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Thoughts on Arrangements of Property Rights in Productive Assets

Abstract: State ownership, worker ownership, and household ownership are the three main forms in which productive assets (firms) can be held. I argue that worker ownership is not wise in economies with high capital-labor ratios, for it forces the worker to concentrate all her assets in one firm. I review the coupon economy that I proposed in 1994, and express reservations that it could work: greedy people would be able to circumvent its purpose of preventing the concentration of corporate wealth. Although extremely high corporate salaries are the norm today, I argue these are competitive and market determined, a consequence of the gargantuan size of firms. It would, however, be possible to tax such salaries at high rates, because the labor—supply response would be small. The social-democratic model remains the best one, to date, for producing a relatively egalitarian outcome, and it relies on solidarity, redistribution, and private ownership of firms. Whether a solidaristic social ethos can develop without a conflagration, such as the second world war, which not only united populations in the war effort, but also wiped out substantial middle-class wealth in Europe—thus engendering the post-war movement towards social insurance—is an open question.

In thinking about alternatives for the arrangement of property rights in the United States, it is useful to begin with some facts. In 2007, before the financial crash, the total market capitalization of US stocks was \$51 trillion. There are approximately 114 million households, and so if those corporate assets were to be owned in equal shares by households, each would own about \$449,000 in corporate equities. The share of capital income (profits, rents, interest and proprietors' income) in national income is around 25%, but this oscillates over time. Thus, under an egalitarian distribution of capital assets, and assuming profitability and labor supply remained about the same as now, each household would earn about one-fourth of its income from capital. If we take the average real rate of return on capital to be 4%, then each household would earn about \$18,000 per annum from returns on its equity portfolio. This would, in particular, have a substantial impact on poverty. The assumptions here are manifold: in particular, that, somehow, an egalitarian distribution of capital assets were maintained.

I am convinced that any economy as complex as ours must use markets, certainly for the distribution of commodities, but also for labor; it is an important question, but one not so easily answered, whether stock markets perform an invaluable function. Famously, Keynes believed that the stock market was akin to a casino, in contrast to modern financial economics, whose students often claim it is indispensable. Passing on that issue for the moment, there appear to be three alternatives for the way in which firms can be owned, which might deliver a more egalitarian distribution of income: state ownership, worker ownership, and household ownership. Indeed, some combination of these forms would probably be advisable in the end.

I think that worker ownership as the main template is inadvisable, indeed, probably not feasible. The US labor force contains approximately 150 million workers. Market capitalization of the corporate sector per worker is about $330,000. On average, if workers were to own the firms in which they worked, each worker would have to invest about this amount in her firm. (In addition, firms would have to borrow funds, as they do today.) As this would comprise the main wealth of workers, the portfolio of the average worker would be highly undiversified—a very risky proposition. (All her labor and most of her capital would be invested in one firm.) Worker ownership, therefore, cannot be a template for the economy as a whole. It can work only in sectors with a low capital-labor ratio. In the US, we see worker ownership primarily in law firms, physicians' firms, and the plywood industry.

The efficiency of state ownership continues to be debated. A number of industries, in a number of countries, have done well under state ownership: steel in Korea, insurance in Germany, oil and railroads in a number of countries, retail liquor in Canada, many sectors in China, and banking in Taiwan and some other countries. The key seems to be to give a good deal of autonomy to the industry, that is, to shield it from political interference. As a template for the economy as a whole, it is probably not workable.

I come finally to household ownership of the corporate sector. From a formal viewpoint, this is what we currently have, except we are here interested in contemplating a distribution of corporate property that is approximately egalitarian. There are two central questions: Is such a distribution of corporate equity compatible with efficiency, and can it be stable—that is, can equality of ownership be more or less sustained? Let me remark, first, that without some mechanism to prevent the concentration of corporate ownership—and any such mechanism would have to restrict freedom to trade equities—concentration would occur rapidly after a putative initial equalization. Poor households would be unable to resist selling their corporate assets to richer ones. They would thereby capitalize their assets in one relatively large lump-sum delivery of cash, rather than receiving a flow of funds over the years. (Poor and rich households would continue to exist as long as wages and salaries are determined by a labor market.)

In 1994, I proposed a scheme in my book *A Future for Socialism* intended to maintain approximately equal corporate ownership by households. The scheme has markets, including a stock market, but there are two currencies: regular money, used to exchange all commodities except corporate stock, and equity coupons, used on the stock market. As a young adult, each person would receive a coupon portfolio from the Treasury, equal to the per capita share of total corporate stock valuation. Stock could be traded on the coupon stock market, and prices of stock in equity coupons would be determined by supply and demand. Owning a corporation's stock would entitle the shareholder to dividends. Firms could issue new stock (selling it on the stock market, which buyers would purchase using coupons), and firms could exchange coupons with the Treasury for dollar investment funds: this would be the only locus at which an exchange rate between coupons and dollars would be needed. At death, an individual's coupon portfolio would escheat to the Treasury. Thus inequality in stock ownership could develop over the course of an adult life, but the slate would be wiped clean at death, with no inheritance of coupon wealth permitted. One crucial market would not be open to the public in this set-up: the market upon which one could exchange coupons for dollars.

Preventing the exchange of coupons for money, by households, is the mechanism which forces households to own corporate stock. The purpose of that prohibition is to prevent the negative externality that would ensue if corporate stock became concentrated. It is not clear whether this prohibition could be effectively enforced. Some firms would be tempted to sell off their assets, and distribute the income to shareholders as dividends. The price of the firm's stock in coupons would fall to zero in the process, but shareholders would have, in the process, cashed out their holdings. Regulation would be necessary to prevent firms from adopting this 'cash-cow' strategy: one form of regulation might be to require firms' stockholders to be diversified by age, as it is old people who would, in particular, desire to cash out their portfolios before death. Another way of evading the purpose of the coupon stock market would be through the use of foreign investors, who would presumably be allowed to purchase stock with foreign currency. Thus partnerships between foreign investors and citizens would have to be intensely regulated, in order to prevent citizens from cashing out their equity assets through foreign agents.

The reason that I proposed a coupon stock market, rather than limiting the investments of households to mutual funds, was to exploit the useful informational properties of a stock market. I am, however, unsure how important this information is—that is, the extent to which the stock market is a good or necessary device for allocating capital to its most productive uses (recall Keynes's remark). It is difficult to form an objective view on this question. It is certainly true that many advanced countries do quite well with stock markets that are much less developed than the Anglo-American ones. Japan is often given as an example where corporate control cannot be purchased by owning the stock of a firm. I don't believe that Japan's economic problems of the last twenty years are due to the inefficiency of its stock market; they are, rather, due to errors in macroeconomic policy.

Another question that can be posed concerning the coupon economy is the role of corporate bonds. Households would continue to have very different incomes (at least because of wage differentiation), and corporations would be able to finance investment through issuing bonds to the private sector. Perhaps bond holders would become more important than holders of corporate equity in the area of corporate control. Concentration of bond ownership would develop. One reason this shift of control to bondholders might occur is that no stock owner would own a significant share of a corporation's stock, but there could be bond holders who lent a significant amount to a firm, who would have an incentive to possess some control. In my original proposal, I gave the function of corporate control to banks, which would be state-owned. Each bank would be responsible for a set of large firms, much as in the Japanese *keiretsu* system.

I am sure that many criticisms can be launched against my proposal, and I am not eager to defend its details. My purpose in presenting it here is to illustrate the problems that one must face if one wants to design a property-owning democracy in which the distribution of ownership of firms remains quite egalitarian.[1]

One reason that I am skeptical of further pursuing the approach I proposed in 1994 is that my views have changed with regard to a key ingredient of a successful, egalitarian system of property rights. In 1994, I believed that one could design a system of property rights that would work, given people as they are. Or, less optimistically, I thought that that was the interesting challenge for socialists. But I no longer believe this is true. I now believe that as long as there is a culture of greed, there will always be people who will be able to succeed in designing a way around the rules and enriching themselves. In other words, a pre-condition of a successful system of egalitarian property rights is a social ethos, which is to some degree solidaristic. I believe that many people today possess such an ethos—even in the United States—or would be able to learn it relatively easily. The problem lies with the minority who are committed to self-enrichment at the expense of others, and I believe this minority is sizable. It is they who would become the economic ruling class of a new system. Therefore, I no longer hold a brief for the feasibility of an egalitarian society, with people as they are today in the United States.

I now turn to the labor market. One of the very important developments of the late twentieth century was that the composition of the richest tranche of the US population changed. A very significant portion of the income of the very rich now comes from salaries, not from capital. It is earned income, in IRS terminology. These people are the upper management of corporations, both financial and industrial, movie stars, some athletes, some highly paid professionals, and I conjecture that, for the most part, the salaries of these individuals are competitively determined. No one would challenge this claim with respect to movie starts or athletes, but many would challenge it for corporate management. I think it may well be true of their salaries as well.

Imagine that the board of directors of a firm whose annual sales are $100 billion is in the market for a CEO.[2] The board is considering between Jane and

[1] For some debate concerning the proposal, see Shleifer/Vishny 1994, Bardhan/Roemer 1994, and Simon 1996.

[2] In 2010, the one-hundredth largest firm in the world, Amazon, had sales of $24 billion. The largest firm, Walmart, had sales of $408 billion.

Bob for the job. They estimate that Jane might increase sales by 2% and Bob by 1%. So Jane will bring in, in expectation, $1 billion more than Bob. Is it surprising that Jane could bargain for a package of, say , fifty million dollars a year? After all her 'marginal product as a person', to use the phrase of two economists, Louis Makowski and Joe Ostroy (1995), is, in expectation , $1 billion, minus the costs of producing that extra product. If you are the captain of a very expensive ship, and you make a minor adjustment in the ship's route, thereby avoiding an iceberg, your acuity can be worth a great deal to the firm.

The reason that American CEOs are paid more than their Japanese and German counterparts, I conjecture, is because the market for corporate leadership is *more* competitive in the US, than in those countries. The American CEO market is international; the Japanese market is restricted to Japanese. I conjecture that Japanese and German CEOs are paid less than American ones because there are social norms in those countries that prevent paying them what the market allows. It is, counter-intuitively, a market imperfection which keeps CEO salaries as low as they are in Japan and Germany—to the extent that this remains true today.

I follow up this comment with two others. The first is that I don't think, *all things considered*, the US CEO market is more efficient than the Japanese one. It may be more efficient in the micro sense of allocating managerial talent between competing firms, but it brings with it an important negative externality: namely, the creation of a class of citizens who are extremely wealthy, which is bad for society for reasons I do not need to rehearse. Indeed, the financial crisis that we have just experienced is due in large part to the very large monetary incentives that were available to financial CEOs and managers who undertook very risky actions. It was, inter alia, the failure to regulate this activity, and in particular, to truncate the earnings in the financial sector, which gave rise to the crisis. (I am not claiming it would be easy to regulate this activity effectively.)

The second comment concerns what costs the economy would bear if we did truncate these salaries. Truncation could most easily be done not by *de facto* caps on salaries, but through taxing large incomes at a very high rate. My view is that the efficiency consequences of so doing would be minimal: indeed, taking into account the negative externalities of huge incomes just mentioned, they would be net positive.

The reason is that I do not believe that the elasticity of labor supply of these very high fliers with respect to salary is large. For their main incentives are not, I think, to earn huge incomes, but rather to be important people, who make big decisions, and garner the respect of their peers for being important people. Truncating the incomes of these high fliers would not induce most of them to pursue other careers. And certainly it would be good to change the career choices of Harvard undergraduates, approximately 50% of whom were taking jobs in finance right after graduation, before the crash.

Thomas Piketty, Emmanuel Saez, and Stefanie Stancheva (2011) have recently attempted to compute the labor supply elasticity of those in the top 1% of the income distribution. They decompose this into three elasticities, which correspond to three ways of responding to tax increases. The first is to postpone the receipt of income, the second is to evade or avoid taxes, and the third is the genuine supply response, of working less. Suppose the first two responses could be prevented by tightening up the tax code—eliminating loopholes. These authors estimate that the optimal marginal tax rate, considering only the *real* response, is over 80%. This confirms my view that the right-wing claim of high labor elasticities among the very highly paid is just a big, self-serving lie.

I think that, in order to implement either an egalitarian distribution of property rights or much higher taxation on the very higher earners, citizens will have to understand more clearly the role of markets. In the United States, there has been a concerted and successful strategy carried out by right-wing think tanks, since the 1970s, aimed at convincing citizens that the state is inefficient, and that nothing can substitute for a laissez-faire market system as an institution for promoting wealth. Indeed, economic theory has had an important role, as I will now describe, although I do not believe this has been conspiratorial.

The two major functions of markets are coordination and the provision of material incentives. It is not easy to distinguish in a precise way between these functions, but several examples will illustrate that they are different. When firms in the Soviet Union could not find the inputs they needed, or when consumers queued for hours to buy commodities, this was a failure of coordination. On the other hand, the Soviet workers' remark, "They refuse to pay us, and we refuse to work", illustrates the failure of incentives. One could say that neither of these examples is perfect, so let me invent a perfect thought experiment. In general, when considering occupations in an economy, workers care about three things: wage income, the educational requirements required for entry into occupations, and occupational characteristics (the status of the occupation, what kind of work is performed, who is served, how dangerous the job is, and so on). Now imagine an economy where workers care only about educational requirements and the occupational characteristics—they are unconcerned about income, as long as the income is above some minimal level. There are firms that hire workers, and each firm has demands for labor in a variety of occupations. Imagine, for simplicity, that there is only one consumer good. Prices in this economy comprise the wages for different occupations, and the price of the consumer good, which we can normalize to be unity. Imagine that education is financed through taxation, so that the only consideration a worker has in pursuing further education is the opportunity cost of staying in school, and the direct utility or disutility he gets from education. A wage vector induces a market equilibrium if, at those wages, the firms demand workers for the various occupations which maximize their profits, and all occupational labor markets clear—that is, the occupations being supplied by workers exactly match the occupations demanded by firms.

Now suppose that taxes are levied on wages, either for funding state services, such as education, or for redistribution. The equilibrium wage vector in this economy will not change. Workers will continue to supply exactly the same distribution of occupational labor as before. In other words, nothing 'real' about the economy changes: all that changes is the distribution of income among workers, and therefore how the consumer good is finally allocated among workers. In this economy, prices have a pure coordination function: they direct firms to choose workers in exactly the occupational proportions that workers are immutably supplying—those labor supplies are independent of prices. There are *no* efficiency effects of taxation. Taxation has only distributional effects.

Now imagine another economy: in this one, workers care only about income and the educational requirements of occupations, but they do not care at all about occupational characteristics. (This is, more or less, the standard neoclassical model.) In this case, equilibrium wages will again clear all occupational markets. But if taxes are now levied on incomes, occupational choices and equilibrium wages will change. There will be efficiency effects of taxation. This is an economy where prices have an important role in providing material incentives. Taxation will induce a so-called deadweight loss.

Until about 1970, the prevalent view in economic theory was that prices performed primarily a coordinating function. This view was embodied in the well-known definition at the time, that economics is the study of how to allocate scare resources to competing ends. In the early 1970s, the principal-agent model was proposed (the phrase did not exist in the economic lexicon before then), and the view gradually changed to one in which the main role of prices is to provide material incentives to workers. I think no economist today would subscribe to the definition of economics that I gave a moment ago: the word 'incentives' would be important in any modern definition. Whether the view of market function changed because of the failure of the centrally planned economies, or because of the development of game theory, or for some other endogenous intellectual reason, is not of concern to me at the moment. But changed it has, and the change is ideologically important: for if you believe that markets are primarily needed for coordination, then, as the example I gave shows, you will think that there is a degree of freedom in the distribution of income that can be chosen without negative efficiency consequences, whereas if you believe markets are primarily needed for incentive provision, you will think it is much harder to redistribute income without important efficiency consequences.

My own view is agnostic. I believe this question requires empirical research. Certainly the lack of markets in the Soviet economy was a key cause of its inefficiencies: but whether these inefficiencies were primarily due to a lack of *coordination*, or to a lack of *material incentives* is still an open question. There are arguments, anecdotes, and jokes to support both views.

Interestingly, Friedrich von Hayek did *not* believe that the major function of markets was incentive provision. What he emphasized was the ability of markets to coordinate the entrepreneurial talents of millions of citizens. His famous 1945 article in the *American Economic Review* (Hayek 1945) on the uses of knowledge in society does not use the word incentives. His theme is one of coordinating local knowledge. Nor did he, or Joseph Schumpeter, for that matter, believe that the desire to get rich was the main motivator of innovation. Schumpeter was quite clear on this: for him, innovators were mainly motivated by the love of the game. For Hayek, state interference in the economy was not primarily bad because it would destroy incentives, but rather because it would lead to social control, the deprivation of liberty, and wasteful spending.

My conjecture is that material incentives are quite important for people who do boring, unskilled work, but they become decreasingly important as occupations become more interesting and challenging. This implies that high taxation at the top of the income distribution is optimal—as Piketty et al. (2011) have recently confirmed. Taxes should be used, in particular, to invest in education, so that most people can learn to perform more interesting work. In turn, with a more educated work force, technological change will produce more knowledge-intensive occupations. For citizens to enact legislation which increases taxes on the upper end of the distribution requires, I believe, that they must understand more clearly the functions of markets. In particular, the coordination function of markets must re-enter both the economics curriculum, and common parlance.

The main successful egalitarian societies today are in Europe, and especially northern Europe, and the template has been social democratic: strong welfare states, private ownership of corporate assets, and significant taxation. The central question raised as to the generalizability of this model to other countries concerns the extent to which population homogeneity is a pre-requisite of its political adoption. My own view is that that pre-requisite has been over-stated. Perhaps more important in the genesis of the welfare state was the Second World War, which had two consequences: first, it wiped out much middle-class wealth in Europe, and thus created a very large constituency for social insurance, and second, social solidarity evolved during the war against Hitler. (Think of the ubiquitous British phrase, "I'm doing my bit", and the Beveridge Report, written in 1942, calling for the elimination of squalor, ignorance, want, idleness and disease.) The wealth of the middle class was not wiped out in the United States, as the war was not fought there. Indeed, ethnic homogeneity might be important not primarily for the solidarity it supposedly engenders, but because those of a single ethnicity and culture tend to have similar risk exposures, which makes designing social insurance very easy. It is, on the contrary, difficult to design social insurance when some groups face massively more risks than other groups (see Roemer 2010 on this).

In sum, I continue, in the good company of Tony Judt (2010), to be a fan of social democracy. I believe the big stumbling block to implementing either social democracy or a property-owning democracy in the United States is the social ethos, which must be transformed for either of these two institutional templates to become politically accessible. We have much experience with social democracy, and it appears to be politically and economically stable. The stability of a property-owning democracy is a serious question. Preserving a relatively egalitarian distribution of ownership of productive assets would require regulation and legislation that some will consider to be serious incursions of liberty. I am not one of those, as I consider the method of arranging ownership of firms to be an entirely instrumental consideration, whose sole purpose is to maximize social welfare, however that be conceived. Even if we were able to implement a property-owning democracy in the United States, this would not obviate the need for high taxation at the top of the income distribution, because wage and salary variation is substantial when firms are large and occupations vary a great deal in the degrees of skill and talent which they require.

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