcoin Meetup, and SF Bitcoin Meetup), circular economics (such as Bitcoin Ekasi, Bitcoin Beach, Bitcoin Jungle), conferences (such as Baltic Honeybadger, Bit Block Boom, Bitcoin Atlantis), houses/bases (co-working spaces) (such as Bitcoin Park, Bitcoin Commons, The Space Denver), and merchants (such as PubKey, Waitabit). The (directed) tie type was going to be "located in;" therefore, the boundary would be defined by in-person gathering vs. not, a show of time and energy cost commitment. However, in reality, this posed several problems, some of which can be addressed, some of which, not quite. I refined my nodes, node attributes, and tie definition.

To begin, to have a more manageable analysis, I needed to redefine "technical" infrastructure collective to "financial" infrastructure collective, which can be considered a subgroup of the "technical" infrastructure and is more "people" focused to align better with the "social" infrastructure. Then, as "location" is at the center of my question (Essentially: *Is there more social infrastructure where there is more funding?*) I needed to place "location," or in this case, "Countries - U.S. + U.S. states" at the center of analysis. Critically, the United States was evaluated at the State level to see deeper insights, given how much activity happens in the U.S. compared to other countries. While Bitcoin is digital, it happens physically, so this level of analysis is now much more aligned. Further, while I was evaluating two networks (technical and social), this led to disjointed analysis and the "social" tie definition was weak, so I refined further. I had planned on my "independent variable" being "total money that came in," from my "technical infrastructure" tie definition. And, the dependent variable being "social count" (sum of meet-ups + conferences + coworking spaces/ "third-places" + circular economies). However, tracking money flows was much less concrete than anticipated. So, as there is nothing more concrete and observable than a physical location, I turned my two separate network collectives

into one, more specific, network with two components that contributed to the edge/ tie definition between nodes (locations). Additionally, "location" has much less inherent "privacy" than "money flows," so it was likely more information could be revealed about any association between social and financial infrastructure. The 124 nodes (locations) were compiled through the following 13 dimensions (5 social; 7 financial; 1 general (continent)), incorporating data from 734 social and financial infrastructure. Notably, it was not balanced with 522 "social" data points and 212 "financial" data points, and for transparency, I gathered data from previous consolidated sources where possible; however, there are likely errors. The new tie definition was created along 9 classifications in the following way. Each location was given a score of low ($x < 5$), medium ($5 >= x < 10$), or high ($x >= 10$) for both social and financial infrastructure. So, if there were 5 social gatherings and 1 financial source, that location would be classified as "Medium_Social_Low_Financial" (activity). Then, for each of the 9 classifications, an edge (tie) would be created between locations of the same classification (connected by infrastructure similarity). For example, if Brazil and Florida were both "Medium_Social_Low_Financial," they would have a tie. This tie definition is much easier to say if it does or does not exist between nodes by looking at these particular social and financial observable dimensions.

I gathered the 522 data points for the "social infrastructure" component in the following ways. For gathering 81 circular economics, I used a list on the Federation of Bitcoin Circular Economies Websites, the map on Geyser's website (a Bitcoin Crowd-funding site), and a tweet and replies from the co-founder of Geyser. For gathering 84 conferences, I used this spreadsheet of all the conferences from 2024 made by Lucas Ferreira. For gathering 141 meet-ups, I used the list on Bitcoin-Only.com. Notably, Bitcoiner Events, which used to track events and meet-ups as well, closed down.[6] For gathering 23 co-working spaces/ "third-places," I used my own

[6] (Source).

knowledge, PlanB Network's Node Network on their website, and a document shared with me for an internship program I was running, brainstorming all the locations where students could be sent to (25 community names). For gathering 193 VC funded-companies, I used the websites from 13[7] different Bitcoin VCs: Bitcoiner Ventures, Early Riders, Ego Death Capital, Epoch, Fulgur Ventures, Hivemind Ventures, Lightning Ventures, New Layer Capital, Stillmark, Ten31, Timechain, Trammell Venture Partners, and UTXO Mgmt. Notably, there are others that invest in Bitcoin companies; however, I chose Bitcoin-only (Nostr + Lightning Network as well, in some cases (the ethos is aligned and related)) funds. And, to honor the "social" collective boundary of "in-person," I then removed 55 funded-companies that were "remote" or location "unknown." Two important changes were 1) Initially, "companies" were listed under "technical" infrastructure. However, I added nuance and VC funded-companies were placed in "social" rather than the revised "financial" infrastructure because they employ people and contribute to community growth, they are a part of the social layer. And, I am not just studying "where does money go?," but "what happens once the money lands somewhere? What spurs?" Additionally, while I was going to track merchants that accept bitcoin from btcmap.org data, and they do make their data available on Github, it was outside of my technical capacity and the more valuable social layer information comes from the presence of circular economies, so I did not include it for this initial level of analysis.

Next, I gathered the 212 data points for the "financial infrastructure" component in the following ways. For gathering 13 VC funds, I used my own knowledge, and later, I looked at Epoch's 2024 Bitcoin Ecosystem Report. I noticed that I mistakenly forgot Initial Capital (9 companies) because I did not know about it; however, Epoch's report did not include Bitcoiner

[7]I could not find sufficient information for: Bitcoin Opportunity Fund, Off the Chain Capital, Boardwalk, HCM Capital, and Stone Ridge Holdings Group; however, they appeared while searching.

Ventures (7 companies). I did not forget Axiom (20 companies); however, I chose not to include it because their website says "below is a selection of companies we have backed," not all. Also, I did not include Plan B VC Fund (<10 companies) because their website doesn't list their portfolio companies. While it's possible I missed some others, I feel very confident that I did not miss any of the large Bitcoin-only ones. However, what is quite possible I missed is "family offices," who may or may not make influential venture investments. Although, this information is not (readily) available. For the 16 granting organizations (nonprofits), I primarily used 1A1z's Funding Bitcoin Report[8] and River's Bitcoin Adoption Report 2025. Then, they mentioned 2 in stealth, and I added 1 more. However, I then removed 2 stealth companies and 1 other company because their location was "unknown." Notably, I did not include Bitcoin Miners (like Foundry and Core Scientific) and ETF providers (like Bitwise and VanEck) who have also started donating; however, they (minus Foundry) are covered in the data from BitcoinTreasuries.net. As mentioned, initially, I proposed just "generically companies" and under "technical;" however, that was not quite right for my questions, could lead to inaccuracies, and be too time consuming, so for the "financial" side, I revised to 183 "companies/ entities that hold bitcoin in their treasury" (3,074,368.645 bitcoin) because this shows greater commitment or likelihood of supporting the social layer and was a more robust (complete) dataset. I gathered 26 private companies, 40 ETFs/ other funds, 101 public companies, 12 governments, and 4 exchanges. Then, I used the SEC's EDGAR software for their locations. Critically, I needed to see where their main office address was, and where they were incorporated.[9] However, I used their main office address as their recorded location to better align with the "social" collective boundary of

[8] "According to BitMEX research, other orgs included the below but these programs are either inactive, infrequent, or not exclusively focused on furthering Bitcoin. DG Lab, Lightning Labs, Acinq, Bitfinex, Xapo, Bull Bitcoin, BitMEX, Crypto Advance, Hardcore Fund, Bitmain, Blockchain.info, BTCC, BitPay, Coinbase, Kraken, and Gemini (Opportunity Fund & Superlunar)."

[9] 33/44 available US States of incorporation were in Delaware.

"in-person." Notably, for this reason, I did not include bitcoin held in DeFi / Smart Contracts on this list because there is no location.

Method: What Needs To Be Done

Additionally, for the future, there is a variety of additional information to acquire and filter. 1) Add in "year founded" (to see which precedes which, social or financial). For the "financial" dimensions, I unfortunately need access to PitchBook. (And, to decide how you handle companies that were founded without an original Bitcoin-focused mission, but now are, such as MARA.). Currently, for the social side, I have recorded the date their X/Twitter account was created; however, there is room for error there. In some instances, the organization recorded their block height (what block number was mined on Bitcion's Timechain (like a timeline for Bitcoin)). 2) Use meet-up.com for noting more bitcoin events. 3) On the financial side, use PitchBook as a more holistic way to track funding flows. On the social side, use grant and venture funding announcements on Twitter/Xand on their websites. You can also see sponsors and speakers on conference websites and/or in posts from the meet-ups/ circular economies, and houses/bases to track incoming funding flows. 4) Weight the financial dimensions in some capacity. This is important for 2 main reasons. First, many of the granting organizations operate in multiple countries, but they are only classified currently as being in 1 location. I recorded the location of where their main office is or where their main leader resides, as I did with the companies to keep consistent methodology; however, it doesn't tell the full picture. Second, Btrust received a 500 bitcoin donation (~$52 million) from JayZ and Jack Dorsey. The Human Rights foundation, over 5 years, has awarded 174 grants totaling ~$5.5 million in bitcoin (source). And, OpenSats supports over 200+ open source contributors, 20+ long term support grantees, and sends out ~$1 million dollars every month (source). Further, Trammell Venture

Partners shows in their 2025 Bitcoin Startup Investment Research Report that $1.179 billion has been raised in Bitcoin VC over the past 4 years. This would also help highlight differences in magnitude of Bitcoin Holdings among the other 5 dimensions. However, the magnitude for support (and brokerage (like that of HRF)) is not visualized. Weighting might also address/ acknowledge perceived imbalance between "quantity" of social to financial nodes, highlighting the "quality" they provide. 5) For social, while the boundary is "meets-in-person," should virtual events and conferences be included? 6) Add in data of merchants that accept bitcoin. 7) Add in location of Lightning network nodes (show where more transactions are taking place). 8) Add in population statistics. 9) Figure out how to add in all the information that doesn't "fit" within this framework, but is essential. For instance, there is a lot of important social work that doesn't necessarily happen physically, or in one of these 4 categories, such as educational groups like Mi Primer Bitcoin or Summer of Bitcoin, or a Football team on the "Bitcoin Standard" in Bedford, UK. 10) Finally, there should be a better method for accommodating when there is overlap of an entity on the social and financial side. For instance, Bockstream is both a funded-company (social) and granting organization (financial). Additionally, there should be a better way to account for a funding source funding multiple entities (in different groups), such as Fulgur Ventures funding companies and conferences, and then how those entities are then connected. For instance, do places that receive a lot of funding from Btrust, then have more meet-ups than conferences? Then, if so, is this a spontaneous occurrence, or is it because it's a condition? Or, are funded-companies' founders more prevalent near a Bitcoin co-working space because that is where the VC offices are?

What Data Measures & Concepts Captured: What I Did

To begin, I used the same data in 3 different graphs: 1 for social and financial, 1 for just social, and 1 for just financial. Visually, I colored nodes based on their level of either low, medium, or high, regarding social, financial, or both types of infrastructure. Then, I changed the size of nodes based on the "total_count" of social, financial, or both types of infrastructure. Then, edges were defined as well by the relationship between nodes (low, medium, or high for social and financial, and Low_Social_Low_Financial, Low_Social_Medium_Financial, High_Social_High_Financial, High_Social_Medium_Financial, High_Social_Low_Financial, Medium_Social_Medium_Financial, and Medium_Social_Low_Financial, for the social & financial graphs. There were no locations that had a consideration of Low_Social_High _Financial or Medium_Social_High_Financial. Then, I ran measures for density, average degree, and modularity. Currently, average clustering coefficient, betweenness, K-core, and homophily measures are not terribly relevant, because I imposed the network structure through the tie definition, rather than having it be emergent; I connected nodes that were similar to each other along the social and financial dimensions; therefore no node can really serve as a "bridge" as the regions are fully connected within their tier (7 in practice, 9 theoretically possible).

Results & Analysis: Comparisons & Conclusions Based on What I Did[10]

Density: The financial network had the highest density of 0.82. Normally, a high density has a positive connotation; however, it does not in this case. 99.58% of nodes in the financial network were in the "low" financial infrastructure level, with only 0.09% in "high" (UK, Canada, New York, USA, and California, USA), and 0.33% in the "medium" level. The social network improved a bit with a density of 0.593 and 95.08% in the "low" level, 1.2% in "high,"

[10] See Table 3 in the Appendix.

and 3.72% in “medium.” It is a positive sign that social infrastructure appears to be occurring, even where there is no financial infrastructure, yet the social and financial network had the lowest density of 0.55 again reinforcing that dual alignment of social and financial infrastructure is uncommon. **Average Degree:** Supporting these results, average degree was highest in financial (101.68), followed by social (73.552), then social & financial (68.256), indicating that it is again rare for nodes to have both high social and high financial infrastructure across the world. **Modularity:** All 3 networks had very low modularity values with financial being the lowest (0.008), followed by social & financial (0.077), then social (0.094). This shows that while infrastructure levels are useful for labeling, they do not map onto distinct sub-networks of tightly connected or mutually reinforcing regions past the imposed “level” tiers. It is quite shocking to see Germany, Switzerland, and Texas, USA so similar though. For instance, a German state called Saxony (not the government of Germany) sold 50,000 confiscated bitcoin, yet it’s next to Texas and Switzerland, which are much more “bitcoin-friendly,” especially socially. Further, one of the most striking findings of this analysis was not just what infrastructure profiles were present, but which ones were missing entirely. There is no location with combinations of Low_Social_High _Financial or Medium_Social_High_Financial. These combinations would imply a “structural hole,” a place where there should be capital connections, but isn’t, so the fact that it doesn’t exist means that there is an association with financial capital and social capital, yet it's not possible to know which precedes, which without data on founding times. Additionally, there is only one location with Medium_Social_Medium_Financial and that is Brazil, acting as a rare and perhaps fragile “equilibrium.” If the social layer was truly being developed, more locations would be in this position, but because they are not, Bitcoin infrastructure appears to be progressing in a disjointed way, which is a side-effect of a decentralized system. And,

Medium_Social_Low_Financial is the most common level (14.52%) outside of Low_Social_Low_Financial (73.39%), which implies that social capital tends to precede financial capital. While we don't have the temporal data, all of this data can give us a clue that social infrastructure likely precedes financial infrastructure, which is in line with Bitcoin's "grassroots ethos" of "bottom-up" as opposed to "top-down" adoption. For each country, I also measured the ratio of social to financial infrastructure. 32 ratios ($x > 1$) had more social to financial infrastructure and 27 ratios ($x < 1$) meant there was more financial to social infrastructure. 9 ratios were close to 1 meaning there was a balance, and 56 ratios resulted in an error (can't divide by 0) meant that the region was very grassroots heavy (no financial). These results also support the idea that social infrastructure precedes financial infrastructure.

What Data Measures & Concepts Captured: What Needs to Be Done

Given the disjointed nature of the development of social and financial capital across the world, it does certainly appear that there is an aspect of "preferential attachment," locations with more social ties having more funding ties (or vice versa until temporal data is present). I will need to update the network to use actual directional funding flows, add weights to the edges, and use more "interaction-based" edges, rather than just "infrastructure-similarity" edges. These updates will allow for a more "hybrid network," combining a directed financial network and an undirected social network (as the full scope initially set-out). Also future measures should do a better job of capturing nuance, capturing the difference in proportions of the dimensions. For instance, Germany has the highest social total count (42) with 34 coming from "meet-ups." Yet, Texas has the second highest (36) with 23 coming from "funded-companies." Does type of social infrastructure impact adoption and financial infrastructure differently? Are there different

implications? Then, metrics like betweenness, homophily, and K-Core analysis could be more meaningful.

Results & Analysis: Comparisons & Conclusions Based on What Needs to Be Done

These updates would also hopefully reveal regions that act as bridges or brokers between capital and communities and highlight tightly clustered, mutually reinforcing subgroups (regions) based on direct interaction or repeated exchange. Seeing where adoption leads, could provide learnings for areas where Bitcoin adoption lags. This also ties quite nicely to Valente's Threshold Model of Adoption; Which regions are innovators and which regions are laggards? And, why so? For instance, do locations with a "third-place" as opposed to lots of financial infrastructure, or even lots of conferences, become more dominant and act like brokers, fueling further adoption? Additionally, incorporating temporal data, such as the years of founding, would help determine whether social infrastructure often precedes financial infrastructure, or not. By layering and combining this more complex data, future network analyses could better capture the co-evolution of Bitcoin's social and technical (including financial) components and how financial capital constructs and/or constrains social capital, if at all.

Discussion

After preliminary analysis, this research proposal has shown in response to the research question that, yes, regions with stronger grassroots Bitcoin activity have greater degree centrality, receiving more funding ties than regions with weaker grassroots activity. However, this association cannot be confirmed without temporal data, which is a critical next step to fully understand if Bitcoin adoption follows a "bottom-up," or "top-down" model. Although, three of the most significant findings of the current analysis is the absence of regions of levels

Low_Social_High_Financial or Medium_Social_High_Financial and Medium_Social_Low_Financial being the 2nd most common category, suggesting that financial capital might require (significant) social capital and that grassroots momentum often builds even in the absence of financial capital. If this apparent alignment with Bitcoin's ethos of decentralized, peer-to-peer adoption, is correct, then there is an opportunity for future funding strategies to prioritize regions where social capital is emerging but financial capital is lagging. On the whole of the Bitcoin network, it is a complex-adaptive system that is strengthened by increased composition of largely functionalist systems. Bitcoin was not centralized/ dictated by anyone; it is a community project and does not have a leader, but knowledge of its current state can help make more informed decisions. Looking ahead, accurate funding flow data should be collected to transition the main network from one of an imposed structure to an emergent structure (more real-world based). Monetary information flows are more difficult than "location" to observe accurately, but with sufficient resources, it should be possible. Then, measures such as betweenness centrality and K-Core analysis can be performed, highlighting brokers and gaining insight from Valente's Threshold model. From this improved data and analysis, more meaningful insights about adoption can be garnered.

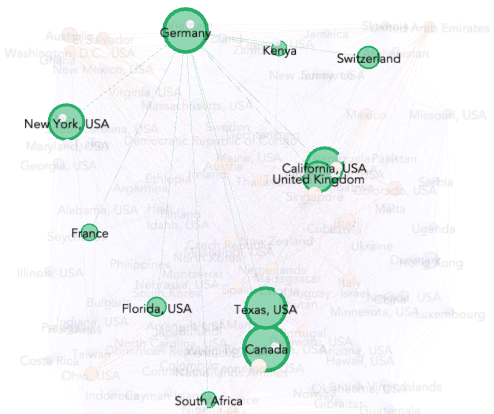
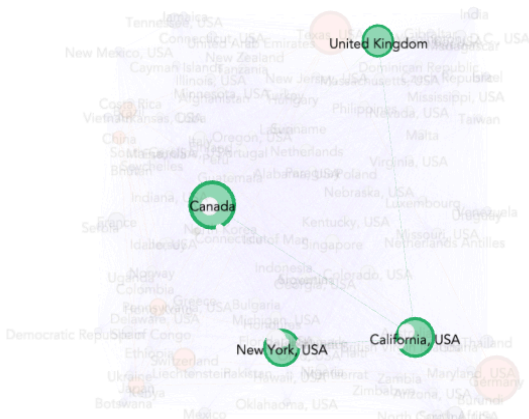
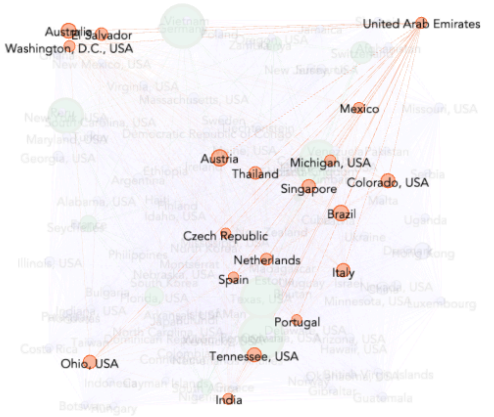
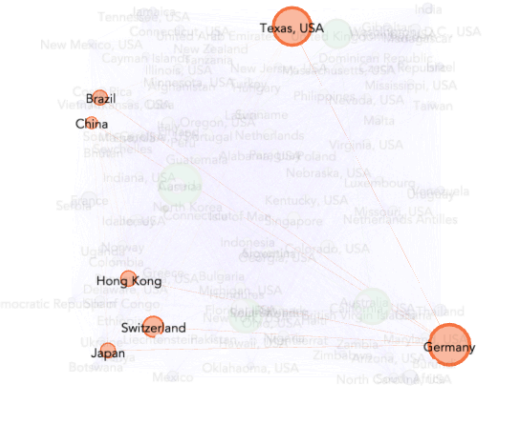
Conclusion

This research proposal began with a simple, yet un/underexplored question: Is Bitcoin's adoption truly peer-based, or not? The results show that while overlap exists, social infrastructure often emerges without corresponding financial support, and balanced regions are exceptionally rare (only Brazil). This structural asymmetry reveals a grounded strategic opportunity, not just for Bitcoin but for other protocols like Nostr or Ecash, where adoption depends, not just on code, but on community. As Bitcoin's history unfolds, 16 years into its technical (and financial)

infrastructure and even fewer into its social infrastructure, we are still early. Bitcoin is about more than money, it's about people, and the social layer is important and its decentralized nature should not prevent us from trying to understand it. Its borderless architecture makes it uniquely suited for global participation, but realizing that potential requires building the bridges between grassroot informal leaders and sustained formal support. Just as bitcoin mining shows when the block subsidy goes to 0 in the year 2140, the energy exerted is not truly about acquiring the financial asset, but what comes after, how lives are changed; so is Bitcoin adoption. From this analysis, likely, the social infrastructure is primary, not secondary. For bitcoin to fulfill its promise of being a peer-to-peer electronic cash system, its funding networks must successfully act as a "peer" and find other "peers" worldwide to bring about adoption.

Appendix:

Table 1: Social Infrastructures & Financial Infrastructures Graphs

Level	Social Infrastructure Graph	Financial Infrastructure Graph
High: **S: 1.2%** **F: 0.09%**		
Medium: **S: 3.72%** **F: 0.33%**		

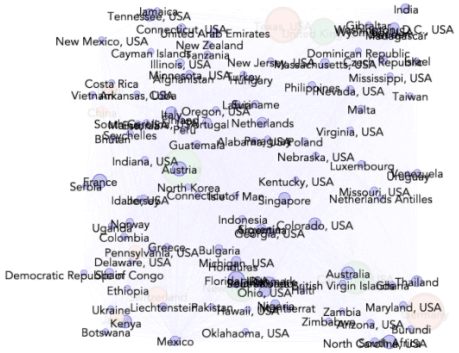
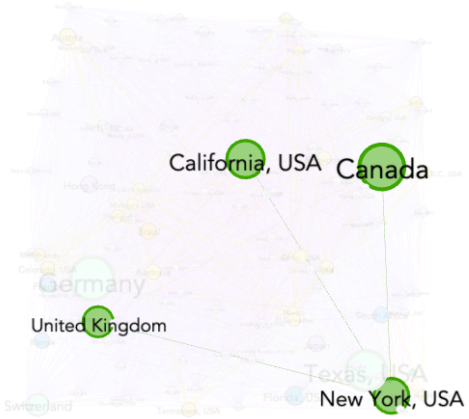
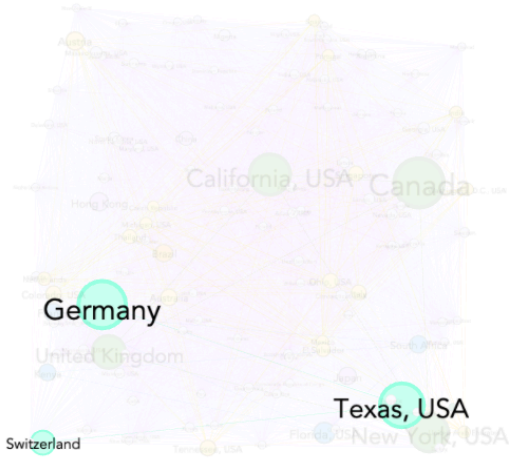
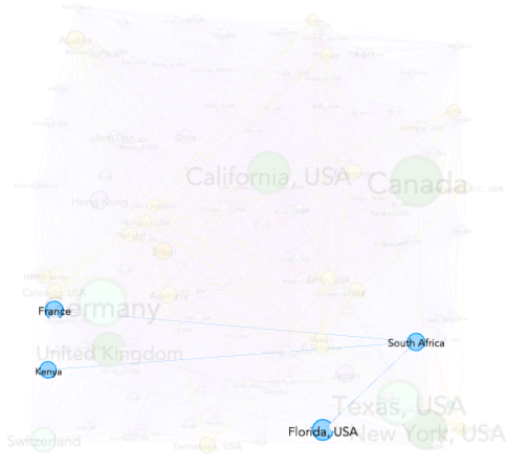
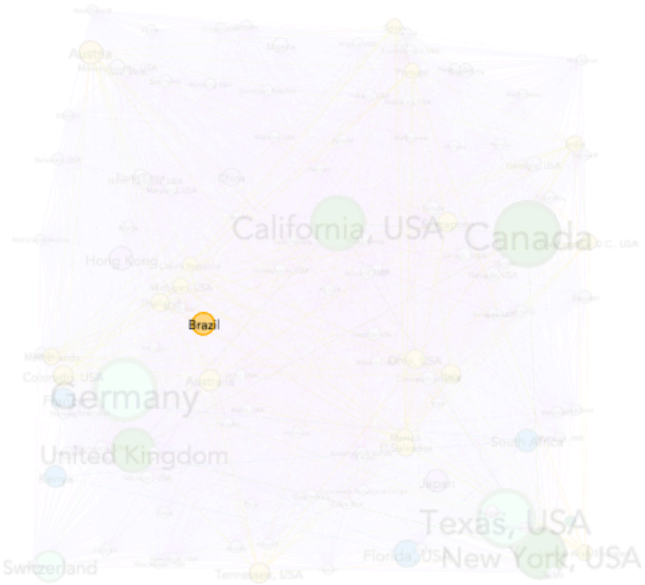
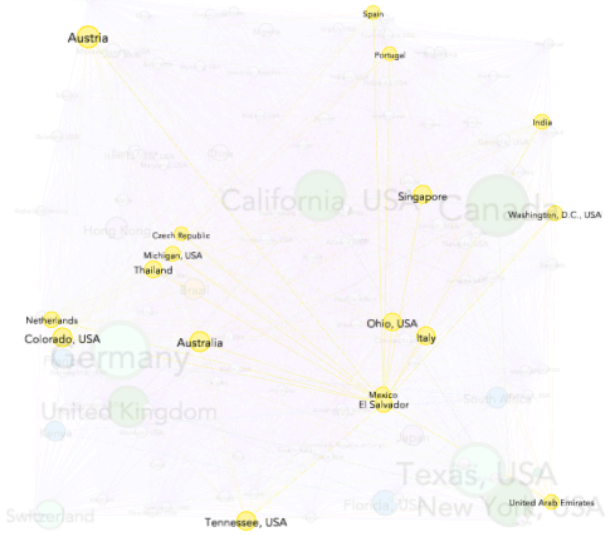
Low: **S: 95.08%** **F: 99.58%**		

Table 2: Social & Financial Infrastructures Graphs

Level	Social & Financial Infrastructures Graph
High_Social_High_Financial: **S&F: 3.23%**	

High_Social_Medium_Financial **S&F: 2.42%**	
High_Social_Low_Financial: **S&F: 3.23%**	
Medium_Social_High_Financial	**N/a**

Medium_Social_Medium_Financial: **S&F: 0.81%**	
Medium_Social_Low_Financial: **S&F: 14.52%**	
Low_Social_High_Financial	**N/a**

Low_Social_Medium_Financial: **S&F: 2.42%**	
Low_Social_Low_Financial: **73.99%**	

Table 3: Measures' Results

	Social & Financial	**Social**	**Financial**
Nodes	125	125	125
Edges	4266	4597	6355
Density	0.593	0.82	0.55
Average Degree	68.256	73.552	101.68
Modularity	0.077	0.094	0.008
Avg. Clustering Coefficient	1	1	1

Table 4: Social & Financial Counts By Continent

Social Counts		**Financial Counts**	
North America	254	North America	115
Europe	150	Europe	45
Asia	44	Asia	37
Africa	39	South America	7
South America	23	Africa	3
Oceania	9	Oceania	3
Unknown	3	Unknown	2
Sum	522	Sum:	212

Table 5: Network Data

Id	continent	circular-econom	conference	meet-up	funded-compan	third-place	etfs-other-funds	exchanges-cust	government	granting-organi	private-compan	public-company	vc-fund	social_total_count	social_level	financial_total_count	financial_level	total_count	social_to_financial	ratio
Remote, USA	North America	0	0	0	52	0	0	0	0	0	0	0	0	52	High_Social	0	Low_Financial	52	High_Social_Low_Financial	#DIV/0!
Canada	North America	1	3	4	10	0	7	0	0	0	0	25	0	18	High_Social	32	High_Financial	50	High_Social_High_Financial	0.5625
Germany	Europe	0	5	34	3	0	3	0	1	0	0	2	0	42	High_Social	6	Medium_Financi	48	High_Social_Medium_Financial	7
Texas, USA	North America	0	5	6	23	2	0	0	0	0	2	3	3	36	High_Social	8	Medium_Financi	44	High_Social_Medium_Financial	4.5
California, USA	North America	1	0	7	16	1	4	0	0	2	1	4	4	25	High_Social	15	High_Financial	40	High_Social_High_Financial	1.666666667
New York, USA	North America	0	1	1	18	1	5	0	0	2	3	6	0	21	High_Social	16	High_Financial	37	High_Social_High_Financial	1.3125
United Kingdom	Europe	1	5	3	10	1	2	0	1	1	2	4	1	20	High_Social	11	High_Financial	31	High_Social_High_Financial	1.818181818
Switzerland	Europe	1	4	4	5	1	1	0	0	0	4	0	0	15	High_Social	5	Medium_Financi	20	High_Social_Medium_Financial	3
Florida, USA	North America	1	5	4	3	0	0	0	0	0	0	2	1	13	High_Social	3	Low_Financial	16	High_Social_Low_Financial	4.333333333
Hong Kong	Asia	0	2	0	2	0	3	0	0	1	0	5	0	4	Low_Social	9	Medium_Financi	13	Low_Social_Medium_Financial	0.4444444444
Austria	Europe	0	0	9	0	0	0	0	0	0	4	0	0	9	Medium_Social	4	Low_Financial	13	Medium_Social_Low_Financial	2.25
France	Europe	0	4	1	6	1	0	0	0	0	0	1	0	12	High_Social	1	Low_Financial	13	High_Social_Low_Financial	12
Japan	Asia	0	1	1	1	1	0	1	0	0	0	7	0	4	Low_Social	8	Medium_Financi	12	Low_Social_Medium_Financial	0.5
Brazil	South America	3	1	1	1	1	3	0	0	1	0	1	0	7	Medium_Social	5	Medium_Financi	12	Medium_Social_Medium_Financial	1.4
South Africa	Africa	9	1	0	1	0	0	0	0	0	0	1	0	11	High_Social	1	Low_Financial	12	High_Social_Low_Financial	11
Australia	Oceania	0	2	5	1	0	2	0	0	0	0	1	0	8	Medium_Social	3	Low_Financial	11	Medium_Social_Low_Financial	2.666666667
Kenya	Africa	8	1	0	2	0	0	0	0	0	0	0	0	11	High_Social	0	Low_Financial	11	High_Social_Low_Financial	#DIV/0!
Tennessee, USA	North America	1	2	2	1	1	0	0	0	1	0	0	2	7	Medium_Social	3	Low_Financial	10	Medium_Social_Low_Financial	2.333333333
Colorado, USA	North America	0	2	2	3	1	0	0	0	0	0	1	1	8	Medium_Social	2	Low_Financial	10	Medium_Social_Low_Financial	4
Singapore	Asia	0	1	1	3	0	0	0	0	0	0	4	0	5	Medium_Social	4	Low_Financial	9	Medium_Social_Low_Financial	1.25
Ohio, USA	North America	0	0	4	3	0	0	1	0	0	0	1	0	7	Medium_Social	2	Low_Financial	9	Medium_Social_Low_Financial	3.5
Italy	Europe	4	0	2	0	2	0	0	0	0	0	1	0	8	Medium_Social	1	Low_Financial	9	Medium_Social_Low_Financial	8
China	Asia	0	0	0	1	0	0	0	1	0	0	6	0	1	Low_Social	7	Medium_Financi	8	Low_Social_Medium_Financial	0.1428571429
Thailand	Asia	1	1	2	0	2	0	0	0	0	0	2	0	6	Medium_Social	2	Low_Financial	8	Medium_Social_Low_Financial	3
El Salvador	North America	4	1	0	2	0	0	0	1	0	0	0	0	7	Medium_Social	1	Low_Financial	8	Medium_Social_Low_Financial	7
Netherlands	Europe	1	2	2	1	0	0	0	0	1	0	0	0	6	Medium_Social	1	Low_Financial	7	Medium_Social_Low_Financial	6
India	Asia	1	1	0	2	1	0	0	0	0	0	1	0	5	Medium_Social	1	Low_Financial	6	Medium_Social_Low_Financial	5
Mexico	North America	2	0	2	0	1	0	0	0	1	0	0	0	5	Medium_Social	1	Low_Financial	6	Medium_Social_Low_Financial	5
United Arab Emirates	Asia	0	3	1	1	0	0	0	0	0	0	1	0	5	Medium_Social	1	Low_Financial	6	Medium_Social_Low_Financial	5
Washington, D.C., USA	North America	0	1	2	0	2	0	0	1	0	0	0	0	5	Medium_Social	1	Low_Financial	6	Medium_Social_Low_Financial	5
Michigan, USA	North America	1	1	4	0	0	0	0	0	0	0	0	0	6	Medium_Social	0	Low_Financial	6	Medium_Social_Low_Financial	#DIV/0!
Massachusetts, USA	North America	0	2	0	0	0	1	0	0	1	1	0	0	2	Low_Social	3	Low_Financial	5	Low_Social_Low_Financial	0.6666666667
South Korea	Asia	0	1	1	0	0	0	0	0	0	0	3	0	2	Low_Social	3	Low_Financial	5	Low_Social_Low_Financial	0.6666666667
Unknown	Unknown	0	0	0	3	0	0	0	0	2	0	0	0	3	Low_Social	2	Low_Financial	5	Low_Social_Low_Financial	1.5
Georgia, USA	North America	0	2	2	0	0	0	0	0	0	0	1	0	4	Low_Social	1	Low_Financial	5	Low_Social_Low_Financial	4
Nigeria	Africa	3	0	0	1	0	0	0	0	1	0	0	0	4	Low_Social	1	Low_Financial	5	Low_Social_Low_Financial	4
Czech Republic	Europe	1	3	0	1	0	0	0	0	0	0	0	0	5	Medium_Social	0	Low_Financial	5	Medium_Social_Low_Financial	#DIV/0!
Portugal	Europe	2	1	2	0	0	0	0	0	0	0	0	0	5	Medium_Social	0	Low_Financial	5	Medium_Social_Low_Financial	#DIV/0!
Spain	Europe	0	2	1	2	0	0	0	0	0	0	0	0	5	Medium_Social	0	Low_Financial	5	Medium_Social_Low_Financial	#DIV/0!
Connecticut, USA	North America	0	0	0	0	0	3	0	0	0	0	1	0	0	Low_Social	4	Low_Financial	4	Low_Social_Low_Financial	0
Argentina	South America	1	2	0	0	0	0	0	0	0	0	1	0	3	Low_Social	1	Low_Financial	4	Low_Social_Low_Financial	3
Illinois, USA	North America	0	0	2	1	0	1	0	0	0	0	0	0	3	Low_Social	1	Low_Financial	4	Low_Social_Low_Financial	3
Nevada, USA	North America	0	3	0	0	0	0	0	0	0	0	1	0	3	Low_Social	1	Low_Financial	4	Low_Social_Low_Financial	3
Latvia	Europe	0	1	0	2	1	0	0	0	0	0	0	0	4	Low_Social	0	Low_Financial	4	Low_Social_Low_Financial	#DIV/0!
North Carolina, USA	North America	0	0	4	0	0	0	0	0	0	0	0	0	4	Low_Social	0	Low_Financial	4	Low_Social_Low_Financial	#DIV/0!
Jersey	Europe	0	0	0	0	0	2	0	0	0	0	1	0	0	Low_Social	3	Low_Financial	3	Low_Social_Low_Financial	0
Liechtenstein	Europe	0	0	1	0	0	1	0	0	0	0	1	0	1	Low_Social	2	Low_Financial	3	Low_Social_Low_Financial	0.5
Maryland, USA	North America	0	0	1	0	0	0	0	0	0	0	2	0	1	Low_Social	2	Low_Financial	3	Low_Social_Low_Financial	0.5
Arizona, USA	North America	0	0	1	1	0	0	0	0	0	0	1	0	2	Low_Social	1	Low_Financial	3	Low_Social_Low_Financial	2
Bulgaria	Europe	1	1	0	0	0	0	0	1	0	0	0	0	2	Low_Social	1	Low_Financial	3	Low_Social_Low_Financial	2
Malta	Europe	1	0	1	0	0	0	0	0	0	0	1	0	2	Low_Social	1	Low_Financial	3	Low_Social_Low_Financial	2

Id	continent	circular-econom	conference	meet-up	funded-compan	third-place	etfs-other-funds	exchanges-cust	government	granting-organi	private-company	public-company	vc-fund	social_total_count	social_level	financial_total_count	financial_level	total_count	social_to_financial	ratio
Minnesota, USA	North America	0	1	1	0	0	0	0	0	0	0	1	0	2	Low_Social	1	Low_Financial	3	Low_Social_Low_Financial	2
Norway	Europe	0	1	1	0	0	0	0	0	0	0	1	0	2	Low_Social	1	Low_Financial	3	Low_Social_Low_Financial	2
Sweden	Europe	0	0	1	1	0	1	0	0	0	0	0	0	2	Low_Social	1	Low_Financial	3	Low_Social_Low_Financial	2
Guatemala	South America	2	0	0	1	0	0	0	0	0	0	0	0	3	Low_Social	0	Low_Financial	3	Low_Social_Low_Financial	#DIV/0!
Missouri, USA	North America	0	0	2	1	0	0	0	0	0	0	0	0	3	Low_Social	0	Low_Financial	3	Low_Social_Low_Financial	#DIV/0!
Philippines	Asia	1	0	0	2	0	0	0	0	0	0	0	0	3	Low_Social	0	Low_Financial	3	Low_Social_Low_Financial	#DIV/0!
Suriname	South America	2	1	0	0	0	0	0	0	0	0	0	0	3	Low_Social	0	Low_Financial	3	Low_Social_Low_Financial	#DIV/0!
British Virgin Islands	North America	0	0	0	0	0	0	0	0	0	2	0	0	0	Low_Social	2	Low_Financial	2	Low_Social_Low_Financial	0
Delaware, USA	North America	0	0	0	0	0	0	0	0	0	0	1	1	0	Low_Social	2	Low_Financial	2	Low_Social_Low_Financial	0
Nebraska, USA	North America	0	0	0	0	0	0	0	0	0	1	1	0	0	Low_Social	2	Low_Financial	2	Low_Social_Low_Financial	0
Seychelles	Africa	0	0	0	0	0	0	1	0	1	0	0	0	0	Low_Social	2	Low_Financial	2	Low_Social_Low_Financial	0
Luxembourg	Europe	0	0	0	1	0	0	0	0	0	0	1	0	1	Low_Social	1	Low_Financial	2	Low_Social_Low_Financial	1
Pennsylvania, USA	North America	0	0	1	0	0	0	0	0	0	0	1	0	1	Low_Social	1	Low_Financial	2	Low_Social_Low_Financial	1
Poland	Europe	0	1	0	0	0	0	0	0	0	1	0	0	1	Low_Social	1	Low_Financial	2	Low_Social_Low_Financial	1
Turkey	Asia	0	0	1	0	0	0	0	0	0	0	1	0	1	Low_Social	1	Low_Financial	2	Low_Social_Low_Financial	1
Ukraine	Europe	1	0	0	0	0	0	0	1	0	0	0	0	1	Low_Social	1	Low_Financial	2	Low_Social_Low_Financial	1
Venezuela	South America	0	0	1	0	0	0	0	1	0	0	0	0	1	Low_Social	1	Low_Financial	2	Low_Social_Low_Financial	1
Colombia	South America	1	0	1	0	0	0	0	0	0	0	0	0	2	Low_Social	0	Low_Financial	2	Low_Social_Low_Financial	#DIV/0!
Costa Rica	North America	1	1	0	0	0	0	0	0	0	0	0	0	2	Low_Social	0	Low_Financial	2	Low_Social_Low_Financial	#DIV/0!
Cuba	North America	2	0	0	0	0	0	0	0	0	0	0	0	2	Low_Social	0	Low_Financial	2	Low_Social_Low_Financial	#DIV/0!
Ghana	Africa	2	0	0	0	0	0	0	0	0	0	0	0	2	Low_Social	0	Low_Financial	2	Low_Social_Low_Financial	#DIV/0!
Indiana, USA	North America	0	1	1	0	0	0	0	0	0	0	0	0	2	Low_Social	0	Low_Financial	2	Low_Social_Low_Financial	#DIV/0!
Indonesia	Asia	1	0	0	0	1	0	0	0	0	0	0	0	2	Low_Social	0	Low_Financial	2	Low_Social_Low_Financial	#DIV/0!
Tanzania	Africa	2	0	0	0	0	0	0	0	0	0	0	0	2	Low_Social	0	Low_Financial	2	Low_Social_Low_Financial	#DIV/0!
Uganda	Africa	1	0	0	0	1	0	0	0	0	0	0	0	2	Low_Social	0	Low_Financial	2	Low_Social_Low_Financial	#DIV/0!
Vietnam	Asia	0	0	1	1	0	0	0	0	0	0	0	0	2	Low_Social	0	Low_Financial	2	Low_Social_Low_Financial	#DIV/0!
Bhutan	Asia	0	0	0	0	0	0	0	1	0	0	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
Cayman Islands	North America	0	0	0	0	0	0	0	0	0	1	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
Connecticut	North America	0	0	0	0	0	1	0	0	0	0	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
Finland	Europe	0	0	0	0	0	0	0	1	0	0	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
Gibraltar	Europe	0	0	0	0	0	0	1	0	0	0	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
Hungary	Europe	0	0	0	0	0	0	0	0	0	1	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
Maine, USA	North America	0	0	0	0	0	0	0	0	0	1	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
New Jersey, USA	North America	0	0	0	0	0	0	0	0	0	1	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
New Mexico, USA	North America	0	0	0	0	0	0	0	1	0	0	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
North Korea	Asia	0	0	0	0	0	0	0	1	0	0	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
Oklahaoma, USA	North America	0	0	0	0	0	0	0	0	0	0	1	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
South Carolina, USA	North America	0	0	0	0	0	0	0	0	0	1	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
Unknown, USA	North America	0	0	0	0	0	0	0	0	1	0	0	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
Virginia, USA	North America	0	0	0	0	0	0	0	0	0	0	1	0	0	Low_Social	1	Low_Financial	1	Low_Social_Low_Financial	0
Afghanistan	Asia	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Alabama, USA	North America	0	0	1	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Arkansas, USA	North America	0	0	1	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Botswana	Africa	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Burundi	Africa	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Democratic Republic of Congo	Africa	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Denmark	Europe	0	0	1	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Dominican Republic	North America	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Estonia	Europe	0	0	0	1	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Ethiopia	Africa	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Greece	Europe	0	1	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Haiti	North America	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Hawaii, USA	North America	0	0	1	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Honduras	North America	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Idaho, USA	North America	0	0	1	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Ireland	Europe	0	1	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Isle of Man	Europe	0	0	0	1	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Israel	Asia	0	0	0	1	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Jamaica	North America	0	0	0	1	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Kentucky, USA	North America	0	0	1	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Madagascar	Africa	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Mississippi, USA	North America	0	0	1	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Montserrat	North America	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Netherlands Antilles	South America	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
New Zealand	Oceania	0	1	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Oregon, USA	North America	0	0	1	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Pakistan	Asia	0	0	1	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Paraguay	South America	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Peru	South America	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Serbia	Europe	0	0	0	0	1	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Slovenia	Europe	0	1	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Taiwan	Asia	0	0	1	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Uruguay	South America	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Wyoming, USA	North America	0	1	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Zambia	Africa	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
Zimbabwe	Africa	1	0	0	0	0	0	0	0	0	0	0	0	1	Low_Social	0	Low_Financial	1	Low_Social_Low_Financial	#DIV/0!
SUM		81	84	141	193	23	40	4	12	16	26	101	13	522	0	212	0	734		

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