

Re-Opening the Debates on Economic Calculation and Motivation under Socialism

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Abstract

According to the orthodox view, a properly functioning price system would be logically impossible under socialism because there are no markets for intermediate goods. This is referred to as the calculation problem. The article takes the contrary view and contends that the absence of these markets creates no logical barrier to such a price system and that it could function effectively as long as the motivation or so-called human nature problem is resolved. Achieving this would require that most workers in a socialist system desire to contribute to the best of their abilities and find in work its own reward. Orthodoxy is also negative on this question. However, as the article shows, there are solid grounds for expecting the emergence of this change in work attitudes in an industrially advanced society. Furthermore, an economy driven by such motivation and unencumbered by capitalist forms of property not only could have a properly functioning price system but a superior one, as the market failure literature attests.

Keywords: socialism, Austrian economics, socialist economic calculation, motivation.

1. Introduction

Socialism presently has little support. The idea of a system where enterprise assets are socially owned¹ is usually dismissed as contrary to human nature - you cannot motivate people without the financial inducements that come with private ownership. Furthermore, many economists, in particular members of the Austrian school², believe they have an additional stand-alone argument against socialism. They maintain that, even if we were all highly motivated 'socialist angels', an economic system based on social ownership would still face severe difficulties caused by its inability to perform economic calculations.

The paper begins by showing that the calculation problem is not an independent argument. Indeed, its foundations crumble if we assume people are motivated in new ways. The paper then addresses the far more substantial matter of human nature or motivation. The question at issue is whether people in a socialist society would generally be diligent and innovative, despite the fact that they are not motivated by profit nor by the threats and inducements of those who are. Would they find work to be its own reward and wish to see it contribute to an efficient and dynamic economy? I explain why I think that this change in motivation is quite plausible given the conditions that are being created in advanced capitalist countries. The paper ends by contending that the new forms of motivation would give socialism a superior price system, one that was free of the distortions associated with market relations.

2. Dissecting the economic calculation argument

Essentially the calculation argument can be presented as a syllogism. First premise: a complex modern economy needs a properly functioning, decentralized price system if it is to be dynamic and efficient. Second premise: a socialist economy where the means of production are socially owned, and hence not bought and sold, could not have such a price system. Conclusion: a socialist economy could not be dynamic and efficient.

¹ These assets include all means of production or intermediate goods, and comprise buildings and other infrastructure, instruments of labor, components, raw materials and fuel. They also include final consumer goods prior to their being transferred to the private ownership of individuals.

² For an extensive collection of writings on the subject by Austrian economists see <http://mises.org/>.

I fully accept the first premise, notwithstanding the fact that it has been common for socialists to argue that we could get by quite well simply with material measures of inputs and outputs. Firstly, demand for intermediate inputs needs to be derived from demand in consumer markets³ and producers need to be able to determine the least cost method of production. Secondly, in the absence of perfect ex ante coordination of interdependent moment by moment decisions over the uses of innumerable resources, choices have to be made ex post between alternative uses, and people close at hand are generally in the best position to determine the most highly valued of these alternatives through a bidding process.

The second premise, that socialism could not have a proper price system, is the one with which I take issue. I will argue that the only obstacle to an effective price system is the failure to find a replacement for the profit motive.

The case against a socialist price system relies on any of three arguments. These are: (1) social ownership by its very nature necessitates a central controlling organ representing society as a whole and this would not permit the level of decentralization required of an effective price system; (2) decentralized transactions based on offer prices of producers and bids by users are necessarily market exchanges; and (3) any price system under social ownership would be greatly inferior to its capitalist counterpart. These claims are examined in turn below.

The first argument, that socialism has to be centralized, is most famously propounded in Hayek's *Road to Serfdom* (Hayek, 1943)⁴. However I see no problem with including under social ownership a state of affairs where individuals act as responsible custodians of social property and are entrusted with decentralized decision making. Such custodianship would simply mean that workers did their best to ensure that the resources under their charge were used efficiently and that they were not tempted to divert them for their own benefit. This is what you would expect from "socialist angels".

³ Under socialism the transactions of individual consumers would continue to be market exchanges. Wages earned in the labor market would be used to make purchases in the markets for final goods and services.

⁴ This is separate from the view that social ownership requires central control because decentralization would be less effective. Here we are looking at whether there is an inherent rather than a practical necessity.

From this point of view, there is nothing in the nature of social ownership itself that would prevent decisions about prices, or other matters, being delegated to what was judged to be their most appropriate level. A socialist government would then only need to centralize a limited range of decisions. Institutional arrangements and taxation are obvious examples, as is the decision on the level of total income to be allocated to investment, including research and development, rather than immediate consumption.

The second of the three possible arguments, namely, that decentralized transactions using prices would necessarily be market exchanges, also falls down in the presence of trustworthy custodians. These transfers between enterprises would need only to entail the transfer of responsibility or custodianship over resources rather than of ownership. In keeping with it not being a market exchange, any net revenue would belong to society and not to the enterprise nor its workers.

Assuming that actors performed their custodial role conscientiously, it is not difficult to imagine the prices used in such non-market transfers of intermediate goods and services being the result of adjustments by actors on the spot to changes in demand and supply conditions. What an enterprise was prepared to bid or pay for an input would depend on what they expected to recover from their customers and the cost of substitute inputs. What they would recover in the case of final goods and services would depend directly on consumer demand while intermediate inputs would depend on it indirectly through derived demand. At the same time, the price at which enterprises offered their products would cover the costs of provision - which they would diligently endeavor to minimize - and ensure that the products went to their most valued use.

The view that decentralized transactions between socialist enterprises *have to* be market relations should not be confused with the view that they *should* be. The latter is expounded by supporters of 'market socialism'. Notable contributions to this viewpoint include Roemer (1994) and Schweickart (2002). Under such arrangements enterprises would have effective ownership of their own output, sell it in the market place to other enterprises or final consumers and retain any net revenue which can then be reinvested or distributed to its management and workers as bonuses in the case of Schweickart's model or to stockholders in Roemer's world where all of us have been issued with equal portfolios. These are models for

those who think that any attempt at 'socialism' would be stuck with the existing forms of motivation. It is also a halfhearted and doubtful form of social ownership.

The third argument for rejecting a socialist price system is that while socialism could have decentralized dealings between enterprises based on prices, any such price system would be inferior to a capitalist one which is based on markets for intermediate inputs. There are two attempts at making this claim. The first attempt is based on demolishing a straw man. This is the economic model of socialism contrived by the Polish economist Oskar Lange in the 1930s (Lange et al., 1964). Lange's model allows for decentralized price adjustment for consumer goods in line with changes in supply and demand but not for the goods used in production. The prices of the latter are regularly adjusted by a central agency based on observed excess demand or supply as reflected in inventories. Enterprises producing these goods are then required to supply whatever they can at that price while covering their costs.

The Austrian economist Frederick Hayek successfully shows that the price system in this model is nothing like a genuine one. (Hayek, 1940 and 1948.) In the real world, enterprises do not simply find prices as given parameters. Instead, they bid inputs away from other less valued uses and offer their output at prices that undercut more costly alternatives. Many goods and services are one-offs that are produced under contract so there would be no excess or insufficient stockpiles to be observed. Then there is the sheer complexity. Most goods can be broken down into 100s or 1000s of varieties often with different costs and there is a constant flow of new goods or varieties of existing ones. Even identical goods differ in terms of required time of delivery and this can affect the cost. If pricing were not left to those closely involved, there would be excessive lumping together of items and untimely price adjustment. While this is all very true, it is a straw man because there is no reason for thinking that the limitations of this model would necessarily apply to socialism.

The other attempt to support the third argument is found in the work of the Austrian economist Don Lavoie (Lavoie, 1981 and 1985). He contends that any price system under social ownership would be inferior to a market based one because it would be unable to reflect the discovery process that emerges from competition between market participants. According to Lavoie, it is important, in the presence of uncertainty, to have numerous participants trying out different approaches to problems, based on their own opinions, guesses and hunches. Those who come up with the best and most highly valued products using the

cheapest methods win out in this competitive contest. I fully agree. However, if, as I contend, decentralized custodianship is compatible with social ownership, diversity of approach should not be a problem.

Under social ownership, it could still be very common for an individual enterprise or facility to be just one of many producing the same good or close substitutes and each of them would be free to try out different production methods and product designs. Some would be new entrants who were either existing enterprises moving into a new field with synergies or starts ups established by enthusiasts with ideas that the incumbents were not open to or capable of developing. This diversity would be greatly assisted by having numerous independent agencies being responsible for disbursing funds in each industry and making their own assessment of what were good investments. At the same time, enterprises would be free to choose their suppliers based on cost and quality, and would have to outbid other users of a resource or intermediate good. Discovering and adopting the best methods and products would of course mean that it would be common to see activities abandoned and enterprises closed or reorganized. Part of being a 'socialist angel' is the willingness to take the risk that one's efforts end in disappointment rather than success.

Summing up this section, the only obstacle to a decentralized socialist price system would be the absence of daring and conscientious custodians - in other words, the human nature or motivation problem.

3.The motivation problem

The question of human nature or motivation basically concerns the prospects for moving from a society where people are motivated by profit - or by the threats and inducements of those who are - to one where they are generally prompted into action by the fact that work is its own reward and by a strong desire to contribute to making the economy efficient and dynamic.

The plausibility of such a change rests basically on the nature of work in an advanced industrial society. Many jobs have intrinsic interest and it is not difficult to imagine them being performed for their own sake. This is particularly so in the case of virtually any work that allows people to apply higher abilities and overcome challenges. This category includes

the jobs that are especially important from the point of view of efficient outcomes. Among these are work in research and development, and entrepreneurial activities such as helping to introduce new methods or products, or developing investment proposals.

Even fairly typical jobs are becoming progressively less irksome and more likely to be congenial to some degree, and hence performed diligently with no great inducement. Technology has been taking the drudgery out of most work. Pick and shovel work has become a thing of the past, and carrying and lifting is going the same way. Machine feeding and work on production lines is progressively becoming the task of robots.⁵ Over the next generation we can expect to see the automation of most of the menial jobs still presently found in retailing. A high and increasing proportion of jobs are professional or managerial, or require technical training. Indicative of much of the work being performed is the fact that close to half of Americans in their 30s and 40s spend at least some of the year enrolled in a career or job related part-time or short course.⁶

This being said, we still have some way to go before we achieve a situation where virtually all work is congenial and gratifying. Furthermore, work satisfaction on its own would still have a number of limitations as a motivator. Firstly, work that is a source of considerable satisfaction would still have its disagreeable moments and these could often be critical from the point of view of outcomes. For example: there is the extra effort required to make doubly sure that an important investment decision is a good one or that a new production process is running smoothly; you may be tired but you still need to meet a deadline; or urgent work matters may clash with personal commitments.⁷ Secondly, just because individuals find work satisfying does not necessarily mean they would always carry it out in a way that achieves the best outcomes. In some cases these could actually be in conflict. The attachment to the project that they are working on may lead them to behave dishonestly to ensure it receives investment funding; they may resist the introduction of a new technology or product mix which does not match their skill set; or they may increase their work satisfaction by

⁵ It is true that much of this work has moved to the newly industrializing countries, particularly China. However, as technologies advance, wages rise and capital accumulates, it will be eliminated there too.

⁶ http://nces.ed.gov/programs/digest/d04/tables/dt04_362.asp Last accessed 26 September 2012.

⁷ It is worth keeping in mind that in many cases much of the utility from a job is in achieving results, and doing so in a timely fashion. So, at these pressing moments, the increased utility of work may well over-ride the utility of other activities foregone, including sleep.

undermining the efforts of rivals or enemies. Thirdly, they may be tempted to misappropriate resources for their own material benefit, through either direct personal use or illicit sale.

Countervailing these tendencies would be a widespread aversion to ‘doing the wrong thing’. Such an impulse is already fairly widespread, and it is not hard to see it being strengthened under social ownership. Ending workers’ alienation would be a major part of this. This is a big topic deserving considerable fresh investigation. Here, however, we will simply flag some of its more obvious features. Firstly there is the knowledge that our increased efficiency would not make rich people richer nor cause other workers to be thrown on the jobs scrap heap. Then there is the humanizing of work, with the end of workplace tyranny and the transformation of the division of labor into something less narrow and demeaning.

Being willing, to a certain degree, to endure disutility in your work and to perform work that clashes with preferred activities would be recognized as a matter of enlightened self-interest rather than altruism or self-denial. It would be an act of reciprocity. Others are doing the same thing and you are all contributing to a common pool of good outcomes that would not be achieved otherwise. You are not directly rewarded but benefit by being able to share in the results of this pool, namely, higher income levels. Failure to contribute would be seen as shameful, as free riding on the contribution of others.⁸

You often hear the claim that high achievers would resent and be de-motivated by receiving the same income as everyone else. If so, they would need to be impervious to a range of good reasons for thinking the contrary. These include the fact that the society that they are part of is a better one to live in because of these arrangements, that their achievements are due in significant degree to factors outside their control and that people with less productive potential are generally doing their best.

The change in outlook and behavior would lead to a number of positive feedback effects on work. Firstly, if workers require less supervision, display an active interest in their work and are more assertive, they can be more involved in the decision making and other thinking

⁸ The pool would vanish if those who are willing to contribute cease to do so because they resent the fact that others do not or decide that the free riding of others diminishes the pool sufficiently for it not to be worth contributing to.

aspects of the work. Secondly, working life would be greatly enhanced by workers displaying greater mutual regard. As well as being generally more agreeable to each other, workers would seek ways to help co-workers to master their work and to develop their abilities, and to ensure that what they are doing meets their career and personal development needs.

The level of socialist motivation would vary, indeed quite considerably, in the beginning. This would require the more motivated to monitor the less motivated. However, assuming a sufficient critical mass of commitment, this may well be less difficult than the challenge faced by capital owners under the present system who have to animate the rest of us who “only work here”.⁹ Critical to the effectiveness of the more motivated is increased assertiveness. People need to feel that they are entitled to know what is going on and make their views known. They need to be able to stand up to people behaving badly who usually get away with it by bullying anyone who challenges them. In other words, the required change in human nature is as much about toughness as goodness. The meek will never inherit the earth.

The monitoring or scrutinizing process would be assisted by the greatly increased openness and transparency of the system. On the one hand, the dismantling of ownership walls would eliminate commercial secrecy and ensure that the activities of organizations were far more visible from the outside. On the other hand, there would be greater internal openness with workers having far more right to know what their colleagues and superiors were doing. One could expect that most workers would be particularly keen to ensure that their own efforts were not undermined by the poor performance of their colleagues. In addition, once they were no longer subject to a tyrannical hierarchy, subordinates would more readily report to superiors on whether or not their decisions were proving to be good ones.

A more active consumerism would also assist in improving the quality of goods and services. Currently consumers are generally inclined to give feedback if they are seeking recompense or wish to vent strong feelings of anger or gratitude. They also reward or punish providers in their future purchasing decisions. However, they generally do not feel that it is a social responsibility to complain and praise. This is another case where a better sense of enlightened self-interest is required. Other consumers gain from your feedback and you gain from theirs.

⁹ In the economic literature this is referred to as the principal-agent problem.

Assertiveness once again plays a role here. People often feel uncomfortable about complaining or insisting on good service.

Competition could still play a role as a motivator. The diversity of approaches from multiple participants that I have already mentioned would allow various forms of competition that are quite compatible with social ownership.¹⁰ At its mildest it would simply involve comparing the performance of providers of non-traded goods and services in different locations. For some work, assignment by tender would be a good way of ensuring competitive pressure. At its severest, competition would lead to the reorganization or closing down of enterprises if their products were obsolete or unwanted, or other enterprises could meet demand more effectively in terms of price and quality.

As already mentioned, investment could be funded by one of numerous banks, and these would be judged on their performance, and be at arm's length from government and any political process, so reducing the risk of them providing enterprises with bailouts. This hazard was dubbed the "soft budget constraint" by Kornai (1992) and it was a major problem both in the command economies such as the Soviet Union and in the "market socialism" of pre-1990 Hungary and Yugoslavia.

This reliance on non-material incentives does not rule out the use of material ones in a secondary role. Income will usually depend on having a job and turning up for work. To allow people to draw a normal income independently of work commitment would require a very high general level of motivation. Wage differentials would also play a role. They would be used to encourage people to take up lines of work for which there is excess demand and also, at least initially, to reward better performance.

In most cases, the former would be a short term problem which would be addressed by increasing training in the field or by developing technologies that require less of the labor in short supply. It would be a permanent problem in the case of excess demand for people who are among the best in a particular field and who would greatly improve the performance of the enterprise they are assigned to. This does not mean that these individuals have to be paid

¹⁰ This would also apply to sectors that are now often run by government bureaucracies, such as education and medical care.

wages way above the norm. While the enterprises that successfully bid for the workers would have to incur at least the full valuation of the next most valued use of the ability or expertise, the workers themselves would only have to be paid what was required to induce them to undertake the kind of activity and this may be no more, and possibly less, than what they would be paid in their next most preferred type of work that they are able to perform and which does not involve the exercise of their special abilities. The difference, an economic rent, would end up as either a tax on high gross salaries or a tax paid directly by the enterprise.

In the early stages of socialism, reward for performance would unavoidably play a significant role while the new forms of behavior were still not fully entrenched and there were still many jobs that were not entirely congenial.¹¹ The sooner it could be dispensed with the better. It is a poor and misleading instrument given the difficulty of assessing the performance of complex tasks, and would have the potential to be quite corrupting and to undermine socialist motivation.

One cannot end this discussion of motivation without a short aside on the failure of 20th century attempts at socialism in the “communist countries”. On their list of fatal maladies were poor motivation and relationships in the workplace.

In most fields of endeavor success is preceded by failed attempts and necessary lessons are learnt from them. The Dieppe fiasco of 1942, for example, contributed much to the success of the Normandy landing of 1944.

More importantly, and what cannot be stressed too much, is that the changes in motivation that we have been discussing require an advanced industrial society. However, Russia, China and most of the old socialist camp were nothing of a sort. Indeed, they still had one foot in the Middle Ages. So, instead of being capitalist countries ripe for socialism, they were semi-feudal ones where capitalism was a novelty.

¹¹ Indeed, at the very beginning of the transition process, the system may well be more like the 'marker socialism' referred to earlier – However, I would prefer to call it state capitalism.

Most people were peasants rather than workers and they were interested in land to the tiller, not social ownership of the means of production. The lack of economic development meant most work was unavoidably arduous and menial, and so it was impossible to move beyond an overwhelming reliance on material incentives. Because of the backwardness, it was inevitable that there would be a very large disparity in material and cultural conditions between those in the leadership and the population as large. They were not interested in sharing poverty with the rest of the population. Hence, scrambling for a good position in the elite took priority over serving the common good. Socialism requires democracy to thrive but this was not possible under the circumstances. Firstly, there was the revolution's very tenuous hold on power and the usually nasty fascist alternatives. Secondly, it was not part of the culture. Under these conditions a "command economy" was all that could be created and was declared the essence of socialism.

These regimes then failed to subsequently develop into anything more deserving of the name socialism. This should not surprise. Notwithstanding considerable social and economic progress, they never achieved a sufficient break from their backwardness. Furthermore, being essentially non-socialist societies, they were full of people who were against or indifferent to moving in a socialist direction. These included the entire elite who had a vested interest in either the existing arrangements or in moving to something more like fully functioning capitalism.¹²

After that detour, let us sum up the discussion of motivation. There are good prospects for work to become something performed for its own sake and for people to want to contribute the best they can to economic outcomes. The latter could operate not only through people's direct endeavors but also indirectly through their interest in the work going on around them. This would include keeping an eye out for negligence and corruption, and assisting others with advice, feedback and encouragement. Competition would still play a role because enterprises would have to be mindful of the performance of others in their field.

4. The economic superiority of socialist motivation

¹² For another example from history of how difficult radical change can be we need look no further than capitalism. That system took half a millennium to become properly established in Europe, and it is still struggling in the more backward regions of the world.

Assuming socialist motivation were achievable, would it be better than the profit motive? It is not difficult to imagine it packing more punch, given the tenuous nature of the latter. The only people directly motivated by profit are the residual beneficiaries, usually the owners of capital. They then have to motivate their employees through a mixture of rewards and penalties. This faces two challenges. Firstly, employed managers at the various levels of the work hierarchy are unlikely to have the motivation of a capitalist irrespective of the remuneration package offered. Secondly, it is increasingly difficult to monitor the performance of rank and file workers. The work is becoming more difficult to specify in advance, as is the task of telling apart the contributions of individual workers. Outcomes are also undermined to the extent that the difficulty of monitoring leads to the choice of an otherwise inferior work organization.

Even if the profit motive operated with full force, socialism would still have another advantage. Ironically, given the usual direction of the discussion, it would have a better price system. The superiority of a socialist price system is no great mystery. It is simply the absence of all the distortions caused by the private ownership of the means of production. These are generally well known and fairly obvious. Below is a list of some of the more important price distortions.

1. Firms are frequently able to create a shortage and so push up the price of the good above cost and capture monopoly profits. They can do this if it is difficult for competitors to readily enter the market. The difficulty can be longer term, as in the case of large sunk costs deterring entry¹³ and the ownership of intellectual property by incumbents, or shorter term, as in the case of temporary market power that comes with being first with a new product or process.

2. Private ownership limits the production and flow of information about supply and demand. Firstly competition between firms leads to secrecy and disinformation and secondly information is a public good, something the market does a poor job of providing. This

¹³ Sunk costs can be a problem in two ways. Firstly, a new entrant has a lot to lose if their entry into the industry is unsuccessful and secondly incumbents can choose to write off their sunk costs and drop their prices to a level that would not allow a new entrant to receive the necessary return on their investment.

information failure means firms are limited in what they know about the investment plans of their competitors, suppliers and customers, and this results in a greater risk of industries having too little or too much capacity relative to demand. In contrast, custodians of social property would give and receive an unconstrained flow of information, and make a deliberate effort to coordinate investment plans.

3. As any undergraduate economics textbook will point out, the market is not very good at dealing with “external” costs and benefits. Under socialism costs such as pollution or loss of local amenity would be internalized. No one involved with an enterprise would financially benefit from ignoring these costs. Generally enterprises would honestly endeavor to determine their extent when presenting investment proposals and the funding agencies would attempt to assess all costs when determining whether a project had a net benefit. Once in operation, production would be monitored through self-regulation by those keen to do the right thing, and this would be fortified by greater transparency to outside scrutiny.

While the market is ever ready to impose external costs, it is not so keen about bestowing external benefits or public goods. Research and development is the primary example. The knowledge developed and used in producing one product could also be used in another. In some cases the knowledge is not created because of the difficulty of getting potential beneficiaries to cooperate. In other cases it is created by one party but access is then restricted. Under social owners, enterprises would make their research and development freely available to others and would be more open about the value they place on particular research and offer to contribute accordingly.

4. Capitalism regularly suffers from financial crises followed by a falloff in aggregate demand which causes unemployment of labor and other resources.¹⁴ When this occurs, the price system is not doing its job. Socialism is hardly likely to have such a problem because it would not have the requisite debt pyramids where money is borrowed so it can be lent. Funds for investment would mainly come out of a government owned pool comprising tax revenue,

¹⁴ There is no need here to resolve the question of whether severe business cycles are inevitable under capitalism or amenable to government remedial policy. If the latter is the case, we can say that the track record of governments gives no reason to be upbeat about their ability in the future to both agree on and implement the correct measures whatever they may be.

and loan repayments and net revenue from enterprises. If enterprises are unable to repay their loans from the government because an investment did not turn out well, there is no danger of the financial chain reaction we often get under capitalism. The government did not borrow the funds it lent.

5. A common response to these “market failures” is government intervention. However, capitalist governments are very much the creatures of vested interests and so do a poor job of correcting markets and often create their own distortions.¹⁵ A number of players are at work, especially the following: capitalists and workers in particular industries who pressure government for favorable treatment; liberals and social democrats who demand bureaucratic measures aimed at mollifying discontent that might otherwise threaten capitalist society; and functionaries and politicians who further their careers rather than serve the common good. However, even if officials acted for the greater good, their regulatory tinkering could never match future custodians of social property endeavoring to minimize all costs and to produce the most highly valued output.

5. Conclusion

The calculation argument does not provide economic theory with its own case against socialism. On the contrary, there is nothing preventing an economy where the means of production are socially owned from having an effective price system as long as it can replace the profit motive with a desire by people to undertake work for its own sake and to serve the common good.

Whether such a change in motivation is possible is not a matter that economic theory can address. It is the old human nature question. I have argued that a change to the required motivation in an advanced industrial society is far more plausible than is generally acknowledged and suggest that the failure of past, inchoate attempts at socialism say nothing

¹⁵ Proponents of laissez faire capitalism fully recognize these problems and have developed a field of economics called public choice theory that provides many insights on this question. However, they tend to obscure the fact that these interventions are endogenous to the market place itself and to the society that capitalism engenders, and pretend that they are exogenous impositions.

about its ultimate viability and a lot about the unfavorable if not impossible conditions under which those attempts were made.

Finally, any discussion of economic calculation should extend to capitalism's many inherent failures in this area.

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