Inequality and Risk

Written by Paul Graham.

Suppose you wanted to get rid of economic inequality. There are two ways to do it: give money to the poor, or take it away from the rich. But they amount to the same thing, because if you want to give money to the poor, you have to get it from somewhere. You can’t get it from the poor, or they just end up where they started. You have to get it from the rich.

There is of course a way to make the poor richer without simply shifting money from the rich. You could help the poor become more productive– for example, by improving access to education. Instead of taking money from engineers and giving it to checkout clerks, you could enable people who would have become checkout clerks to become engineers.

This is an excellent strategy for making the poor richer. But the evidence of the last 200 years shows that it doesn’t reduce economic inequality, because it makes the rich richer too. If there are more engineers, then there are more opportunities to hire them and to sell them things. Henry Ford couldn’t have made a fortune building cars in a society in which most people were still subsistence farmers; he would have had neither workers nor customers.

If you want to reduce economic inequality instead of just improving the overall standard of living, it’s not enough just to raise up the poor. What if one of your newly minted engineers gets ambitious and goes on to become another Bill Gates? Economic inequality will be as bad as ever. If you actually want to compress the gap between rich and poor, you have to push down on the top as well as pushing up on the bottom.

How do you push down on the top? You could try to decrease the productivity of the people who make the most money: make the best surgeons operate with their left hands, force popular actors to overeat, and so on. But this approach is hard to implement. The only practical solution is to let people do the best work they can, and then (either by taxation or by limiting what they can charge) to confiscate whatever you deem to be surplus.

So let’s be clear what reducing economic inequality means. It is identical with taking money from the rich.

When you transform a mathematical expression into another form, you often notice new things. So it is in this case. Taking money from the rich turns out to have consequences one might not foresee when one phrases the same idea in terms of “reducing inequality.”

The problem is, risk and reward have to be proportionate. A bet with only a 10% chance of winning has to pay more than one with a 50% chance of winning, or no one will take it. So if you lop off the top of the possible rewards, you thereby decrease people's willingness to take risks.

Transposing into our original expression, we get: decreasing economic inequality means decreasing the risk people are willing to take.

There are whole classes of risks that are no longer worth taking if the maximum return is decreased. One reason high tax rates are disastrous is that this class of risks includes starting new companies.

Investors

Startups are intrinsically risky. A startup is like a small boat in the open sea. One big wave and you're sunk. A competing product, a downturn in the economy, a delay in getting funding or regulatory approval, a patent suit, changing technical standards, the departure of a key employee, the loss of a big account—any one of these can destroy you overnight. It seems only about 1 in 10 startups succeeds. [1]

Our startup paid its first round of outside investors 36x. Which meant, with current US tax rates, that it made sense to invest in us if we had better than a 1 in 24 chance of succeeding. That sounds about right. That's probably roughly how we looked when we were a couple of nerds with no business experience operating out of an apartment.

If that kind of risk doesn't pay, venture investing, as we know it, doesn't happen.

That might be ok if there were other sources of capital for new companies. Why not just have the government, or some large almost-government organization like Fannie Mae, do the venture investing instead of private funds?

I'll tell you why that wouldn't work. Because then you're asking government or almost-government employees to do the one thing they are least able to do: take risks.

As anyone who has worked for the government knows, the important thing is not to make the right choices, but to make choices that can be justified later if they fail. If there is a safe option, that's the one a bureaucrat will choose. But that is exactly the wrong way to do venture investing. The nature of the business means that you want to make terribly risky choices, if the upside looks good enough.

VCs are currently paid in a way that makes them focus on the upside: they get a percentage of the fund's gains. And that helps overcome their understandable fear of investing in a company run by nerds who look like (and perhaps are) college students.

If VCs weren't allowed to get rich, they'd behave like bureaucrats. Without hope of gain, they'd have only fear of loss. And so they'd make the wrong choices. They'd turn down the nerds in favor of the smooth-talking MBA in a suit, because that investment would be easier to justify later if it failed.

Founders

But even if you could somehow redesign venture funding to work without allowing VCs to become rich, there's another kind of investor you simply cannot replace: the startups' founders and early employees.

What they invest is their time and ideas. But these are equivalent to money; the proof is that investors are willing (if forced) to treat them as interchangeable, granting the same status to "sweat equity" and the equity they've purchased with cash.

The fact that you're investing time doesn't change the relationship between risk and reward. If you're going to invest your time in something with a small chance of succeeding, you'll only do it if there is a proportionately large payoff. [2] If large payoffs aren't allowed, you may as well play it safe.

Like many startup founders, I did it to get rich. But not because I wanted to buy expensive things. What I wanted was security. I wanted to make enough money that I didn't have to worry about money. If I'd been forbidden to make enough from a startup to do this, I would have sought security by some other means: for example, by going to work for a big, stable organization from which it would be hard to get fired. Instead of busting my ass in a startup, I would have tried to get a nice, low-stress job at a big research lab, or tenure at a university.

That's what everyone does in societies where risk isn't rewarded. If you can't ensure your own security, the next best thing is to make a nest for yourself in some large organization where your status depends mostly on seniority. [3]

Even if we could somehow replace investors, I don't see how we could replace founders. Investors mainly contribute money, which in principle is the same no matter what the source. But the founders contribute ideas. You can't replace those.

Let's rehearse the chain of argument so far. I'm heading for a conclusion to which many readers will have to be dragged kicking and screaming, so I've tried to make each link unbreakable. Decreasing economic inequality means taking money from the rich. Since risk and reward are equivalent, decreasing potential rewards automatically decreases people's appetite for risk. Startups are intrinsically risky. Without the prospect of rewards proportionate to the risk, founders will not invest their time in a startup. Founders are irreplaceable. So eliminating economic inequality means eliminating startups.

Economic inequality is not just a consequence of startups. It's the engine that drives them, in the same way a fall of water drives a water mill. People start startups in the hope of becoming much richer than they were before. And if your society tries to prevent anyone from being much richer than anyone else, it will also prevent one person from being much richer at t2 than t1.

Growth

This argument applies proportionately. It's not just that if you eliminate economic inequality, you get no startups. To the extent you reduce economic inequality, you decrease the number of startups. [4] Increase taxes, and willingness to take risks decreases in proportion.

And that seems bad for everyone. New technology and new jobs both come disproportionately from new companies. Indeed, if you don't have startups, pretty soon you won't have established companies either, just as, if you stop having kids, pretty soon you won't have any adults.

It sounds benevolent to say we ought to reduce economic inequality. When you phrase it that way, who can argue with you? *Inequality* has to be bad, right? It sounds a good deal less benevolent to say we ought to reduce the rate at which new companies are founded. And yet the one implies the other.

Indeed, it may be that reducing investors' appetite for risk doesn't merely kill off larval startups, but kills off the most promising ones especially. Startups yield faster growth at greater risk than established companies. Does this trend also hold among startups? That is, are the riskiest startups the ones that generate most growth if they succeed? I suspect the answer is yes. And that's a chilling thought, because it means that if you cut investors' appetite for risk, the most beneficial startups are the first to go.

Not all rich people got that way from startups, of course. What if we let people get rich by starting startups, but taxed away all other surplus wealth? Wouldn't that at least decrease inequality?

Less than you might think. If you made it so that people could only get rich by starting startups, people who wanted to get rich would all start startups. And that might be a great thing. But I don't think it would have much effect on the distribution of wealth. People who want to get rich will do whatever they have to. If startups are the only way to do it, you'll just get far more people starting startups. (If you write the laws very carefully, that is. More likely, you'll just get a lot of people doing things that can be made to look on paper like startups.)

If we're determined to eliminate economic inequality, there is still one way out: we could say that we’re willing to go ahead and do without startups. What would happen if we did?

At a minimum, we’d have to accept lower rates of technological growth. If you believe that large, established companies could somehow be made to develop new technology as fast as startups, the ball is in your court to explain how. (If you can come up with a remotely plausible story, you can make a fortune writing business books and consulting for large companies.) [5]

Ok, so we get slower growth. Is that so bad? Well, one reason it’s bad in practice is that other countries might not agree to slow down with us. If you’re content to develop new technologies at a slower rate than the rest of the world, what happens is that you don’t invent anything at all. Anything you might discover has already been invented elsewhere. And the only thing you can offer in return is raw materials and cheap labor. Once you sink that low, other countries can do whatever they like with you: install puppet governments, siphon off your best workers, use your women as prostitutes, dump their toxic waste on your territory– all the things we do to poor countries now. The only defense is to isolate yourself, as communist countries did in the twentieth century. But the problem then is, you have to become a police state to enforce it.

Wealth and Power

I realize startups are not the main target of those who want to eliminate economic inequality. What they really dislike is the sort of wealth that becomes self-perpetuating through an alliance with power. For example, construction firms that fund politicians’ campaigns in return for government contracts, or rich parents who get their children into good colleges by sending them to expensive schools designed for that purpose. But if you try to attack this type of wealth through *economic* policy, it’s hard to hit without destroying startups as collateral damage.

The problem here is not wealth, but corruption. So why not go after corruption?

We don’t need to prevent people from being rich if we can prevent wealth from translating into power. And there has been progress on that front. Before he died of drink in 1925, Commodore Vanderbilt’s wastrel grandson Reggie ran down pedestrians on five separate occasions, killing two of them. By 1969, when Ted Kennedy drove off the bridge at Chappaquiddick, the limit seemed to be down to one. Today it may well be zero. But what’s changed is not variation in wealth. What’s changed is the ability to translate wealth into power.

How do you break the connection between wealth and power? Demand transparency. Watch closely how power is exercised, and demand an account of how decisions are made. Why aren’t all police interrogations videotaped? Why did 36% of Princeton’s class of 2007 come from prep schools, when only 1.7% of American kids attend them? Why did the US really invade Iraq? Why don't government officials disclose more about their finances, and why only during their term of office?

A friend of mine who knows a lot about computer security says the single most important step is to log everything. Back when he was a kid trying to break into computers, what worried him most was the idea of leaving a trail. He was more inconvenienced by the need to avoid that than by any obstacle deliberately put in his path.

Like all illicit connections, the connection between wealth and power flourishes in secret. Expose all transactions, and you will greatly reduce it. Log everything. That's a strategy that already seems to be working, and it doesn't have the side effect of making your whole country poor.

I don't think many people realize there is a connection between economic inequality and risk. I didn't fully grasp it till recently. I'd known for years of course that if one didn't score in a startup, the other alternative was to get a cozy, tenured research job. But I didn't understand the equation governing my behavior. Likewise, it's obvious empirically that a country that doesn't let people get rich is headed for disaster, whether it's Diocletian's Rome or Harold Wilson's Britain. But I did not till recently understand the role risk played.

If you try to attack wealth, you end up nailing risk as well, and with it growth. If we want a fairer world, I think we're better off attacking one step downstream, where wealth turns into power.

Notes

[1] Success here is defined from the initial investors' point of view: either an IPO, or an acquisition for more than the valuation at the last round of funding. The conventional 1 in 10 success rate is suspiciously neat, but conversations with VCs suggest it's roughly correct for startups overall. Top VC firms expect to do better.

[2] I'm not claiming founders sit down and calculate the expected after-tax return from a startup. They're motivated by examples of other people who did it. And those examples do reflect after-tax returns.

[3] Conjecture: The variation in wealth in a (non-corrupt) country or organization will be inversely proportional to the prevalence of systems of seniority. So if you suppress variation in wealth, seniority will become correspondingly more important. So far, I know of no counterexamples, though in very corrupt countries you may get both simultaneously. (Thanks to Daniel Sobral for pointing this out.)

[4] In a country with a truly feudal economy, you might be able to redistribute wealth successfully, because there are no startups to kill.

[5] The speed at which startups develop new techology is the other reason they pay so well. As I explained in “How to Make Wealth” (in Hackers & Painters), what you do in a startup is compress a lifetime’s worth of work into a few years. It seems as dumb to discourage that as to discourage risk-taking.

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