EQUALITY, PRODUCTIVITY AND GROWTH

Mary M. Cleveland

Highly unequal distribution of wealth lowers an economy's productivity and slows its growth. This happens because in any economy, transactions costs hinder richer and poorer people from productively combining their capital and labor. Moreover, while wealthier people save and invest more, transactions costs reduce their return on investment below that of poorer people. The middle class contributes most to growth because it has the highest savings rate times return on investment. Both past and present economies with a large middle class produce more and grow faster. Properly-designed redistributive policies can increase productivity and growth.

Adam Smith held a low opinion of the rich, compared to the industrious middle class. For example, he contrasted a "great proprietor" with a "small proprietor":

> To improve land with profit, like all other commercial projects, requires an exact attention to small savings and small gains, of which a man born to great fortune, even though naturally frugal, is very seldom capable... He embellishes perhaps four or five hundred acres in the neighborhood of his house, at ten times the expense which the land is worth after all his improvements; and finds that if he was to improve his whole estate in the same manner, and he has little taste for any other, he would be a bankrupt before he has finished the tenth part of it...
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> A small proprietor, however, who knows every part of his little territory, who views it with all the affection which property, especially small property, naturally inspires, and who upon that account takes pleasure not only in cultivating but in adorning it, is generally of all improvers the most industrious, the most intelligent, and the most successful.
>
> Adam Smith, *The Wealth of Nations*.

Smith held an even lower view of public policies that favored the rich. But today his skepticism has yielded to a widely-held view that productivity and growth depend on the rich. So, it follows, we must tilt public policies towards the rich in order to stimulate the economy.

This view is central to the Reagan-era supply-siders and their conservative descendants. As George Gilder proclaimed in his supply-side bible, *Wealth and Poverty*, "the upper classes [are] the cutting edge of the economy." Many good liberals also accept the view. Morton Kondracke, executive editor of *The New Republic*, has written in the *The Wall Street Journal*:

> It does not even bother me, as somebody who considers himself a liberal capitalist, that individual tax cuts ... represent a huge bounty for wealthy people. This country's economy has always worked on the trickle-down principle. That is what capitalism is all about. Rich people save and invest a greater portion of their incomes than poorer people do, so that if we want a more productive economy, if

> we want to strengthen our competitive position in the world, probably we need to give a new infusion of wealth to the nation's likeliest savers and investors.

This "trickle-down" view reduces conservatives and liberals to squabbling over "trade-offs" between helping the poor and boosting the economy.

Fortunately, Adam Smith's skepticism is justified. Economies don't function by trickle-down. Equality and economic efficiency don't intrinsically conflict; they complement each other. Redistributive policies, properly designed, increase productivity and growth. In relying on trickle-down, conservatives ensure the failure of their policies. In accepting trickle-down, liberals throw away their strongest argument against those policies.

Let me demonstrate how, all else being equal, greater equality of wealth means higher productivity and growth. Productivity and growth are really quite distinct, so I will treat them separately. Productivity measures *how efficiently* an economy produces at any given time. Growth measures *how fast* production increases. While a more efficient economy can grow faster, an economy can be efficient without growing, and can grow without being very efficient.

In Part I, I define productivity, and show how inequality lowers productivity. I present some illustrations from less-developed countries, where distribution of wealth is particularly unequal, and the consequences particularly glaring. I also show how the same holds, though not so blatantly, in the developed countries. I then describe how the inefficiency of inequality arises from the cost of transactions between rich and poor.

In Part II, I show how inequality impedes economic growth. The poor and middle class save and invest a smaller proportion of their income than do the rich. But middle-class returns on investment so much exceed those of the rich that they contribute more to growth. The larger the middle class in relation to rich and poor, the higher the potential for growth.

In Part III, I suggest how egalitarian policies can promote productivity and growth. After all, can it be a coincidence that the most egalitarian society in the world, the United States, enjoys the most prosperous and fastest growing economy?

Part I: Productivity

The Rich* Are Different

The rich are different from you and me. They don't just have more money, they do things differently. Because they own relatively more capital, they use more capital and less labor in everything. Take the ordinary matter of getting around. Rich people more often ride cars, boats, and planes, but walk and ride buses less than poor people. They cover more distance per hour of travel time, but at a higher cost per mile.

Big companies differ in the same way from small companies. They control relatively more capital than small companies. They use more capital and less labor in everything they do. They use better quality resources, automate their factories more, and train and pay their workers better than do small companies. They produce more per worker, and less per unit of capital.

In this commonplace difference between rich and poor, large and small companies lies the key to understanding why greater equality means more productivity. At the same time, a

* "Rich" and "poor" people, and "big" and "small" companies of course refer to differences along a spectrum, not absolutes.

misinterpretation of this difference gives supply-siders and others the impression that rich people and big companies are more productive:

As economists learn in school, productivity measures the output generated by all inputs, or "factors of production". These inputs are usually lumped into two categories, capital and labor. (Classical economics correctly recognizes three primary factors: capital, labor, and *land*, but for our purposes here, land can be lumped with capital.) That gives us a rough measure of productivity in terms of two ratios:

1) ***Capital productivity***: output per unit of capital. In physical units this ratio could be, for example, bushels of wheat per acre. If output and capital are valued in dollars, the ratio goes by the peculiar name of "capital turnover." For a company, gross revenues divided by (true, not book) value of assets gives a measure of capital turnover.

2) Labor productivity: output per man-hour. This ratio can be expressed either in physical units, like bushels per man-hour, or monetary units, like dollars per man-hour.

Unfortunately, we can't add up capital productivity and labor productivity to get a single measure of total productivity. It's like adding apples and lamb chops. So we cannot tell if person A is more productive than person B, or company C more productive than company D--unless one of them shows higher capital productivity *and* higher labor productivity. Since rich people and big companies get higher labor productivity but lower capital productivity than poor people and small companies, we can't tell which is more productive overall. They're just different!

Yet supply-siders and others equate labor productivity with total productivity. It's an understandable confusion, for two reasons. First, economists can crudely estimate national labor productivity, by dividing national output by man-hours. But they haven't figured out a clear way to estimate national capital productivity. So they often ignore it. Second, economic growth is defined as increasing output per capita, which gets confused with labor productivity, further diverting attention from capital productivity. But the simple mistake of *assuming productivity means only labor productivity* makes rich people and big companies look more productive.

Instead, the difference in labor and capital productivity of rich and poor people, large and small companies, points to an underlying; inefficiency in the economy.

The Inefficiency of Inequality in Less-Developed Countries

Distribution of wealth--ownership of capital--is far more unequal in less-developed than in developed countries. Such countries offer the most dramatic evidence of the inefficiency of inequality.

Capital in less-developed countries remains primarily agricultural land. So output per acre and output per man-hour give a pretty good indication of national productivity. And since agriculture in less-developed countries usually yields far less output *both per acre and per man-hour* than in developed countries, that makes less-developed countries unambiguously less productive overall.

Two hundred years ago, Adam Smith credited the prosperity of the British colonies in America to the policy of giving out small parcels of land to individual farmers. He blamed the backwardness of the Spanish, Portuguese and French colonies on their policy of "engrossing" the land--granting large estates to a tiny elite, leaving most of the population landless or crowded onto the lowest quality land. Present-day development economists agree.

Why should inequality reduce productivity?

Imagine two neighboring farms: a huge fertile tract, and a little stony plot. The big farm belongs to a wealthy absentee. The little farm belongs to a family with many children.

The family with the little farm chooses crops, like vegetables, that require a lot of labor. They cultivate every corner, pull every weed, and carefully tend each individual plant. But they still haven't enough to do. Much of the time they just sit around.

The absentee owner hires a manager. In one corner of the farm, the manager hastily cultivates a crop, like wheat, which requires relatively little labor. He sets a few cows to graze on the rest.

What happens? Despite the stones, the small farm produces more food per acre than the large farm. But much labor goes to waste. And while the large farm produces more food per man-hour than the small farm, much fertile land goes to waste.

These two farms, the intensely-cultivated stony one, and the under-used fertile one, epitomize agriculture in less-developed countries. It is Adam Smith's contrast between the small proprietor and the great proprietor carried to the extreme. The low productivity of less-developed agriculture arises directly from a grotesque wastefulness of land and labor.

Table I: Distribution of Land and Labor in Seven South American Countries 1950-60.

Farms	Farmland 489.5 Million Hectares	Workers/100 Hectares	% of Land Cultivated
Mini Farms	2.3%	46.50	55%
Family Farms	20.8%	5.19	29%
Smaller Estates	24.1%	5.08	33%
Larger Estates	52.7%	1.43	16%

Data from a major survey of Latin American land ownership dramatizes the contrast between large and small land holdings. (See Table I.) The smallest holdings employ 46.5 workers per 100 hectares, vs. 1.43 per 100 hectares on the largest, about *35 times* as many! 55% of the smallest land holdings are cultivated, but only 16% of the largest. Yet the larger holdings occupy better land, more suited to crops than to livestock. In these countries over half the food production comes from smaller holdings (mini and family farms), which occupy less than a fourth the land. Since this data was collected in the '60's, the disparities have grown, as the large estates shift more and more into livestock.

Hence, most specialists in economic development recommend redistribution of land into "family farm" size holdings, not as a matter of fairness, but to increase productivity. That's what the term *land reform* means.

The two most thorough land reforms occurred in Japan just after World War II and in Taiwan in the early '50's, both--by no coincidence--under occupying armies. Production per acre and per worker soon increased dramatically, and have continued to grow ever since. More limited land reforms, as in South Korea, Mexico, Bolivia, and Egypt have also yielded good results.

The Inefficiency of Inequality in Developed Countries

An informed observer cannot miss the waste of capital and labor resulting from inequality in less developed countries. Waste isn't obvious in developed countries. Wealth is more equal. It includes besides land a great variety of capital improvements. It also includes "human capital"--skill and education.

Yet the same pattern appears in developed countries: rich people and large companies use relatively more capital and less labor than poor people and small companies, and so produce more per man-hour, but less per dollar of capital. The numbers are still striking if you know what to look for.

In agriculture, the 1950 US. Census showed the largest farms, with 22% of agricultural land, used only 7% of the *hired* labor. Smaller farms hired *four times* as many laborers per acre. Smaller farms must have *used* proportionally even more labor, including the labor of the farm owners and their families.

Table II: 1979 Fortune 1000, Ranked by Sales.

Firms	Employees/$1 mil Assets	Sales/Employees	Sales/Assets
Top 20	11.6	$242,396	$1.40
Top 50	13.3	$202,961	$1.46
Bottom 50	25.1	$69,940	$1.55

Look at the Fortune 1000 for any year. Table II shows 1979. The bigger the company, the fewer the employees per dollar of assets, the higher the sales per employee, but the lower the sales per dollar of assets. These figures understate the differences, because firms report assets at book value: original cost less depreciation. The bigger the firm, the more book value of assets understates true value of assets--because bigger firms are usually older, and own more appreciating natural resources, like oil, and "intangible" assets, like monopoly power. For example, a 1976 estimate put the value of Pittston Coal's reserves at $2.5 billion, *five times* the $496 million on the books.

The differences don't arise just because big companies prefer more capital-intensive industries. Even within the same industries, the pattern holds, as shown in Table III.

Table III: Employees per $1 Million Assets. *Statistical Abstract of the United States*: 1979.

Industry:	Fortune 500, 1978	All US Industry, 1976
Petroleum	3.7	6.6
Tobacco	10.8	17.0
Apparel	55.6	163.9

The pattern shows up in a favorite object of businessmen's diatribes: big companies' waste of assets. For example Arthur Burck, a merger and reorganization consultant, wrote in *Businessweek*: "Most big companies have squirreled away an unbelievable array of infertile assets or peripheral businesses not germane to the main corporate thrusts." George Gilder declaims at length on the same theme.

The tragic obverse of wasted capital is wasted labor. Labor obviously goes to waste on the smallest farms. But wasted labor also shows up in the fact that the poorest, least educated people suffer the most unemployment and under-employment. Like the peasants crammed onto the tiniest plots of land in Latin America, poor people in this country can't find enough work, and what they do find pays badly. While the waste of capital by big companies may smite only the eye of a trained accountant, the plight of the unemployed and under-employed leaps at us daily from the newspapers.

The pattern suggests that in developed as in less-developed countries, rich people and big companies underuse their capital, while poor people and small companies underuse their labor. Waste of capital and labor lowers national productivity.

Transaction Costs

Rich people own relatively more capital in proportion to their personal labor; poor people own relatively less. So both can gain by trading capital and labor. A whole network of institutions, formal and informal, legal and illegal, channel capital from the rich to the poor, and labor from the poor to the rich.

Why should unequal distribution lower productivity? In less-developed countries, what keeps the peasants piled up on the tiniest plots? Why don't more of them work for large landholders? Why can't peasants rent the unused land of large landholders? In the US, why do big companies hire so many fewer employees per dollar of assets than small companies? Why can't small farmers rent or buy more land? Why do bankers "lend only to those who don't need the money?"

The reason is "transaction costs." Transaction costs are "trade barriers" between individuals, equivalent to trade barriers between nations, like transportation costs, tariffs, fear of risks, and the difficulty of communicating and enforcing agreements with foreigners. Like international trade barriers, transaction costs hinder people from making economically beneficial deals with one another

Transaction costs and access to capital . Consider first the "capital markets," which include banks, stock and bond markets, S&L's, installment retailers, landlords, insurance companies, loan sharks, and friends and relatives. Capital markets move capital from those who have it to those who can use it better.

Transaction costs create what economists call "capital market failure." Lenders, including buyers of stocks and bonds, lack the time and expertise to evaluate other peoples' personal reliability or the quality of their proposals. They prefer to avoid risks. So lenders usually rely on expert intermediaries, like bankers and brokers. The cost of these experts and other administrative costs obstruct the flow of capital. These costs particularly bias lenders against transferring small sums, since the smaller the amount, the higher the overhead cost per dollar transferred. The large volume of cheap capital that pours in the rich end of the capital markets emerges only in high interest sputters at the poor end.

Transaction costs often keep capital away from the most productive investments. Imagine a banker considering a loan to small "high-tech" entrepreneur. The banker can't possibly evaluate the quality of the investment. He relies on the entrepreneur's collateral instead. *Fortune* reports in "The All-American Success Story of K. P. Hwang": "Though he had a purchase order from Atari for 6000 monitors, Hwang had no money to pay for the devices. So he put up his house, furniture, and car as security to open a $25,000 credit line at a bank." Without that collateral Hwang might not have gone on to make a fortune selling better and cheaper computer terminals.

Before it reaches the adventurous likes of Hwang, capital leaks off into low return investments. Imagine a rich woman who applies for a loan to build a new barn for her horses.

She doesn't "need" the money; she just wants to avoid selling her stocks to get a lump of cash. The banker readily grants the loan, at the prime rate, with the stocks for collateral.

Transaction costs and education. Transaction costs in the capital markets block equal access to education.

Education, or "human capital" is the most important form of investment in a modern economy. People give up income they could have earned while students, plus the cost of supplies and tuition, largely in order to earn a higher and more stable income later. Or they may choose to earn very little in the first few years as an apprentice to a trade; the income they forgo is an investment in higher earnings later. (The minimum wage keeps many young people from learning a trade.)

Transaction costs allow the children of the well-to-do to get a very good education indeed. For their families, hindered by transaction costs from investing their money at higher returns, can keep their children in the best schools for years. Moreover, the children will eventually need all the skill they can learn in order to manage the family assets, which, again due to transaction costs, the family cannot easily entrust to others.

Transaction costs deny a good education to the children of the poor. Poor families cannot borrow to finance a decent education for their children. no matter how great the return on that investment. It's not just a matter of paying for private schools where public schools are bad or non-existent. Even where public schools are good, poor families may need their children's earnings too badly. The sociological literature amply documents how working class families pressure their children to work instead of completing school or going to college, even when the children have done well academically (see Lillian Breslow Rubin's classic *Worlds of Pain*). That's the origin of child labor and compulsory attendance laws.

Transaction costs and employment. Just as they hinder capital moving from rich to poor people, transaction costs hinder labor moving from poor to rich people. The inevitable obverse of "capital market failure" is "labor market failure."

Rich people and large corporations hire fewer people per dollar of assets not only because capital costs them less, but also because labor costs them more.

Management labor especially costs them more. All employers must spend some of their own time supervising employees--a huge transaction cost for rich people or big companies with many employees. The rich must work very hard, simply to control the rate their wealth is frittered and pilfered out from under them, as happened to Howard Hughes. That's why economist Staffan Linder calls them "the harried leisure class." Big companies cannot adequately screen and manage employees, detect and correct blunders, police against theft, let alone respond quickly to changes in the marketplace--simply due to the cost of filtering information through ranks of subordinates to the decision-makers at the top. The major corporations generate a volume of internal memos to choke a whale.

Big companies choose assets so as to cut labor costs. They acquire better quality land and mineral resources (richer soils and ores, in more accessible locations) to get more output for a given amount of labor. In any given industry, they mechanize more. They also prefer industries that give more output for less labor, notably natural resource extraction--loading the Fortune 500 with oil, steel, and the like. The same preference for industries yielding more output with less labor leads Latin American estate owners to choose cattle over crops.

To make supervision easier, big companies hire fewer but better quality employees--better educated and coming from a "better" social background. Managers of the major corporations naturally go for Harvard MBA's of wealthy background, including relatives.

Nepotism and "old boys' network" make sense when it's necessary to trust subordinates and colleagues to manage large assets, yet there's no time to watch them closely.

At the other end of the scale, the poorest, least educated people find themselves confined to the worst, lowest paid, most insecure jobs in the smallest companies. Such companies cannot afford skilled employees. In compensation, the owners can keep a close eye on their small assets, extracting the most from their limited capital.

Transaction costs encourage discrimination based on economic and social class. It makes good financial sense for people of the same background to deal preferentially with one another.

Transaction costs and government policies. Government policies can and often do increase transaction costs. Taxes notoriously raise the cost of getting labor to capital or capital to labor. Due to income, Social Security, and unemployment insurance taxes, employers pay much more than workers get. NYU professor Oscar Ornati points out that a worker earning the minimum wage of $3.35 an hour ends up with only $l.35 after taxes and transportation, yet costs an employer over $4 an hour.

Transaction costs in less-developed countries exceed those in developed countries by orders of magnitude. Primitive banking systems, poor transportation and communication, cumbersome traditional procedures, lower classes' lack of legal rights, tangles of regulations necessitating bribes to petty officials, corrupt and brutal police--all these turn transaction costs into gravel in an economy's gears. Besides land reform, development experts stress the modernization of infrastructure and institutions.

Better government policy can lessen, but hardly erase transaction costs. Transaction costs arise first from the ordinary fact that it takes time and effort to get places and do things. Transaction costs also arise from the essence of human nature: People pursue their own self-interest, narrowly or broadly conceived, acting on limited information, and avoiding risks.

We can't eliminate transaction costs. But we can reduce their impact by lessening the need to trade labor and capital--by more evenly matching wealth and people, capital and labor. Greater equality brings higher productivity by minimizing the waste of capital and labor by transaction costs.

Of course more equal ownership and control of wealth mean more productivity for other reasons too. Greater equality ensures fewer monopolies and more competition. It also reduces the number and size of wealthy interests with power to influence government to their private ends.

Why Don't We Recognize That More Equality Means Higher Productivity?

Misconceptions and lack of communication between economic specialties hinders the understanding that greater equality means higher productivity in developed as well as less developed countries:

First, as described earlier, there is the common confusion of total productivity with labor productivity. Due to transaction costs, rich people use more capital per worker, and so get higher output per man-hour. That makes them look more productive. Capital productivity gets forgotten.

Second, economists in different specialties rarely talk to each other. Development economists have long known that greater equality means higher productivity. But development economists concentrate on the nitty-gritty of getting anything done at all in societies that strongly resist change. They often speak in euphemisms to avoid offending the elites they hope to influence. They don't generalize their perceptions to developed countries. Meanwhile. theoretical economists and macro-economists concentrate on abstractions and statistical aggregates. They tend to miss economic features that appear glaring to development economists.

Third, by long-standing convention, standard models of the economy assume a world without transaction costs--rather like the frictionless world of high school physics. For some purposes, that's a reasonable assumption. But for modeling a whole economy, it's like designing aircraft assuming no air resistance. Transaction costs are no trivial complication. They are a central, massive, pervasive feature of all economies.

Fourth, poorly-designed social welfare policies in capitalist countries, together with the egalitarian travesty of communism, have given a bad name to redistribution.

Finally, many observers muddle productivity together with growth. The argument that rich people contribute more to economic growth seems intuitively even more compelling than the argument that rich people are more productive.

Part II: Growth

Defining Investment and Growth

When individuals or companies save for the future, they invest current income to obtain more future income. If that future income exceeds the amount needed to replace depreciating assets (buildings, cars or machinery), then their net worth grows.

Neither income nor investment need be measured in money. People who renovate their own house invest time that could have been consumed as leisure, or earning cash on a paid job, to obtain a future benefit in the form of a more pleasant and spacious home. They have created a real value: a "sweat equity" they can eventually tap by selling or refinancing their house. Similarly, people who get an education give up income they could have earned now, or leisure they could have enjoyed, to increase their "human capital."

Return on investment is the percentage rate that future net benefits must be discounted to reduce them to the value of the amount invested. If an investment of $100 yields net $12 a year in perpetuity, the return on investment is 12%. Return on investment measures the *quality* of investments: the higher the rate, the more productive the investment.

An economy grows when investment throughout the economy exceeds replacement investment. An individual or company's contribution to national income growth is the amount saved and invested, *times their return on investment*. A dollar invested at a 10% return on investment makes national income grow by 10¢; one at 20% adds 20¢.

Investment quality can outweigh quantity: A dollar invested at 20% contributes more than two dollars invested at 5%.

How Rich and Poor Contribute to Investment and Growth

Data on personal savings show that savings and investment increase with wealth. The poorest save nothing from income. Middle-class people save something, and rich people save the largest share of income. Economist Michael Evans offers savings data in *The Wall Street Journal* to show that "more than 100 percent of total personal savings in the United States is done by those with incomes of over $25,000 per year."

However, it does not follow that the rich contribute more to growth, for two reasons:

First, conventional studies like Michael Evans' exaggerate the difference in savings between rich and poor. Low income brackets contain a disproportion of retirees running down their savings--making it look as though the poor were rapidly getting poorer, which they are not. The statistics count only cash transactions, like adding to a savings account or buying a house. They omit savings as "sweat equity" or "human capital"--the major form of savings among poor and middle-class people.

More important, savings data indicate nothing about the *quality* of investment, as measured by return on investment. Economists who claim the rich contribute more to growth simply assume that return on investment does not vary significantly with wealth.

Is this assumption justified?

Get Spectacular Returns on Investment: Be Poor!

The same transaction costs that keep capital out of the hands of poor and middle class people and small companies *guarantee* that they get a higher average return on what investment they can make. They need no particular shrewdness in investing. Like Adam Smith's small proprietor, they simply make the most of their limited assets.

How much does the return on investment vary from poor to rich people, small to large companies?

Omissions and biases in data complicate the measurement of return on investment. Many studies ignore non-financial return. The clearest numerical evidence comes from differences in interest rates for borrowed money, and estimates of return on investment in education.

Interest rates and access to capital. Transaction costs force poorer people to pay a higher rate of interest for money they borrow--if they can borrow at all. But people who borrow naturally expect investments to return (not necessarily in cash) at least the interest they must pay. The higher the cost of borrowing, the higher the expected return.

Small borrowers, business and personal, may pay banks up to six or so points above the prime rate. Rich people or large corporate borrowers may get a discount from prime of a point or so. Considering that the true inflation-free rate of interest lies somewhere between 2 and 4 per cent, a 7 point spread looks pretty big.

The real spread extends much wider. Rich people or large corporations may find their own capital so cheap that they finance investments internally, although they could borrow at under prime. At the other end of the scale, banks refuse loans altogether to risky, poorly-collateralized customers. Such customers must resort to more expensive sources of capital, including installment buying and the neighborhood loan shark.

Usury laws show the desperation of small borrowers. For example, the 18% annual limits on credit buying suggest that many people in fact willingly pay more.

To judge from the cost of borrowing, poor people may get two to four times the return on investment of rich people.

Return on investment in education. "Human capital" economists have devoted much effort to measuring the return on an investment in education. They invariably find that return on investment falls as years of education increase. Gary Becker estimates an average money rate of return on a college education at 11 to 13%, adjusted for the fact that college students are on the average more able. (The unadjusted estimate is a couple of points higher.) An unadjusted estimate for a high school education runs around 18%; estimates for 8th grade may run over 40%. Estimated returns for education beyond college run lower than those for college.

On the average people who go to school longer are more able. But if ability alone mattered, longer years of education would show a *higher* return on investment! This makes the decline in rate of return the more remarkable. Human capital economists attribute the decline to "capital market failure." That is, a person's education depends less on ability than on family wealth. Despite the high return on education, poor families cannot borrow to tide themselves over while children finish school or go to college.

Return on investment reported by companies. Corporations report as "return on investment" (ROI): their current profits divided by book value of assets. Middle-size companies tend to report a higher ROI than larger ones; among very large companies reported ROI does not clearly fall as company size increases. But, as described above, book value grossly understates the actual value of big companies' assets. That makes reported ROI at best a very poor measure of real return on investment. The market cost of capital is a much better measure; as long as big companies get capital very cheaply, they will logically and inevitably invest it at low returns.

Self-made millionaires. Middle-class entrepreneurs *becoming* rich, like K. P. Hwang, the computer terminal king, obviously obtain extraordinarily high returns on investment. They get rich by a combination of ability, energy, and especially, the good luck of being in the right place at the right time. The megastars of sports and entertainment also spring from the middle class, and get rich from a combination of talent, energy and luck. Middle-class successes usually make their fortunes in the space of just a few years, and hardly ever strike it rich twice. (Of course some politicians and their friends discover more sordid routes to riches, like a lucrative government contract, or a purchase of land where a new highway intersection happens to get built the next year.)

George Gilder celebrates at great length rags-to-riches immigrants and the creative young scientists of the microprocessor industry. He acknowledges that small oil drillers make most of the new strikes; small inventors make virtually all the major new inventions. But then he makes a crucial error: he fails to distinguish these middle-class becoming-rich from the upper-class already-rich. He just lumps these entrepreneurs in with the "upper classes." High entrepreneurial returns belong in the category of *middle-class returns*. They bear no relation to the normally low returns of the already-rich. Great entrepreneurs shoot up from the middle class--leaving their children to circle like spent rockets in the upper class orbit.

What Money Can't Buy

In the popular demonology, the rich have their cake and eat it too: a lot of money *and* a high return on investment. There are two sources of confusion:

Successful entrepreneurs. Many people make Gilder's error of confusing successful entrepreneurs with the already-rich. Successful entrepreneurs tend to catch the public eye. Not so the heirs of rich families sliding quietly back down towards the middle class, their inheritances dissipated in half-baked "venture capital" investments.

Financial investments. On *financial* investments, rich people get a higher *cash* return than poor people--for obvious reasons: transaction costs make it cheaper for bankers and brokers to handle large investments than small ones. For example, economist Thomas Atkinson estimated returns on financial investments for Wisconsin individuals in 1949. People with incomes under $5000 averaged a 3.7% return. People with incomes over $50,000 averaged a 6.8% return.

A rich man gets a higher cash return on $1 million in stocks than his housekeeper gets on $1000 in a savings account. But the housekeeper gets something more than the paltry cash interest paid by her "rainy day fund." She gets a little security against unemployment and other sudden disasters. Most of the rich man's capital is in the market earning a 6 to 7% real return before deducting fees to brokers and financial advisers. Most of the housekeeper's capital is earning a real 18% on her high school education. If there's one thing money can't buy, it's a high return on investment!

The Poor Get Richer

But do poor or middle-class people really get high enough returns to compensate for lower savings rates? Evidence comes from a different source: measured distribution of wealth over time.

Table 4: Percent of Wealth Held by Top 1% of US Adults, from Lampman and Smith

1922	1929	1933	1939	1945	1949	1953	1956	1958	1965	1969
32%	36%	28%	31%	23%	21%	24%	26%	27%	29%	25%

Distribution of wealth. Although per capita wealth has grown enormously since the turn of the century, the *distribution* of wealth in the US has if anything become slightly more equal. In his classic study of distribution of wealth in the US from 1922 to 1956, Robert Lampman estimated the percentage of wealth held by the top 1% of adults fell from 32% in 1922 to 26% in 1956. Later, James Smith estimated similar percentages for 1958 through 1969. See Table 4.

A stable distribution means that wealth in the hands of poor people has grown at least as fast as wealth in the hands of rich people. In fact it has grown much faster:

Population growth. Population growth dilutes per capita wealth in the lower brackets faster than in the upper ones. Poor people have more children, and most immigrants (legal and illegal) are poor. To make wealth *per capita* grow equally at bottom and top, total wealth *per family* must grow faster at the bottom. Suppose a rich two-child family and a poor four-child family each double their wealth per person over a generation. For the rich two-child family, that's a 100% increase in family wealth; for the poor four-child family it's a 200% increase.

Social mobility. People at the bottom of the heap can only go up, and people at the top of the heap can only go down. If there is any social mobility, people necessarily rise on average at the bottom, and fall on average at the top.

In a study of inter-generational mobility in Cleveland, Ohio, economist John Brittain ranked 144 sons and fathers into ten socio-economic levels. Of the 14 sons of fathers in the top level, 7 stayed at the top, 4 fell to the second level, 2 to the third, and one to the fourth. Of the 14 sons of fathers in the bottom level, 6 stayed at the bottom, and 8 rose to the ninth through sixth levels. Relative to the average, the top group sank while the bottom group rose.

US social mobility, never quite what Horatio Alger promised, still exceeds mobility in other capitalist countries and is probably increasing. Social historian Stephan Thernstrom estimates that a hundred years ago something like one in ten children of working class families made it into the middle class; today, two to three times as many make it. This net upward mobility from the bottom clearly appears in the large fraction of descendants of Irish and Italian immigrants of the last century who have ascended to the middle class. Recent immigrants, notably Hispanics, have replenished the lower brackets. (Different ethnic groups, of course, climb at very different speeds.)

At the upper end of the US distribution, among the richest 1%, 40% or more are "self-made." That means they climbed up from the middle class. They may have moved only a few percentage points, say from richest 10% or 5% into richest l%. But the wealth difference is staggering, since the richest l% begins around a net worth of $100,000 and ranges up to billionaires. And if 40% of the rich arrive each generation, then a big chunk (not necessarily 40%) of the old rich must sink back into the middle class to make way for them.

Corporate mobility. Companies belong to people. "Corporate mobility" corresponds to social mobility. Of the 1980 Fortune Five Hundred, some 230 were not among the 1960 Five Hundred. Of the top 50 of the 1980 500, 23 were not in the 1960 top 50. Eight of these, including Xerox, were not even in the 1960 Five Hundred. On the average small companies grow faster than big ones. The net worth of owners and officers of small companies grows faster too.

Growth and the Middle Class

Much of the growth of the poor may arise from redistribution in their favor, notably public education. Such redistribution lifts them into the middle class. But redistribution can hardly account for the success of the middle class, whose taxes subsidize both the poor and the rich. Rather, the middle class combines a significant rate of savings with a relatively high return on investment. This combination drives economic growth, as ambitious middle class members leapfrog over each other in a race for prosperity.

In less-developed countries, wealth is dramatically less equal than in the developed countries. The middle class is small, social mobility is low, and the same wealthy families rule from generation to generation. What little growth occurs makes distribution even more unequal, as it does not touch the impoverished majority.

Growing nations today and historically have a relatively large middle class and high social mobility. Adam Smith recognized that the innovative, hardworking and thrifty middle class--not the limp aristocracy--created England's tremendous growth and prosperity in the 18th Century. The middle class of the English colonies created the fastest growing and most prosperous nation of all.

Part III: Equality and Public Policy

Redistributive Policies

Greater equality should mean higher productivity and growth. But ill-designed redistributive policies can offset greater equality with greater transaction costs. The massive redistributive policies of socialist nations clearly deaden effort and initiative. As the leader of the Swedish conservatives, Gösta Bohman recently observed, "Swedes work. They work on their cottages, they work on their boats." It very much matters *how* we redistribute.

Historic egalitarian policies in the United States aimed to ensure equality of opportunity and equality before the law. Such policies included homesteading on small parcels of land--"40 acres and a mule," free public education, public health, equal rights before the law. The most prosperous developing countries today, like Singapore, Taiwan or South Korea, heavily emphasize universal education and health care.

In the last 50 years, the concept of equality has changed. Egalitarian policies in the U.S.A. today target the symptoms of poverty, like "substandard housing," as much as the causes, like illness or lack of education. Policies like minimum wage laws, rent control, school busing, unemployment insurance, or Social Security, have been implemented without regard for perverse incentives and large hidden costs. Some policies clearly conflict with equality of opportunity. Many end up delivering more benefits to middle-class bureaucrats and well-connected contractors than to the poor. An effective redistributive system must minimize side effects and unnecessary costs.

Tax Policy

Egalitarian policies must rely on a redistributive tax system. Such a system must be progressive, yet dampen incentives as little as possible.

Income taxes. The progressive income tax meets such criteria poorly in theory, worse in practice. It strikes harder at those who seize opportunities to work and invest than at those who don't. It falls identically on those who struggle 50 hours a week to bring home $25,000 a year, and on those who enjoy $25,000 a year from property plus a life of ease. It also falls identically on those who earn their capital gains by inventing a new drug, and those who just happen to own land the city wants for a new stadium.

As administered, the tax isn't even particularly progressive. Due both to loopholes and to the intrinsic difficulty of measuring property income, a large proportion of upper-class income simply does not get reported for taxes. For example, a study based on the 1970 Census found that people reporting *negative* income averaged a net worth of $76,400, while those reporting $0 to $5000 averaged a net worth of $20,800. Obviously, a lot of very wealthy people report negative or low income--a tribute to our multi-billion dollar tax shelter industry.

So long as we're stuck with the income tax at national and state levels, its intrinsic flaws don't justify further shifting taxes from the wealthy to middle and poor classes. A cut in capital gains rates does just this, for capital gains exemplify the low-return passive income most enjoyed by the already-rich.

Gilder, confusing middle-class entrepreneurs with the already-rich, argues that we must shift taxes off the rich. For, he says, high marginal tax rates discourage small investors who might get rich if a risky venture pays off. That's as logical as arguing that troops going into battle will fight better if we give them half-rations of ammunition now, but promise double rations if they survive. Current tax burdens on small investors surely cramp their initiative and performance far more than the prospect of taxes they might have to pay if and when they get rich.

Payroll taxes. Payroll taxes, like Social Security, have inexorably raised the transaction cost barrier separating those who want to work from those who want to employ them. They fall especially hard on the working poor and on their small employers. These small companies provide the most employment per dollar of assets. Their proportionally large payrolls make them especially vulnerable to payroll taxes. The proposed Clinton health plan, financed by mandatory employer contributions, will further raise the payroll tax barrier.

Sales taxes. Sales taxes raise transaction costs throughout the economy and are even more regressive than payroll taxes. Yet they continue to grow in popularity, thanks presumably to their relative invisibility. Some politicians now favor a large and even less visible sales tax: the European-style value added tax.

Wealth taxes. A tax on wealth--particularly passively-gained and held wealth--redistributes more effectively and stifles incentives less than income, payroll or sales taxes.

We have a general wealth tax in this country, one which has been around much longer than income, payroll or sales taxes: the property tax. It is intrinsically more progressive than the income tax. Most people receive income; only half the population owns any property to speak of. And as the statistics from Lampman and Smith suggest, much of the nation's property belongs to very few people. While the richest l% receive about 8% of income, they own at least 25% of wealth. The same wealthy people who report negative income still pay property taxes.

Throughout much of US history, local governments provided infrastructure, schools, police and other services for their residents, financed solely by property taxes. This was a powerfully redistributive system. Unfortunately, the spread of home ownership has brought property taxes into disrepute. Many state laws now limit the power of local governments to vote themselves higher property taxes. In 1978, Proposition 13 rolled back and froze property assessments statewide in California. It delivered windfalls to a handful of huge property owners like Standard Oil of California, in exchange for pittances to small homeowners. And it shifted the financing of education from local property to statewide sales and income taxes.

As property taxes decline in significance, the US tax system becomes at once more regressive and a greater source of transaction costs.

Capitalism and Equality

The supply-siders deserve great credit for reminding us that we must design public policies carefully to avoid gumming up the economy with transaction costs. But supply-siders and liberals alike must recognize that redistribution is not a luxury. It is not a charitable activity carried out at the expense of productivity and growth. Least of all is redistribution so self-defeating that the best way to help the poor is to give to the rich and let the benefits trickle down!

Redistribution increases productivity and growth by uniting the idle assets of the rich and the idle labor of the poor in the energetic, ambitious middle class. Capitalism works best where opportunities are most equal; where it is easy to get rich by creativity and endeavor, but hard to stay rich without effort. That is straightforward economics. It's also the lesson of American history.

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