

Macroeconomic Aspects of Profit Sharing

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When John Maynard Keynes came to sum up the central message of the *General Theory* for the economics profession, in a remarkable but long forgotten *Quarterly Journal of Economics* article of 1937, he began with a "general, philosophical disquisition on the behavior of mankind"—under uncertainty. Here as elsewhere, Keynes made it abundantly clear that he shared Frank Knight's distinction. "Uncertainty" did not mean "risk"—that which is, at least in principle, reducible to well-defined actuarial probabilities. By "uncertainty" Keynes intended, I believe, to convey the idea of "ignorance"—that which is essentially due to insufficient or precarious knowledge of the mechanism by which the future is generated out of the past.

The Keynesian scenario looks out over an economic world that is rife with uncertainty. In that world, expectations play an important dual role as both a manifestation of uncertainty and as a cause of it. Such expectations are arbitrary to some degree because they can be based on almost anything, including self-fulfilling expectations of the behavior and expectations of others. And, as Keynes pointed out, "being based on so flimsy a foundation," these expectations of expectations are "subject to sudden and violent changes."

It follows that while there may ultimately be some long-run forces drawing it toward full employment, capitalism may also have some deep-seated tendencies toward short-run instability. Unadulterated *laissez-faire* is likely to be out of equilibrium much of the time, and even when it is in equilibrium there is no guarantee of being in a "good" equilibrium. Whether in a state of "bad" equilibrium or merely in disequilibrium, such coordination failures generate undesirable macroeconomic consequences like unemployment, which can cause very significant losses in economic and social welfare. By the ultimate logic of this Keynesian world view, then, the stage is set for some form of government interven-

tion to recoordinate the economy into a better configuration. Any such government policy will inevitably introduce some economic distortions of its own, but as an empirical matter, it can be argued, these losses tend to be small relative to the enormous welfare gains from having an economy operate at its full employment level.

These general considerations do not indicate the best *form* of government intervention to stabilize the macroeconomy. Indeed, we do not currently have a general, realistic framework within which a meta-issue like that might properly be addressed. Nevertheless it is possible, I believe, to give some common-sense criteria for desirable forms of government intervention. It is my contention that economists have not been sufficiently imaginative in devising operational mechanisms or systems possessing advantageous macroeconomic properties. My thesis is that both the Keynesian policy revolution and the monetarist counter-revolution represent dazzling digressions around the main problem. In the long course of history I think it will increasingly come to be seen that, for all the wealth of practical policy options and theoretical insights they might offer, the common defect of Keynesianism and monetarism is that both are attempting to detour around the malfunctioning labor market by skillfully manipulating one or another financial aggregate. Discretionary macroeconomic policies can work, and sometimes they work very well, but I think their main attraction is as a temporary measure, not a long-term strategy to be relied upon with impunity for decades on end. The usual fiscal and monetary policies are, to my mind, sledgehammer-like tactics for controlling unemployment and inflation. They do the job, but clumsily, by brute force—and they can have harmful aftereffects. I think it is possible to find subtler alternatives that operate more cleanly and with a softer touch by taking a page from the book of Adam Smith.

A good mechanism for fighting unemployment and inflation should have several noteworthy characteristics. It should be decentralized, based on the natural microeconomic incentives of a market-like environment. It should work more or less automatically, keeping to a minimum the need for using discretionary government policy. And, in a highly uncertain world, it should be robust in retaining its desirable macroeconomic characteristics over a wide range of possible situations or circumstances—including some that are currently unforeseen.

I would argue that a superior form of government policy for combating unemployment and inflation in our economies is to encourage, through exhortation and special tax privileges, the widespread use of profit sharing. A profit-sharing system has the potential to automatically counteract contractionary or inflationary shocks, while maintaining the advantages of decentralized decision making. And these desirable properties are robustly preserved throughout a variety of economic environ-

ments. At the very least, widespread profit sharing can be a valuable adjunct to traditional monetary and fiscal policies.

I believe we should seriously consider some new ideas about basic reform of the economic mechanism because our old ways of doing things are no longer adequate. The premier economic malady of our time is stagflation. Despite some abatement of its virulence in the immediate present, we still seem to be unable to reconcile, over a reasonably sustained period, high employment with low inflation. Even when economic conditions are on the upswing, significant pockets of unemployed workers remain throughout the Western capitalist countries. Western governments are afraid to aggressively push unemployment down to more humane levels for fear of reigniting inflation. The policy induced recession remains our only reliable method for lowering inflation rates. It is difficult to imagine a more costly, inefficient, or unjust waste of economic resources and human potential.

The coordination difficulty that can cause some systems to suffer involuntary unemployment is not inherent in laissez-faire private enterprise *per se*. It is closely tied to one particular property of a conventional wage payment system: namely, compensation of each firm's employees is stuck to an outside *numéraire* (whether money, a cost of living index, or other companies' products) whose value is immune from anything the firm does. Under the wage payment system, we try to award every employed worker a predetermined piece of the income pie before it is out of the oven, before the size of the pie is even known. Our "social contract" promises workers a fixed wage independent of the health of their company, while the company chooses the employment level. That stabilizes the money income of whomever is hired, but only at the considerable cost of loading unemployment on low-seniority workers and inflation on everybody—a socially inferior risk-sharing arrangement that both diminishes and makes more variable the real income of the working class as a whole. An alternative labor participation system where it is considered perfectly normal for a worker's income to be tied to an appropriate performance index of his or her firm, by contrast, puts in place exactly the right incentives to automatically resist stagflation. Profit sharing is one variant of such a system. It represents a way of building into the economy the kind of natural resistance to unemployment and inflation that could really disarm stagflation at its source.

At some risk of oversimplification, let me give a concrete if highly idealized (and extreme) example of what I have in mind. Suppose that wages plus fringe benefits of the average General Motors automobile worker come to \$24 per hour. This means that the cost to GM of hiring one additional hour of labor, the marginal cost of labor, is \$24. The extra hour of labor is used to produce more automobiles, which are then sold to yield increased revenue. If the increased (or marginal) revenue

exceeds the increased cost, more workers will be hired; in the opposite case, workers will be laid off. Since GM is trying to maximize profits, it will take on (or lay off) workers to the point where the additional revenue created by the extra hour of labor is neither more nor less than the additional cost, in this case \$24. The average revenue per hour of labor will naturally be higher, say \$36, to cover overhead, capital, profits, and the like.

Now imagine that the auto workers agree to a different type of contract with GM. Instead of a fixed wage of \$24 an hour, they go for a fixed two-thirds share of GM's average revenue of \$36. At first glance there seems to be no difference between the two systems, since in both cases the workers get \$24 an hour. However, GM's incentive to hire or fire is subtly but dramatically changed.

If GM now hires an extra worker, its revenue goes up by \$24 as before, but its *total* labor cost in fact only increases by two thirds of \$24, or \$16. It clears a profit of \$8 on the extra worker, and understandably wants to go on hiring and expanding output more or less indefinitely. There is a secondary effect: in order to sell the extra output, GM has to reduce the price of its cars.

The benefits for the whole economy are clear: the new labor contract means more output and jobs—and lower prices. Firms want to hire more workers for the same reason they would be keen to acquire more salesmen on commission—nothing to lose, and something to gain.

So what is the rub? Clearly the revenue per worker—and therefore pay—has declined because the marginal revenue brought in by the extra worker is less than the average revenue. Senior workers who are not unduly at risk of being laid off might resist the plan.

However, this conclusion does not necessarily follow if a large number of important firms introduce profit (or revenue) sharing, because as each firm expands and hires more workers, total workers' purchasing power rises, and so does the demand for GM's products. Not for the first time, the sum of the economic parts adds up to more than the parts themselves. The conclusions reached from this example readily generalize to formulas encompassing more realistic "mixed" compensation systems of base money wages plus shares of per capita profit (or revenue).

Somewhat more abstractly, consider a typical monopolistically competitive firm in a partial equilibrium setting. Suppose the wage is treated as a quasi-fixed parameter in the short run. If the firm can hire as much labor as it wants, it will employ workers to the point where the marginal revenue product of labor equals the wage rate. This is familiar enough. Consider, though, what happens with a profit-sharing contract that names a base wage and a certain fraction of profits per worker to be paid to each worker. A little reflection will reveal that if the profit-sharing

firm can hire as much labor as it wants, it will employ workers to the point where the marginal revenue product of labor equals the base wage, independent of the value of the profit sharing parameter. (Note, though, that what the worker is actually paid depends very much on the value of the profit-sharing coefficient.) When a standard textbook (IS-LM type) macro-model is constructed around such a model of the firm, the following isomorphism emerges. A profit-sharing macroeconomy will find itself with the same output, employment, and price level as the corresponding wage economy whose wage is set at the profit-sharing economy's base wage level. In other words, the aggregate macroeconomic characteristics of a profit-sharing economy, excepting the distribution of income, are determined (on the cost side) by its base wage alone. The profit-sharing parameter does not influence output, employment, or prices, although it does influence the distribution of income. If the employed workers can be persuaded to take more of their income in the form of profit shares and less in the form of base wages, that can result in an unambiguous welfare improvement—with increased aggregate output and employment, lower prices, and higher real pay.

With identical-twin wage and wage profit-sharing economies are placed in the same stationary environment, with competitive labor markets, both economies will gravitate toward the same long-run full-employment equilibrium. But then perform the following thought experiment. In the typical style of disequilibrium analysis, disturb each economy and observe the short run reaction when pay parameters are quasi-fixed but everything else is allowed to vary. The profit-sharing economy will remain at full employment after a disturbance, while a contractionary shock will cause a wage economy to disemploy labor. It should not be hard to imagine why such characteristics make a profit-sharing system more resistant to stagflation.

This same point can be made yet another way. Consider the standard textbook macroeconomic (IS-LM type) model. Aggregate demand is determined, via the appropriate multipliers, as a function of autonomous spending injections and real money balances. The price level is determined as a degree-of-monopoly-power markup over wages. Wages are treated as exogenously fixed in the short run. Given the standard IS-LM type specification, the model grinds out (as a parametric function of the wage level) output, employment, and the price level. It is clear what happens within such a model if there is a *ceteris paribus* money wage cut. Output and employment are higher, while prices are lower. Yet this is exactly what occurs when an economy shifts toward profit sharing. The base wage determines the fundamental macroeconomic characteristics of the system: when there is an increase in profit shares at the expense of base wages, macroeconomic performance improves without loss of real labor income.

Here is one more way of seeing the differences between wage and profit-sharing systems in the short run when pay parameters are temporarily frozen. Consider the standard model of the monopoly firm. Suppose the government is initially imposing a tax on each unit of labor hired. Then the government switches some part of the labor tax to a tax on profits that raises the same tax revenue. We then expect the firm to expand employment, increase output, and lower price. But switching some part of the base wages over to profit sharing performs essentially the same experiment and should induce the same outcome.

Let me note in passing that a profit-sharing system does not eliminate unemployment by, "in effect," lowering wages to the point where equilibrium is automatically maintained. The driving force behind full employment in a profit-sharing system is not a disguised form of wage flexibility in the usual, classical sense of that term. A profit-sharing system will remain at full employment even when worker pay is above the marginal revenue product of labor. The point is not that one system operates closer to equilibrium than another, but rather that the *form* of disequilibrium response to unexpected disturbances is different. (In principle, a profit-sharing system is no less disequilibrated by shocks than is a wage system since both systems will likely exhibit some friction or inflexibility of contract parameters.) Roughly speaking, the short-term response of a share economy holds the quantity of hired labor (and output) at its full-employment level, with disequilibrium showing itself on the price (or value) side (workers are temporarily not paid their marginal value). Wage economies, on the other hand, tend to respond to contractionary shocks by holding equilibrium prices (or values) in line (workers are always compensated their marginal value) while the quantities of employment (and output) decline. In the long run, both systems tend to the same equilibrium, but their short-run behavior out of equilibrium is quite different. And, of course, it is far more important for overall economic welfare that the system as a whole maintains a full employment flow of goods and services throughout a contractionary shock than that some second marginal-value efficiency conditions on the level of the firm are being satisfied.

The theoretical identity between wage and profit-sharing systems in equilibrium is not just limited to static situations where the amount of capital is given. It also applies to establishing the stock of capital itself over longer time periods across which it can be treated as variable. It is true that if pay parameters were permanently frozen, then capitalists in a share system might underinvest relative to a wage system because any incremental profits would have to be shared with labor. But over the relevant time horizon for durable capital investment decisions, pay parameters are relatively plastic, essentially determined by long-run competitive forces. In both wage and profit-sharing systems, that will

stimulate equal efforts toward output-increasing improvements. Actually, in a real world subject to disequilibrating shocks, a profit-sharing economy (whose aggregate output is perpetually stabilized at the full-employment, full-capacity level) is more likely than a fluctuation-prone wage economy to generate an enlarged steady volume of private investment.

I am aware that such short-run, fixed-pay-parameter disequilibrium models as I have been discussing will be unsatisfying to the economic theory purist who will want a full blown account of why one payment mechanism rather than another has been selected by society in the first place, and who will not rest content without understanding on a more fundamental level why pay parameters should be sticky in the short run. Such concerns have a legitimate place. But I do not think they should be taken to such an extreme that we are inhibited from examining what would happen in disequilibrium under alternative payment systems before first having firmly in hand a general, all-encompassing theory of economic systems and disequilibrium-like behavior.

What about the possible objections to profit sharing? Several are frequently voiced. I believe the objections can be successfully rebutted, even decisively rebutted, but I have space here to deal with only a couple of them, and at that rather skimpily.

The objection to profit sharing one hears most often from economists is that compared with a wage system, it represents a socially inefficient method of risk sharing. (Isn't it obvious that under a wage system the firm bears the risk, while under a profit-sharing system the worker bears the risk?) In my opinion the reasoning traditionally put forward to support this "insurance" argument is fallacious, being based on a partial equilibrium view that does not take into account the radically different macroeconomic consequences of the two systems for overall employment and aggregate output. The fixed wage does not stabilize labor income. What is true for an individual tenured worker is not true for labor as a whole. When a more complete analysis is performed, one that considers the situation not as seen by a tenured, high-seniority worker who already has job security but by a neutral observer with a reasonably specified social welfare function defined over the entire population, it becomes clear that the welfare advantages of a profit-sharing system (which delivers permanent full employment) are enormously greater than a wage system (which permits unemployment). The basic reason is not difficult to understand. A wage system allows huge first-order losses of output and welfare to open up when a significant slice of the national income pie evaporates with unemployment. A profit-sharing system stabilizes aggregate output at the full employment level, creating the biggest possible national income pie, while permitting only small second-order losses to arise because some crumbs have been randomly redistrib-

uted from a worker in one firm to a worker in another. Here is a friendly challenge to would-be critics. I challenge anyone to cook up an empirical real-world scenario, with reasonable numbers and specifications, where a profit-sharing system does not deliver significantly greater social welfare than a wage system.

As if this argument alone were not enough, you must bear in mind what a mistake it would be to extrapolate the demand variability now observed in the firms of wage economy to a share economy. Such cyclical industries as machine tools, metals, building materials, construction, and the like would not fluctuate nearly so much, since the share economy is permanently operating at or near full capacity. Every firm of a profit-sharing system would exhibit significantly greater demand stability than we are now accustomed to because a budding recession cannot feed upon itself in a fully employed economy. In addition, enterprising insurance companies are sure to offer to reduce risk further for the employees of big profit-sharing corporations by offering neatly packaged policies that will insure income fluctuations for a premium.

A second frequently voiced objection to profit sharing goes something like this. The good macroeconomic properties of a profit-sharing system come from the fact that share firms have a financial incentive at all times to maintain, or even to increase employment because, in effect, the average cost of labor, or pay, is lowered when additional employees are hired. But why would workers accept a profit-sharing scheme with no restriction on hiring? Wouldn't the senior workers of a share firm resent and try to resist the new workers coming on board who, in effect, lower the pay of all the employees? In addressing this issue we must first of all distinguish between abstract economic properties that might be apparent in an environment of just one profit-sharing firm, and readily observable behavior in a profit-sharing milieu. When an entire economy of share firms is geared up and functioning smoothly, there is a significant excess demand for labor as a whole and there are no long-term jobless people to be picked up easily. New labor must come primarily from other share firms, presumably yielded up in grudging amounts. In that environment, the tenuous aftermath of hiring a few more workers in one firm will scarcely be noticed, disguised as it must be behind a myriad of seemingly more important economic changes that directly influence the income of an individual firm. Besides, even should the subtle connection be made, it becomes an issue only when the senior workers are trying to protect a noncompetitive pay level held artificially above the going market rate of that job category; new workers will have no incentive to join the firm in the first place unless they can receive a higher pay there than elsewhere. A profit-sharing system can be the centerpiece of a program of prosperity for working people. The rules of the new game, of the new social contract, say that everyone will be able to

find a job at the going rate. But, to put it bluntly, workers in a share firm simply cannot expect over the long run, for decades on end, to be continually paid above the competitive rate for their skill and experience level—the firm will naturally try to offset that possibility by drawing in more labor.

I am under no illusion about the political realities involved in making an economy-wide transition to a system based on profit-sharing principles. Some people are hurt by change, any change, and they will shout loudest to preserve the status quo even though, as with free trade, a share system is highly beneficial to the population as a whole. I believe that pure self interest based on strong tax incentives in favor of profit-sharing income will go a long way toward convincing unions and others to look favorably upon a system that guarantees that aggregate output will be produced, and consumed, at the full-employment level even if it erodes the monopoly rent above competitive pay, which they currently enjoy. If the tax incentives are strong enough, a unionized firm will not only be enticed to join the share economy, but, in a sense, will be driven to enroll. It will be compelled because, if many other firms adopt share plans and if the pecuniary advantages in the form of tax savings are significant enough (larger than the union premium), a union will be unable to compete for members without following course. And the potential tax benefits could be made extremely attractive without doing fiscal harm to the federal budget since the increases in government revenues and decreases in outlays obtained from maintaining permanent full employment are so enormous. No union would be compelled to petition for the special tax status of a share plan. But when it chooses to participate, a union cannot enjoy the tax benefits without forswearing any restrictive hiring practices. This is a logical requirement for the government to insist on, since the entire rationale of the differential tax treatment is to encourage increased employment. When all is said and done, no matter how well designed are the incentives, such change will require genuine consensus, a general agreement cutting across left/right political lines, that the broad social gains of permanent full employment without inflation are worth more than the narrow private losses that will inevitably be incurred here and there.

The superior profit-sharing variant of capitalism is practiced, to some extent, in the immensely successful economies of Japan, Korea, and Taiwan. While these countries are not identical clones, their economies do share certain important characteristics. In each case, workers receive a significant fraction of their pay in the form of a bonus. The bonuses are large, averaging over good years and bad about 25% of a worker's total pay in Japan and about 15% in Korea and Taiwan. The degree to which the bonus is actually determined as a function of current profits per worker varies from firm to firm, and depends upon the country.

(For example, in some Japanese companies the bonus is almost a disguised wage, but this is not true for most Japanese companies, and it appears to be hardly true for any Korean companies.) Bonuses, like dividends, respond to corporate earnings, but with a complicated lag structure not easy to quantify by any rigidly prescribed rule. Overall, there is very little question that profit sharing is a significant feature of the industrial landscapes of these "Japanese-style" economies.

While it is difficult to quantify the exact magnitude of its contribution out of a host of reinforcing tendencies, the bonus system is almost surely one major reason (although, most likely, far from the only reason) for the outstanding economic performances of Japan, Korea, and Taiwan. Their flexible payment system helps these economies to ride out the business cycle with relatively high, stable levels of employment and output. Their governments enjoy greater leeway for fighting inflation without causing unemployment. Levels of saving (and investment) are very high without causing dreaded Keynesian unemployment. The variability of real pay per member of the potential labor force has actually been reduced. Over time, a more equitable distribution of income has emerged than is found in other capitalist countries.

I believe that we in the West, instead of giving lessons as we are accustomed to doing, now must be prepared to take a lesson from the East. We should consciously tilt our economies toward this superior variant of capitalism. We ought to adopt a new social contract that promises our working people full employment without inflation but asks, in return, that workers received a significant fraction of their pay in the form of a profit-sharing bonus.

But, the typical economist will ask, why, if a profit-sharing system represents a far better way of operating a market economy than a wage system, don't we see more examples of share economies? After all, even in Japan, Korea, and Taiwan only modest (although significant) steps have been taken in this direction. The rest of the advanced capitalist countries are predominantly wage economies. Why, if profit sharing is so beneficial, does not self-interest automatically lead firms and workers in this direction?

The answer involves an externality or market failure of enormous magnitude. In choosing a particular contract form, the firm and its workers only calculate the effects on themselves. They take no account whatsoever of the possible effects on the rest of the economy. When a firm and its workers select a labor contract with a strong profit-sharing component, they are contributing to an atmosphere of full employment and brisk aggregate demand without inflation because the firm is then more willing to hire new "outsider" workers and to expand output by riding down its demand curve, lowering its price. But these macroeconomic advantages to the outsiders do not properly accrue to those

insiders who make the decision. Like clean air, the benefits are spread throughout the community. The wage firm and its workers do not have the proper incentives to cease "polluting" the macroeconomic environment by converting to a share contract. The essence of the public-good aspect of the problem is that, in choosing between contract forms, the firm and its workers do not take into account the employment effects on the labor market as a whole and the consequent spending implications for aggregate demand. The macroeconomic externality of a tight labor market is helped by a share contract and hurt by a wage contract, but the difference is uncompensated. In such a situation there can be no presumption that the economy is optimally organized and society-wide reform may be needed to nudge firms and workers towards increased profit sharing.

This much-needed reform will not come about easily. Persuading workers and companies to fundamentally change the way labor is paid in the name of the public interest will demand political leadership of a very high order. Material incentives, such as favorable tax treatment of the profit-sharing component of a worker's pay, will probably be required. Yet the benefits of full employment without inflation are so enormous, the increased income is so great, that we cannot afford not to move in this direction.

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