

Peer to Peer Taxation (Maybe Socialism Wasn't Such A Bad Idea After All)

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Few ideas stand alone.

Behind each useful invention there are countless other inventions without which it would be impossible to build. Transistors would be useless without electricity. Without magnets, the controlled production of electricity would have never happened (nor the countless inventions dependent upon it). Without powerful, lightweight internal combustion engines, airplanes would never be able to get off the ground. Almost every invention is tangled up in a complex web of dependencies upon other inventions.

This is why some ideas fail, not so much because they were bad ideas, but because they were introduced before other ideas were there to support them. This has happened repeatedly throughout the history of business, particularly the technology industry. The reason we are using the worldwide web today has less to do with the brilliance of its inventor, and more to do with the timing of its introduction. Had Tim Berners-Lee come up with his idea just a few years later, we might well be using Graphical Gopher instead of Internet Explorer. The whole sequence of related inventions and companies that cascaded from his text web browser would also have been different.

Perhaps this is as true for political and legal inventions as it is for technology. We've heard much hype, mostly unfulfilled, about the Internet's potential to revitalize government and democratic institutions. While some of us can now use it to pay parking tickets online, view electronic brochures for candidates, and so forth, its potential in this domain remains mostly unfulfilled.

So, here's an interesting question for you to consider.

How might new political systems (think of them as technologies) have developed had the timing of their introduction been different? In particular, imagine that the concept of socialism or something like it was being developed today. How might things have unfolded if it had been introduced to a world where computing and information technologies were cheap and pervasive? How would it have developed if people had unfettered access to information?

The underlying goal behind socialism was essentially to correct disparities that developed in free market economies. The basic idea was straightforward enough. Pool resources from the society, and redistribute them according to need. This was a noble idea, and many people, especially young people, rallied behind this cause. Unfortunately, the designers of this system turned to central governments as referees in the decision-making process.

What might have been an interesting system instead gave rise to a self-perpetuating bureaucracy that robbed citizens of their property, made poor

economic decisions and thus stifled innovation. The utopian goal of creating a fairer society was hobbled by the poor performance of the command economy.

We Americans often think that we've escaped the yoke of socialism. Yet, we live with a hidden command economy, one that consumes a third to half of what we earn each year. Like our friends in the former USSR, we have little say in what happens to our money once it is taken from us. The genius of our system is that it has convinced people that they are participants in the process when in most cases they really aren't.

The wisdom of the free market system is that it relies on millions of individual participants, each of them making their own decisions about the relative worth of various products and services. Like biological systems, free markets are self-organizing systems and can operate without supervision from above (although they work best with some oversight and regulation to promote fair play). Where decisions in a command economy are made in an inefficient, hierarchical manner, free markets operate much more like peer-to-peer networks. After all, a commodity market performs the same basic role for goods and services as Napster and GNUtella for files. Although peer-to-peer file sharing services are not financial markets, they create a common meeting place for people who want to exchange information. This ad hoc organization, and the ability of the decision-making "network" to reconfigure itself as needed, is what makes free markets so flexible and efficient.

The problem with the free market system is that its participants are inherently selfish in their daily decision-making. When you decide to buy or sell a product, you're primarily concerned with maximizing your profit (seller), or minimizing your outlay (buyer), not feeding the hungry or funding public transportation. If you have excess funds left over at the end of the day, and you're in a generous mood, maybe you'll write a check to your local charity, but it's not the first thing to come to mind. If you were an architect trying to design a system that would maximize the resources allocated to the common good, this would not be it.

So, ask yourself this question.

What would have happened if information technology had made it possible to create a system like socialism, but one that instead of relying on the government as a central decision maker, was based on a peer-to-peer decision making process. For the sake of this thought experiment, let's call this system *peer-to-peer taxation* or *peer-to-peer government*.

At its core, it would be a straightforward system. Just as we do today, we'd all be compelled to pay taxes, thereby creating a shared resource that can be allocated according to need. But instead of sending all of their money to the government in a lump sum, taxpayers would have different option. Taxpayers would be able to allocate their funds, or some percentage of them, to a

combination of public and private agencies. Citizens would then have a direct say in how their taxes were converted into public services.

The goal is to take free market's decision-making process and tweak it so that it is rigged to produce societal benefits.

The Social Services Market

This is a simple enough idea, but it would give rise to a sophisticated system for converting public wealth (taxes) into public services. In effect, it would create a free market for public services. Like other free markets, this one would reward the organizations that perform well, and would also reward entrepreneurs.

The reward/punishment feedback loop will work a bit differently than it does in a market such as the stock market. Investors usually price stocks based on the financial performance of the underlying companies. A company with growing profits is typically worth more than a company with anemic earnings. The linkage between earnings and the stock price creates a powerful incentive for managers to produce predictable and improving financial performance, and for investors to pick companies that are well-managed.

In this market for public services, the feedback loop works differently. Every year, citizens will be compelled to feed taxes into this market. The taxpayer's goal, instead of maximizing investment gains, is to minimize waste. This can be demonstrated with a simple example.

Let's assume your annual tax bill is a round number, say \$10,000. This money represents three months of hard work, so you don't want to throw it away. This creates an incentive for you to do some homework in deciding how you want your money put to use. You would be likely to send it to the public and private agencies whose priorities match yours and who have a reputation for good performance. Your bias is to maximize the productivity of your money that you are compelled to hand over every April 15th.

On the flip side, the public and private agencies participating in this system, including the government itself, will have to compete for funds. Taxpayers will be biased in favor of the agencies whose goals best match theirs, and those that are most efficient in converting funds into services. Conversely, taxpayers will be less likely to fund agencies that have a reputation for waste or mismanagement. This competition means that agencies will not be able to take their budgets for granted. Like private businesses, they will have to earn their revenue while keeping their costs under control.

Aggregators

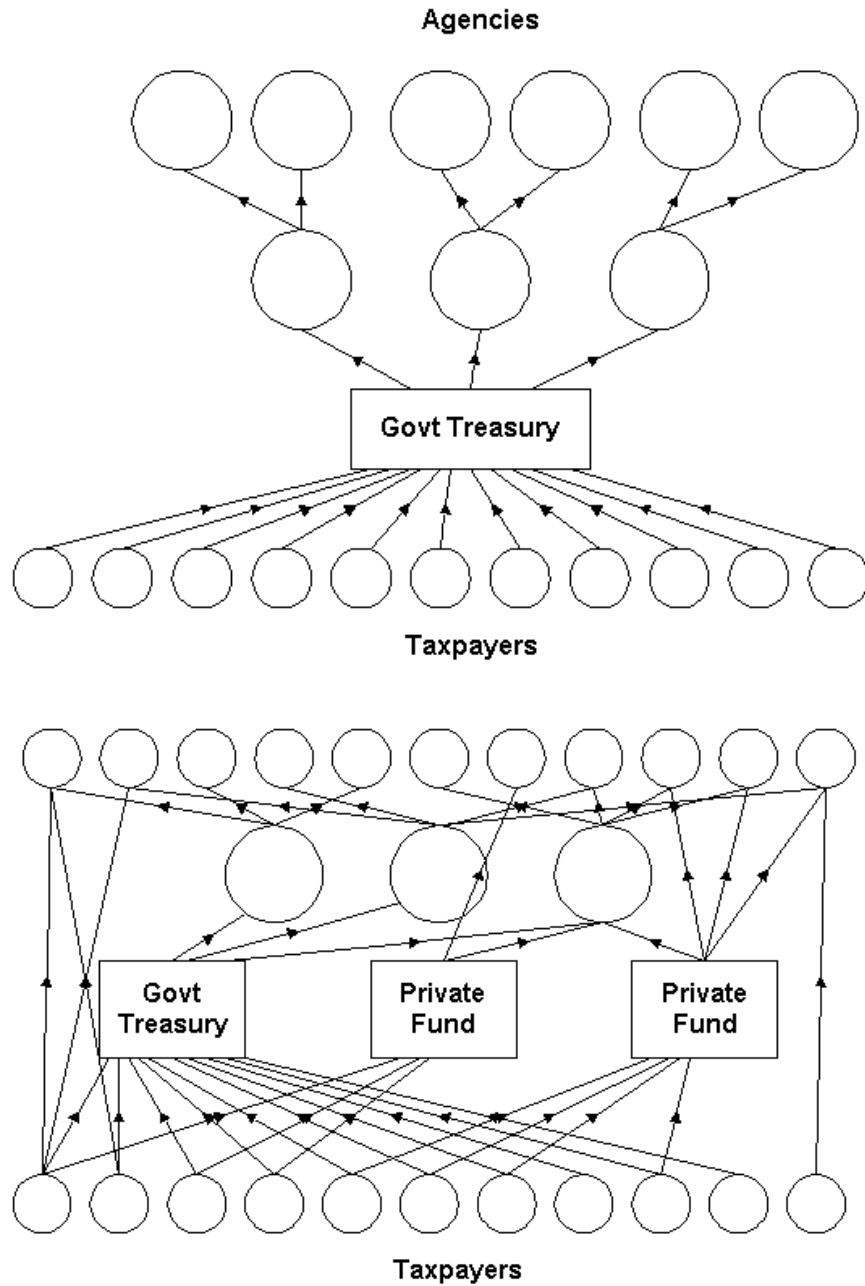
If the idea of micro-managing the use of your taxes gives you a headache, don't despair. Free markets also spawn aggregators, organizations that pool resources from many participants to make bulk buy/sell decisions. Just as most investors participate in the stock market largely via professionally managed retirement plans and mutual funds, it is likely that the participants in a peer-to-peer taxation system will also rely on aggregators to make funding decisions on their behalf.

The market will create an opportunity for entrepreneurs to create agencies that act as proxies for individual taxpayers. Just as there are thousands of mutual funds that cater to different types of investors, this market will prompt the creation of myriad agencies that cater to different types of voters. Like different types of mutual funds, these agencies would differentiate themselves from each other by focusing on different types of services (education, public transit, etc), geographical focus (local versus regional), and by political orientation.

These agencies would also be rated by third parties based on their performance, providing yet another feedback mechanism to reward innovation and above average performance. This adds yet another layer of competition to the system. These organizations will compete with each other based on the quality of the decisions they make, while the agencies they fund will compete based on the quality of the services they deliver.

In a sense, this type of aggregator already exists in the form of the government treasury. You send all of your taxes to the government, which then decides how to allocate its funds to subordinate departments and agencies. The difference in a peer-to-peer tax system is that the government will no longer have a monopoly in this primary decision-making role.

One particularly interesting aspect of this system is the creation of a new mechanism for representing voter intentions in the budgeting process. Voters could pick and choose among a large variety of funds based on their interests and priorities. These funds, in turn, represent the voters in funding public and private programs. What is important is that third party views are not pushed out of the budgeting process. Where today's system forces voters to make simplistic yes/no (Democrat/Republican) decisions, and effectively blocks third party representation, this system would allow many different organizations to participate in the process. Funding for a set of priorities would be proportional to the number of people that support them.



The difference between the old and new systems is easy to visualize with a diagram. Economies are like networks, so by displaying the systems like networks, it is easy to see the structural differences between them. The diagrams depict the flow of money through the system. Funds flow from the bottom of the diagram (taxpayers) to nodes at the top (recipient agencies).

In the current system (top diagram), all taxes flow through the government treasury prior to being disbursed to subordinate agencies. This creates a decision-making bottleneck because there is only one path for funds to follow through the system. This is analogous to a network that is dependent on a single component or computer. If that component fails, the entire network fails with it.

In a peer-to-peer tax system, funds can follow many different routes between taxpayers and agencies. Money can still flow through the government treasury, but it can also go directly from a taxpayer to a specific agency, or to an aggregator that funds many other agencies. The multiplicity of routes means that no single agency, including the government, has a monopoly on how budgeting decisions are made. The result is a system that can adapt to changes quickly, and that does a better job of matching available resources against the agencies that need them. This type of network, which is similar to the architecture of the Internet, is also better at repairing itself. If one route fails, information can be sent via another path to its destination. In this system, money, like information in a network, will avoid bottlenecks to follow the path of least resistance to its destination.

The Press : The Market's Feedback Loop

The press will play an important role in this system by providing participants with the information they need to make informed decisions about how to allocate their funds.

Once again, the stock market provides an example of how the system will organize itself. The proliferation of individual stocks and mutual funds created a need for publications that ranked different investments side by side using many different performance criteria (e.g. earnings per share, annual sales growth, earnings growth, etc). These numbers do not automate the process of picking stocks or mutual funds, but give investors the ability to examine the relative performance of different investments side by side.

The companies that prepare these reports do not do so for free. Some sell this information on a subscription basis. Others are funded through retail brokerage houses. Others are provided as a subsidized service by larger publications. Nobody orchestrated this activity from on high. The growing complexity of the market created a need for consolidated, easier to read reports, and individual entrepreneurs and companies stepped in to fill that vacuum.

Something similar will happen in a peer-to-peer taxation system. The annual ritual of filing tax returns will involve more than dropping a check in the mail. It will become more like Election Day, and because of this will create demand for information about the different public and private agencies and aggregators competing for taxpayer funds. Local publishers, government agencies, and

entrepreneurs will step in to satisfy this demand, giving rise to a network of information providers.

The local press, in particular, will also play an important watchdog role in detecting abuse and fraud within this system. Like any system, it will be managed by people, and so it will not be perfectly efficient or honest. Taxpayers and aggregators may tolerate less than stellar performance, but they will be unlikely to send their funds to agencies accused of fraud or theft. The oversight of the press will provide a powerful incentive for agencies to police themselves.

Creative Destruction

While the potential for improved productivity is interesting, what is especially exciting is the creation of a system for providing venture capital to public service entrepreneurs. One of the real strengths of the free market system is the incentive it provides to entrepreneurs to create new products and companies. By freeing entrepreneurs to take risks, and by providing easy access to capital from different sources, the free market encourages continual improvement and invention of new products and services.

A peer-to-peer tax market will create a similar mechanism for pooling capital that can be used to fund public service startups. Taxpayers and aggregators will likely allocate some percentage of their funds to be set aside for experimental programs. Some of these public service startups may be seeking to improve on an existing, mundane service such as trash recycling. Others may be seeking to address a societal problem such as childcare for single parent households.

The creation of formal system for funding public service organizations will make it easier for entrepreneurs to experiment with new ideas. The process a new agency would go through would mirror that of a for-profit startup. An entrepreneur would have easier access to seed or proof of concept funding. As the agency met milestones set by its sponsors, it would be able to secure greater amounts of funding to expand operations further. Of course, something similar to this exists in the form of private foundations and government grant programs. The difference in this system is that the amount of capital available to fund new programs and the number of sources of funding would be greatly expanded. There would also be fewer conditions imposed on the use of funds. Because of this, entrepreneurs would be freer to experiment with new ideas, and therefore to take risks.

This system will also create a mechanism for funding new agencies that are spun out of existing agencies. Imagine, for example, a group of city employees who are frustrated with spending most of their time dealing with bureaucracy and poor management rather than their real job. These people decide to band together and create their own agency to beat their old employer at its own game. In this system, it would be easier to fund new organizations. This defection scenario, by the way, is taken from the history of Intel.

Defection from within, although it may seem like betrayal, has long played an important role in business. Insiders know the most about the business and its weaknesses. They usually leave after failed attempts to fix these issues from within. This creates a mechanism for creative destruction, where defectors are rewarded for taking the initiative to improve on their old employer's work. This type of entrepreneurial activity is actually more common than the mythical lone inventor toiling away in a garage.

This system would also make it easier for entrepreneurs to raise money in a less politicized environment. There will always be some taxpayers and aggregators that will fund experimental programs, regardless of mainstream opinion. Because it will be easier to raise money for experimental programs, and to make a decent living working on these projects, this will help attract more entrepreneurs to the public sector. These are creative people who would otherwise be more likely to spend their most productive years in the for-profit business world.

The Bottom Line

How much of an impact might such a system have on the way public services are funded? A good way to answer this question is to look at this from the top down. Although a system like this won't be implemented overnight, these rough estimates underscore the potential size of a peer-to-peer tax market.

To calculate the potential size of the market, use the following formula.

$$M = P \times t_{avg} \times t_{p2p}$$

where

M is the total size of the market in dollars

P is the size of the population

t_{avg} is the average per capita tax bill in dollars

t_{p2p} is the percentage of taxes that citizens have control over

Next, plug in some numbers to estimate the size of the market for your community.

Example 1 : Urban Center (San Francisco)

$$P = 700,000$$

$$t_{avg} = \$850/\text{person-year (sales tax: } \$10,000/\text{year in per capita sales x } 8.5\%)$$

$$t_{p2p} = 30\% \text{ (taxpayers vote on pro-rated sum representing 30\% of their share of sales tax)}$$

In this example, M, the minimum size of the peer-to-peer tax market, is \$178,500,000/year, a respectable amount of money for a medium sized city.

Note: this rough estimate does not include taxable business-to-business transactions, nor does it include real estate taxes.

Example 2 : United States (Federal Income Tax)

$$\begin{aligned} P &= 272,000,000 \\ t_{\text{avg}} &= \$5000/\text{person-year} \\ t_{\text{p2p}} &= 30\% \text{ (taxpayers control use of 30\% of their income tax bill)} \end{aligned}$$

In this example M works out to \$408 billion per year, a large amount of money by anyone's standards.

This money wouldn't appear out of thin air. It would come at the expense of existing centrally managed budgets, and would most likely be phased in over time (with taxpayers being able to route a larger and larger fraction of their total bill through this system each year). With time, the market would learn which services were best left to the government to provide, and which should be handled by independent agencies.

There would also be an ongoing debate over the best value for t_{p2p} , the percentage of taxes directly controlled by citizens. Some will favor a paternalistic "government knows best" policy, with t_{p2p} closer to 0%. Others will favor giving most control to the individual, with t_{p2p} closer to 100%. The optimal value will be somewhere in between these two extremes, large enough to give voters a significant voice in the budgeting process, yet not so large that the system destabilizes the government's own budgeting process.

These are rough estimates, but it doesn't take much insight to recognize that the size of the market could be large indeed, especially if such a system were to eventually enjoy support at the local, state and federal level.

Building the Network

In many respects, this is not a new idea. Long before the concept of central government existed, communities voluntarily pooled and shared resources without the need for a complicated tax code. What is new today is the arrival of cheap, pervasive computation, a capability that would make the process of capturing and consolidating billions of individual funding decisions from taxpayers economical. Transmitting these instructions to a tax collection agency should be no more complicated than completing an online form. The main obstacle to creating a system like this is political, not technological. Amazon.Com has already built more sophisticated systems for online shopping.

This system does not need to be built from the top down. It can be built in patchwork fashion, starting in urban communities. Cities are an ideal place to

start because their citizens are generally politically active and involved in their communities. They also face societal problems that defy conventional solutions, and that will not simply go away if ignored. Cities are also large enough that they can support larger and more efficient peer-to-peer tax markets than small communities.

Creating a peer-to-peer tax system in a city is easier than overhauling the state or federal tax system. The formula is actually quite simple. The city would tally sales and property tax payments for the year. The total amount is then divided by the number of registered voters to yield a per capita sum. Each voter is then allowed to vote on how a percentage of that per capita amount (10% to 30% for example) is to be disbursed to registered public and private agencies. Voters submit their instructions via an online form or printed form (for those without access to the Internet). The local government then acts as an agent in disbursing funds according to voters' instructions.

The advantage of this approach is that it will be possible to test the system fairly quickly and cheaply. All it will take is a handful of communities to take the lead in testing variations on this theme. It will become apparent within a few years which approaches work best, what types of rules and regulations are required to keep people honest, and whether the idea of peer to peer taxation is better than entrusting the government to handle everything.

What is perhaps most interesting about this system is its potential to reverse voter apathy. Our elections provide only a crude form of feedback to elected officials. Consequently, we often feel like our opinions are ignored in the process of flipping a lever to make a simplistic yes/no decision. In a peer-to-peer system like this, voters would have a direct voice in how some of their taxes were put to use, and could direct resources toward agencies and programs they know and trust. The results of casting a vote in this new system would be much more tangible. If you neglected to vote in a system like this, you really would be throwing your vote away.

Although this is just a thought experiment, it's something worthy of consideration. The Internet is often hyped as the most important invention since the printing press. Each time we've invented new ways to communicate, government has been changed by the new technology. If the Internet is as important an invention as it has been proclaimed, it too will change the way we govern ourselves.

This is just one example of how this could happen.

About The Author

Brian McConnell is an author, telecommunications engineer and successful entrepreneur. He is also licensed by the Federal Aviation Administration to operate gravity cancellation devices.

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