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MARKET SOCIALISM AND ECONOMIC CALCULATION

The purpose of this paper is to examine unappreciated criticism of the market socialism model that was developed in the 1930s during the Socialist Calculation Debate. Our aim is to present two related theses: (1) market socialism is not different from the “standard” version of socialism, and as a consequence of that (2) no type of socialism can mimic capitalist market process. The first section briefly summarizes the importance and misunderstandings of the market socialism model. The second section discusses its omitted criticism. The third section contrasts calculation under market socialism with calculations under a capitalist regime. The last section presents concluding comments.

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1. SOCIALIST CALCULATION DEBATE AND MARKET SOCIALISM

The Socialist Calculation Debate has been subjected to many revisits, reinterpretations and various analyses. The literature is full of many coherent and rich considerations extending the topic far beyond socialism itself (see comprehensive overview in Lavoie 1981). If someone wanted to investigate all the arguments and counter-arguments about the possibility of socialism, this would appear as a very difficult, if not impossible task. Two primary publications remain the most important: Ludwig von Mises’s presentation of the problem, and Oskar Lange’s response, who was a leading defender of socialism in the spirit of the neoclassical economic tradition.

Mises’s argument ([1920]1990) was an original (yet, as in many original works, undeveloped) approach to unite two distinct social disciplines, law and economics. According to economic theory, production decisions are driven by profits and losses, which are generated in the market by price discrepancies. Had it not been for the prices for the factors of production and the goods and services that are produced with them, it would have been impossible to economically judge the efficiency of economic actions. Pricing

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of goods allows for their economic valuations and revaluations made by speculating entrepreneurs. Without those parameters it is impossible to appraise economic choices and actions.

This economic reasoning on the role of prices was already known to theoreticians. Price calculation is a necessary condition for economic efficiency. Mises's contribution was to contemplate the sources of price structures. He argued that price ratios in the market are the results of voluntary interactions of market participants exercising their property rights. Thus those parametric ratios which constantly help entrepreneurs to assess economic actions are formed by deliberate contracts, not by public decrees or state planning. They can *only* arise from the competing, cooperating and interacting wills of different participants, who from a legal point of view, are exercising equivalent rights (Mises 1990: 16-7)¹.

This insightful observation of the inevitable link between the legal framework and economic reality led Mises to formulate the argument on the impossibility of a prosperous socialist commonwealth. Since any socialist system rests on the creation of one compulsory owner of factors of production, the property rights in those factors need to be abolished. There are foreseeable economic side effects of any nationalization scheme. The abolition of property rights precludes the immanent feature of their exercise: freedom of contracts. Once this freedom of contracts is obliterated, the act of the creation of prices, as performed by the market participants, cannot happen. As the Misesian story goes – without price ratios, meaningful price assessments based on them cannot be accomplished, hence the economic calculation and efficiency evaluations must be absent in a centrally owned economy (Mises 1990: 28).

The simplicity and clarity of this argument attracted many economists (and still attracts nowadays). This refers to the followers of Mises and his opponents. Anyone arguing on the possibility or impossibility, feasibility or inefficiency of a socialist system has to start from Mises. In the 1920s, German economists unsuccessfully tried to reject his thesis. Most of them did not stand up to the task and argued for some “calculation” scheme alternate to monetary calculation (see the overview in Mises 2002). The most notable attack came from the neoclassical school. The answer to the problem was offered by Fred Taylor (1929), and developed later by Oskar Lange (1936-1937) in his competitive solution.

¹ Mises does not use explicit legal terminology in his essay, but constantly refers to the “exchange” phenomenon between two parties.

Lange worked in the neoclassical tradition of a mathematically described general equilibrium, where all economic and technical data are equilibrated by a somewhat simultaneously self-determined process independent of human will. This credential led many critics of socialism to consider Lange's response as an exercise in general equilibrium analysis.² Moreover, even today there are economists who argue that Lange's response assumes what needs to be proven.³ According to those critics the counterargument to Lange's propositions is the same as the argument against general equilibrium models. Since these models cannot successfully depict economic reality and illustrate the process of production, they also cannot lead to success in achieving an even more difficult task: the efficient organization of a socialist economic plan. Yet contrary to this belief, Oskar Lange's model inspired by Taylor's insights, is not deeply grounded in the equilibrium analysis. Lange's model, the so called market socialism model, offers a "real" solution to economic planning under uncertainty without a necessary direct reference to the economic concept of general equilibrium.⁴

How is market socialism supposed to function?⁵ The consumer market needs to be free and dependent on consumers' preferences. Public factories

² But interestingly not Mises himself – see Mises 1966: 705-710, where he treats the general equilibrium solution and competitive solution as two distinct responses.

³ See: Boettke 2001: 40; Kirzner 1988: 7; Lavoie 1981: 46; Vaughn 1994; Horwitz 1998: 431. Also Lavoie (1985: 119) argued that market socialists "relaxed only one datum" (prices) and assumed that "all other data was available". Yet, this does not have to be the case.

⁴ There are of course instances, in which Lange refers to the unrealistic perfectly competitive equilibrium, but they are neither substantial nor binding for his practical considerations and recommendations.

⁵ Lange and others' concept of "market socialism" is purely theoretical. Sometimes the term is being used to name real world mixed economies, for example the Chinese economy. Despite the similarity in name, the Chinese economy is completely different from the theoretical market socialism idea as developed in the 1930s. The most important reason for this is that the Chinese economy adopted a form of "nomenklatura" ownership separated from the purely political system (very slowly, but decisively so); see on this Ram Mohan 2004: 4905ff. Kornai (2000: 33) classifies this as a form of transition from socialism to capitalism, however imperfect it may be. Also for China's economy international markets play a vital role. For example, it is the main recipient of foreign direct investment (Fung et al. 2009: 479-482). Even though the government plays a huge role in the Chinese model, it is not the model envisioned by Lange and market socialists because the price system does not depend on the planning authority organizing it. The relevant part of the process depends on independent international markets, external investors, and decentralized 'nomenklatura' businesses. Nevertheless, even though Lange's market socialism does not exist in China, the analyzes of it can shed some light on Chinese (and other countries) issues. See the concluding section.

and enterprises in socialism should be run by public managers. Unrestricted consumer spending is the indicator of products, which are relatively more desirable. All factors of production should have monetary prices (even set at random) assigned to them according to the central price listings. Managers of public companies are supposed to consider both prices of existing factors (owned by the state) and consumer spending on various goods at currently existing prices. In the case of a noticeable disequilibrium between the two, shortages and surpluses will arise in different markets. The problems of those shortages and surpluses will be solved as easily as they are in capitalism – by continuous price adjustments (Lange 1936: 57-60). If any factor (or consumption good) is in deficit, official price ratios (centrally organized prices) shall be increased. If there is a surplus, then the price shall be lowered to clear the market (Taylor 1929: 8).

The above response is a straight answer to Mises's *calculation* argument; perhaps even too straight, because it mostly refers to an operational problem of an arithmetical process (the need for a common denominator for "prices"). Lange actually acknowledges Mises, and he concedes a point that (as opposed to initial German responders): it is impossible to avoid economic calculation if the economy is to prosper (Lange 1936: 53). Goods, factors and services need a common denominator for their valuation in order to guide acting entrepreneurs (or public managers). Accordingly, Lange agreed with half of Mises's point: the vital role of the price system. What he debated was the second and crucial part of the argument against socialism – as Lange ironically noted the "institutional" part of the argument (Lange 1936: 55) – that prices can be formed *only* via voluntary contracts under the private property regime. On the contrary, prices as parameters can be organized centrally and adjusted in a decentralized manner responding to public managers' demand who have the knowledge of a particular time and place.

This proposition is not an "equilibrium" model, because there are no mathematical equations in it that require "solution". There is no ultimately achieved stationary state in the model, either assumed, or visualized in a mathematical world. Even when Lange refers to equilibrium concepts, this does not overcome the real world aspects of his dynamic analysis (his equilibrium references are similar to the ones appearing in the works of the Austrian economists).

It appears that most of the criticism of Lange which followed his publication, missed the point. He did not assume perfect knowledge, or lack of error on the part of the managers. Additionally the so called "incentive"

problems mentioned by the others (Roberts 1971; Knight 1940) are not problems “per se” for the theoretical project. If the incentive is understood as a systemic constituent that helps to motivate and encourage people to “do their job”, then the socialist system actually has a better inducement system than capitalism. It applies to both rewards and punishments. People can be shot or tortured for not “doing their job”, and they can be rewarded for performing excellently (rewarded relatively more than other people, since the central owner owns everything). Provided there is no social and political revolution, and that central planners can organize their dictatorial apparatus at least to the minimal extent, the incentive schemes can be “well” arranged and put into action.

However we proceed from this outlook, whether we side with Lange or find counterarguments to his scheme, the debate changed significantly after Lange’s response to Mises’s ground-breaking contribution. Economic calculation and its heritage, double entry bookkeeping, are among the most important human inventions. Without economic calculation it is impossible to find a common standard for valuations of scarce goods. Nevertheless, state ownership of all production goods does not completely exclude the prospects for calculation. Under market socialism as proposed by Lange and Taylor, calculation becomes possible. All factors and goods can have a common denominator, a universally recognized unit of account, which paves the way for some forms of economic assessment. Naturally, these assessments might be (and, as we argue, they are) much different from the ones attained under capitalism. Yet the Misesian “calculation” argument per se is answered by the market socialism model – under central ownership factors can be priced, and their employment can be economically “measured” by the use of those “prices”.

Mises and his student, Friedrich Hayek, offered their counterarguments to market socialism. Mises chided market socialists for their allegedly unrealistic proposition that public managers could “play” the market (Mises 1949: 707). He believed that real entrepreneurs could not be imitated by artificial competition between the managers, who do not own any property. Apart from delivering irony, this argument begs for more explanation. Hayek, on the other hand, emphasized mostly the bureaucratic challenges. Prices under market socialism would adjust slowly, they would not quickly comply with changes in conditions, making in effect the whole apparatus highly inefficient. The path toward equilibrium would not be rapid enough (Hayek 1940: 131-2).

2. THE IRRELEVANCE OF MARKET SOCIALISM

The failure of market socialism model stems from the fact that it is not different from the standard type of socialism in which the role of governmental central planner is primary.⁶ For this reason it fails on a very basic level; it cannot create a special type of competitive socialism. The proof for that is not concealed in answers to questions such as: “Is there *calculation* in socialism?”, or “Is there *equilibration* under socialism?”. Such questions led theoreticians astray for some time – in market socialism something is equilibrated, and something is calculated. The proof is rather hidden in answers to questions such as: “*What* is being calculated in socialism?” and “*What* is being equilibrated under socialism?” (assuming a form of market socialism).

We can follow Lange’s suggestions and assume that central ownership could organize the planning in a decentralized arrangement with dynamically adjusted price ratios (today using the Internet). Nonetheless this calculation scheme would differ largely from capitalist forms of calculation. The crucial thing about market socialism is that it does not differ much from the classical form of economic dictatorship. This is because the so called “prices” under the market socialism scheme *are already a part of the central owner’s plan*, which is being executed and adjusted through time. Both under market socialism and capitalism, profits and losses appear because of the price discrepancies and price adjustments. There is, however, one important difference between these two economic systems. Under capitalism, most price elements are beyond the direct control of one acting entrepreneur – even though the entrepreneur does influence price movements, he is certainly not causing all the price adjustments. He is rather adjusting his actions to *externally* driven price changes (Cole 1971: 183).

Under market socialism, the price structure is centrally controlled and subjected to monopolistic decision-making by one collective agency (or dictator). Let us consider the simple example of the production process of machines made of steel. To quantify the extent of profits or losses, state

⁶ By “standard” form of socialism we mean a socialist order in which the government as the exclusive owner of the means of production has the ultimate control over resources. Its decisive role stems from the fact that the majority of production and distribution results is being created by central authority’s decisions taken directly by a political entity. The “market socialism” model was created in order to overcome this difficulty. Yet, as we will see below, it failed in this regard.

manager needs the prices for factors of production, steel in this case, and the prices for finished goods which are sold later on, the machines. The positive difference between the two is a “profit”, and a signal to increase the output. The negative difference is a “loss”, a signal to decrease the output, and to reallocate the factors to more “desirable” processes of production. But who decides about the prices for machines and the prices for steel in this case? It is the central agency which is supposed to make the price structure an objective guidance for the most efficient results.

In reality, prices under market socialism are fiat prices – they represent decrees of a central owner (Eucken 1948: 190ff). Under socialism, the central owner issues orders on how to allocate capital goods and labour. Under market socialism, the central owner sets the price ratios which indicate what should be produced if profits are to be achieved. These ratios in market socialism are not different in their nature from the usual orders given by the economic dictators and state monopolists in “typical” socialism. By setting the prices for steel and machines, the central owner has already issued a decree indicating whether this particular production process is “profitable” or not. If the price for steel is higher than the price for machines, the central agency decrees that it is not “profitable” to produce these types of machines. And since only the central agency can adjust the prices, it constantly decides whether this or any other production process should stay “profitable”, or linger on as “unprofitable”. Hence, under market socialism the usual socialist decrees and direct commands are translated into the indirect language of calculus and numerical signals. Instead of directly instructing managers of public companies on “what to do”, the central owner indirectly instructs: “do this, because it is profitable”. This is a minor change and makes the whole case of market socialism almost irrelevant for the socialist challenge.

It could be argued that under capitalism the case is similar because existing prices already “illustrate” what is profitable and what is not. Apart from the fact that this is only the case with the current prices, they are not centrally set. Price structure under capitalism is not organized by one central will. It is an uncertain outcome which depends on various interactions between market participants. Price adjustments at any time under market socialism have the same cause: the will of a central ownership body. It is not only that the state under market socialism decides what is “profitable” currently, but it also decides *ex post* what was “profitable” and what will be “profitable” in the future. In all the instances, the judgment whether something was done properly (profitably) or not lies in the hands of a state

monopoly. To be precise, this feature makes market socialism nothing special – rather just another example of political and economic dictatorship, established in this case by some accounting measures implying the planners' orders.

This characteristic of market socialism was thoroughly confirmed by Walter Eucken's empirical analysis (1948, 1948a) in the case of the "German experiment" during the war. As Eucken demonstrated, price accounting does not restrain the state in any way. Any calculations run by the state do not set any form of real constraint upon the actions of state agents. Under German central planning, the decision to start and continue a certain investment, or liquidate it, was decreed. Official calculus done by the state did not constitute any limit upon its actions. It could either be changed, or simply ignored. From this empirical description, Eucken was able to infer an important theoretical contribution – centrally administered ratios are unimportant for the implementation of socialist (statist) programs.

Naturally one might argue that it is the same in the case of a businessman's plan in the market economy. His plans can also be executed courageously without reference to real world prices. Nevertheless, there is a crucial difference of an institutional nature between these two scenarios. The businessman will lose his money and eventually all the assets he owns if he chooses to pursue his goal without reference to prices and monetary calculation. Other businessmen will gain wealth at his expense if he chooses to ignore price signals.

The central owner under market socialism cannot really go "bankrupt", because from a purely technical point of view (officially and cautiously administered calculus) when he goes "bankrupt" all the assets will be liquidated "at his expense", yet paradoxically, at the same time fully "in his favour". There will not be any redistribution of ownership, since by definition under socialism there is only one owner. Hence the difficulty of market socialism does not lie in the fact that the central owner is not *willing* to subject himself to official calculation, but that he cannot constrain himself in the same way as the capitalist entrepreneur. For even if he does follow the signals of calculus and tries to achieve "profits", he merely does what he pleases to do. He achieves profits because he decides what profits are. There is no escape from this paradox. He cannot be externally controlled because it is he who controls every production decision.

Capitalist calculation has severe institutional consequences. Economists describe the market process in terms of "profits", "losses" and "equilibrating allocations" resulting from them. The other side of this coin was given in

Mises's initial publication. When the economist speaks of an "equilibration process" and the reallocation of resources due to the profit-loss mechanism, there is a legal side of this process (White 1989: 129). Profits and losses lead to reallocations of not only "goods" but also of ownership titles. In fact the former could not be realized without the latter. An alteration in the distribution of ownership induces change in economic allocations.

This all is absent under socialism and market socialism. Under capitalism, "prices" are for a single entrepreneur an *external* opportunity cost which is independent of his own will. Socialist ratios, on the other hand, might be considered as variations of accounting costs, but they certainly are not *external* to the central owner's will. The capitalist entrepreneur is adjusting his preferences to existing prices, created by the interaction of competing wills of other entrepreneurs. When the central owner is adjusting his preferences to the existing "prices", his preferences are always the driving force because these "prices" are his decisions and the results of his preferences. Henceforth they cannot be considered as independent parameters guiding his actions external to his will (Bornstein 1962: 97-8). In other words, calculation under market socialism fails its task of being an independent guidance precisely because this "calculation" relies fully on the one who is to be guided. Hence, even if the planners under market socialism do what they are supposed to do in theory (follow the rules of calculus), they still implicitly issue decrees and commands as they would do explicitly under "standard" socialism.

Curiously, one of the thinkers who noticed this flaw in the market socialism model was a guild socialist, G.D.H. Cole. His insights were even clearer and profounder than Eucken's. They were presented before Lange's publication. His point was lucid and firm. The extent of the wages, rents, interest and all the subsequent costs depends on the methods used by the state. If these costs are calculated by the state, they are controlled rates, their level depends on the decision of the planner. The decision to increase costs, or decrease them in one sector of the economy (firm), is coordinated with the decision to change them in another sector. The whole process can be equilibrated and calculated quite well. Those monetary charges, however, are of a different nature than in a "plan-less economy", where the structure of monetary prices is not planned the way it is under market socialism. Therefore "costs" in socialism are shaped and imputed according to the planner's decisions. Obviously this is not the case for the capitalist entrepreneur, who in the cost imputation process is bound by the property rights of the other entrepreneurs (Cole 1971: 183-5).

It might seem trivial to answer the initial question from the beginning of this section – “what” is being equilibrated and calculated under market socialism. The planner’s orders and decrees are being equilibrated and reflected in the form of numbers. Price accounting and monetary ratios adjustments echo state decisions. They do not *convey* anything extra apart from the planner’s preferences. This is why those “prices” are fiat prices. They might be “binding”, but the “obligation” to follow them is entirely opposite to the one under capitalist system.

Since Cole published his book before 1936, Lange (1936: 63) felt he had to respond to the strong objections about the arbitrary nature of price imputation, which under the monopolistic conditions of state ownership proceeds without external limitations placed outside the political decisions. The only possible response is that centrally administered adjustments of the officially designed price ratios are not arbitrary if they rely on some external objective factor. The process might be “arbitrary” in the very beginning. “Prices” may be set at random, as Lange himself concedes. Nonetheless even if that is the case, the rules set by the planner will put the economy on the objective path to correct economically the efficient process of equilibration (Lange 1936: 64). Such rules shall be efficient if the price adjustments are based on *physical* surpluses and the deficits of all goods at the end of an accounting period.

There is no doubt that physical quantities are objectively recognizable elements of the economic reality outside of one’s will. The notions of “surpluses” and “deficits”, however, are not (contrary to our intuition). Apart from a few cases⁷, surpluses and shortages in the economy are a matter of *subjective interpretations* made by speculative entrepreneurs (Huerta de Soto 2010: 206-7). Let us take the case of empty seats in a theatre, or in any case of goods stored in the market which are not sold instantaneously on one day – do they represent a surplus and should therefore the prices be lowered?

⁷ Instances where shortage can be perceived as a case when a consumer does not have some “necessary” amount of basic consumption good at his disposal (the hypothetical example could be “one loaf of bread per day”). This refers only to a few cases of basic consumption goods. Even more importantly, since this touches the core of the problem of socialist economies, this could not occur in cases of capital goods and production goods where the quantity of goods available cannot be related to any individually consumable quota.

It is conceivable what would happen if the state apparatus decided that any good actually physically stored somewhere represented a surplus. This would lead to an official lowering of the prices for these goods, and furthermore (due to these decreases), their immediate disappearance from the market. Let us imagine goods A placed in a store. Since they represent a physical surplus, the planner lowers the price until they are immediately sold to the consumer – the price has to be much lower. Now, according to the official calculus, the production of good A is “unprofitable” because prices for all the factors needed to produce A are higher than the present low prices for A. The factors necessary for production of A become ‘unemployed’, because the managers cannot employ them “profitably” – they are stored in warehouses. Then again a physical surplus develops. The planners have to lower the price in order to “clear” the market from the surplus. Now, factors necessary for the production of A disappear from the market and it is “unprofitable” to deliver them.

This example demonstrates how the purely *physical* perspective on the nature of surpluses is a guaranteed recipe for an economy of the universal shortages. Such phenomenon is lucidly described by Janos Kornai (1979) who demonstrates that socialism must end up as a “resource-constraint system”. If the central owner is to avoid the universal shortage of all goods, he cannot rely on exclusive physical observations. Surpluses need to be noticed and entrepreneurially inferred from the economic reality. This leads us, however, back to the initial irrelevance of market socialism – if the state is to exclusively decide what is a “surplus”, it will also decide when the prices set by the state need to be adjusted and corrected (no objective factor will substitute the state in this effort⁸). Henceforth, the notion of surpluses is not “objective” at all; it is not outside of central planners’ preferences and decisions. Centrally administered ratios are not external guidance, objective opportunity costs for the planner, and neither are “surpluses” and “shortages”. Shortages and surpluses cannot be passively registered in physical terms, but it has to be *decided* when the surplus or a shortage

⁸ Let us clarify here that we do not mean that the central planner does not have “necessary data”, because neither do the entrepreneurs under capitalism. The issue is not the question of having “proper data”, but the question of *who* and *how* runs the economic system.

appears.⁹ As mentioned previously, market socialism inescapably becomes the same thing as typical socialism without any calculations.¹⁰

As Kornai's work indicated, capitalism is not only a resource constrained system, but also demand and budget constrained. Hence the notion of surpluses and shortages in economics is not strictly physical, but based on the entrepreneurial perception of what (and at what monetary cost) can be profitably reallocated. Many goods are stored currently in shops and warehouses; this state of affairs does not embody surpluses, but "investments" in the inventory – "reservation demand" – which allows to economize on goods held in possession (instead of consuming them right away). Without the concept of reservation demand, market socialism becomes a system without the concept of economizing on scarcities. Naturally the concept of "reservation demand" can be introduced into the market socialism model. But then it has to be at the price of abolishing the utopian project of price adjustments according to physical quantities.

3. THE IMPORTANCE OF "PIECEMEAL" ECONOMIC PLANNING

It is not hard to prove that market socialism is virtually the same as regular socialism. It is more challenging, however, to defend the original fundamental proposition about the necessary wastefulness ("impossibility") of socialism. Initially, Mises stated that calculation is essential for an efficient economy. Lange proved that a variation of calculation might be present under a market socialism regime. As we argued, the above calculation is not really an essential issue because what matters for socialism is how decisions are being made (and they are made almost exactly the same way under socialism and market socialism alike). This statement has additional consequences for the analysis of capitalism. If for socialism a calculus per se does not matter, then apparently it is a similar case with capitalism. It does not matter that under capitalism some form of calculation

⁹ As Friedman (2006: 490) puts it, if the proper interpretation of surpluses and shortages was that easy, no entrepreneur would ever lose his money. The market adjustment would be an almost automatically driven process by blindly responding entrepreneurs.

¹⁰ Another point that strengthens our conclusion: when the price needs to be lowered in the case of a surplus the question is "how much lower?". To use the technical term, how the "price elasticity" should be discovered? In the market economy there is some "optimal" level of price rigidity natural to market process. This price rigidity in market socialism, again, is decreed by the state. See Hayek 1984: 57-8.

is undertaken. What matters more is how decisions are made in this capitalism calculation scheme.

The answers to question “What is being equilibrated and calculated under socialism?” allow us to address an analogous question – “What is being calculated and equilibrated under the capitalist system?”. If the ratios under market socialism convey only orders of the central planner and his preferences (economic dictatorship), what do capitalist prices convey?

The answers are given by the “institutional” function of prices. For any capitalist entrepreneur, prices are a form of constraint on his actions. It does not matter that he arithmetically “calculates” whether some production process seems “profitable”. The important aspect is that this calculation process has severe legal and practical consequences – if the entrepreneur “miscalculates”, he is going to lose control over the assets *to someone else* (whereas in market socialism, the planner’s losses on one side are his profits on the other). It strictly follows that a direct effect of the price system under capitalism is the threat of insolvency and bankruptcy – the possibility of ownership redistribution.

Bankruptcy, and the possibility of suffering it, leads to more than personal cautiousness and thoughtfulness in taking actions. In order to stay in business and avoid financial trouble, businessmen need constantly to *refer* their actions to past, current, and especially anticipated yet uncertain future prices. Price structure converts, under capitalism, into a universal frame of reference important to all investment decisions whether they follow the routine, or involve ground-breaking projects. This reference is not a “calculation” as an end in itself (an arithmetical operation possible also in market socialism), because price structure has more fundamental causes and sources. It is created by the *competing wills* of property owners, who manifest their decisions and preferences through numerical valuations. To sum up, prices under capitalism and market socialism differ in nature, because in the case of the latter one will sets them, and in the former many competing entrepreneurs do this.¹¹

For these reasons, calculation in the environment of a private property regime forms a chain linking all the entrepreneurs and their plans. To avoid

¹¹ Therefore Lavoie (1985: 173) is right on the target quoting Saul Kripke, when Kripke compared Mises’s argument to Wittgenstein’s argument about the impossibility of a purely private language. As Kripke stated “If one agency sets all prices, it could have no rational basis to choose between alternate courses of action. (Whatever seemed to it to be right would be right, so one cannot talk about right)”.

mystical, or even worse, metaphysical phrases, let us take the example of a competitor experiencing insolvency, who under pressure of economic reality decides to abolish a production project. Let us suppose that his choice to liquidate is driven by the fact that prices of steel are higher than he expected. At first sight this merely appears as a microeconomic case of an investment mistake. But there is more to it – if prices of steel are higher than he expected, this means that some other entrepreneurs bid up the prices to the higher levels. Their decision (however wrong it may be) is based on their expectations, their (wrong or right) perception of a higher valuation. It turns out that other market participants *believe* they found a better and more valuable option to allocate steel than a person who now needs to shut down his business.¹² At this instance the relevant question about the difference between capitalism and socialism is as it was in the beginning of the Socialist Calculation Debate – why the beliefs of many market participants are supposed to lead to a better outcome than under economic dictatorship? Why are *market interpretations* supposed to be better than *compulsory one will interpretations*?

Friedrich Hayek's answer was that entrepreneurs *know more* about local production functions than a central planner (Hayek 1945: 524-5). Being of course correct in this statement, he did not see that there was no necessary conflict between the utilization of this "knowledge" and the nationalization of the factors of production. To "know" is not the same as to "own". Hayek is right in saying that people do have decentralized knowledge of time and place and that it cannot be easily transmitted to the central planner in the form of statistics. Under capitalism this is done by price movements and price adjustments, indicating which production functions are utilizing the knowledge in a better way. The problem is that under market socialism the same mechanism applies. Administered ratios can also adjust to changes in the knowledge of market participants in a decentralized approach. Under market socialism the central owner can in theory use the same information and the same channels of information that are being used in capitalism.

¹² This was part of the controversy within the Austrian School. The great theorist of entrepreneurship Israel Kirzner argues that entrepreneurs *perceive* profit opportunities like they *know* what is going to happen under an uncertain economic environment, or at least know how to gain this knowledge (Kirzner 1973: 67-9). It is, however, uncertain what the future brings and ignorance is inescapable. As Henry Hazlitt pointed out in his review of Kirzner, the entrepreneur does not *perceive*. He "thinks" he does, he "bets" and he "guesses" (Hazlitt 1974: 759). Kirzner himself noticed that Mises emphasized uncertainty and ignorance aspects more than he does (Kirzner 1973: 89). See also Hülsmann 1997: 35-6.

When we describe the price system (calculation) as a "communication channel" between entrepreneurs, we do not mean that no mistakes are made. We merely observe how the price system connects entrepreneurial judgments and differences of interpretations through the simple use of double entry bookkeeping. It is more proper to view the market process not as a coordinated process, but as a form of entrepreneurial battle for the allocation strategies. Sometimes markets are being referred to as a form similar to "language", since prices are not a fundamental variable (Yeager 1998: 18-20). We might agree to use this metaphor, but only on condition that the market process is as much based on dialogues as on monologues.¹³ Any time there is an entrepreneurial exchange of factors and assets in the market, there is a difference in opinion and interpretation. There are asymmetric expectations about the future state of affairs. Through price calculations and the process of bidding for factors (in order to achieve profitable employment) entrepreneurs are *excluding* each other from the market. That meaning seems to be hidden in the word "competition" and that is absent under (market) socialism. The question of "why must socialism be a failure?" becomes simpler than one could suspect, since it equals the question "why is competition in price setting and in the financial market good?".

The core of the issue rests on the observation that the market process is about disagreements between the competing owners about which production techniques are better and more economical (Lavoie 1985: 123). Why do competing differences of opinions on production processes lead to a better outcome than under one monopolistic plan? The question could be narrowed to one sector – why one producer of milk, or one airline with monopolistic privilege should perform poorly compared to a situation in which firms are free to compete? The natural response by any economist for this microeconomic case is that a competitive property regime allows to economize the skills of all competitors. If one company gets exclusive privileges to supply the goods, the economization of those skills is precluded. This argument can simply be extended over the whole economy. If entrepreneurs are forcefully excluded from the market, they cannot use their skills for the benefit of the consumers (deliver better quality products, lower prices et cetera). As modern competition theories argue, markets remain competitive when (at least) there is freedom of entry into the sector that allows other entrepreneurs to contest the market and satisfy consumer

¹³ I am grateful to Jeffrey Friedman for that metaphor.

demand in a better way (Baumol et al. 1983: 2ff). Under socialism this entry of other entrepreneurs is prohibited – only one set of prices, one set of interpretations, one set of expectations and one view of the market process are allowed.

One could respond that a central planner would simply employ those entrepreneurs and consider their opinions. This leads us back to the fact that markets are not dialogues, and under socialism opinions and advices can only be used in a dialogue when a homogeneous opinion could somehow emerge out of different disputative minds. The problem becomes apparent when we remind ourselves that the economic process is about disagreements and differences in opinions. They simply cannot be settled by dialogue, and often become monologues. These discussions and unbridgeable differences of opinions are “solved” by the market outcomes and the mechanism of profit and loss. Under socialism these opinions are not relatively weighted during competition (here lies the secret function of the Misesian “calculation”), but rather imposed by one structural preference ranking by one will. Perhaps this is why Mises stated that markets cannot be “played”. Those differences of opinions can be settled only within the institutional constraints of real money dealt by the “market”, not play money dealt by the central planner. If entrepreneurs are heterogeneous in their expectations and judgments, they can only settle their differences by the capitalist market process. If they could settle their issues in a dispute *ex ante*, they would become homogenous agents with no differences of opinions. In that case the capitalist process would indeed be unnecessary. In the real world permeated by uncertainty and ignorance, where entrepreneurs are heterogeneous and differ in their views, this is hardly the case.

Competition between the market participants in terms of monetary appraisal creates an economizing society with set, adjusted, reset and readjusted limits of an entrepreneurial division of labor, opening the field for a net of outsourcing (Salerno 1990: 54). Hence the Hayekian division of knowledge can be transformed into a division of tasks in planning activities. This can be exemplified in the simple case of a restaurant owner, who decides to buy tables instead of making them on his own. This type of a decision is based on a cruel economic calculation – instead of spending all the money on wood, paint, other factors and workers, it seems more reasonable to simply buy produced tables from another producer. This illustrates the case of the rational entrepreneurial division of labour. If somebody else is better in producing tables, reaches more “profitable” levels of production, it is better not to produce them oneself.

Prices faced by an entrepreneur in a “plan-less” economy are not dependent on his will. They can be considered as “independent opportunity costs”, because they make the entrepreneur adjust his valuations and preferences to them. Since they are external to his will, and not a product of his preferences, plans and evaluations (as opposed to the case of market socialism) one should view them as autonomous (and representing other entrepreneurs’ actions). Hence they also become a form of guidance, which raises interest in the opinions of others (conveyed in prices). If one is not interested in the opinions of others (prices), and decides to produce unprofitably, the consequences are obvious – he will lose money and, eventually, the control of any resources. In terms of economic theory as Alchian (1950: 212-3) puts it, we do not need to obscurely assume that entrepreneurs “maximize” their profits. The observation that if they do not, they go out of business, will suffice. Calculation in capitalism becomes a standard by which production plans are judged and assessed via each other. Can we be sure that because of that, production plans will get more coordinated with time? Certainly not. But at least we know that plans satisfying consumer demand in a better way will drive out plans that are less effective in this task. This becomes possible, because calculation under capitalism is a two-sided coin. On the one hand it is an arithmetical process, on the other, it is a legal process of redistribution of ownership – from less successful entrepreneurs to more successful ones.

One might observe some mild resemblance between the market system compared to socialism and Karl Popper’s classification of political projects. Popper ([1945]1995) made a distinction between “utopian social engineering” and “piecemeal social engineering”. The former is based on macro planning, which aims at the complete social restructuring of economic institutions and constraints. It is Utopian, because it tries to reorganize most existing social arrangements, and on its way to accomplish the task of final “Good”, will cause a lot of unanticipated problems. According to Popper, more realistic is “piecemeal” engineering, which does not try to reform every single aspect of human life, but tries to adjust social behavior in various marginal degrees.

A quite similar distinction can be observed in cases of the market economy and the socialist economy. The latter is a Utopian form of planning because it tries to reorder the economy entirely with the unsupported hopes and beliefs that this move will not have any dramatic economic consequences. The former is a procedure of piecemeal economic planning, because it does not try to revolutionize all existing organizations, but merely

tries to implement the economic plan with “marginal” adjustments (even though they might be “revolutionary”, they are always “marginal” in the broader social sense because they do not overthrow the rules of the system). Just as piecemeal engineering is represented by exercising decentralized powers, similarly economic competition in the form of piecemeal planning, where entrepreneurs act in a “plan-less” economy, is represented by exercising voluntary property transfers. Why is it efficient? Apparently because this piecemeal economic planning is always constrained and subjected to the external judgment made by other market participants. In socialism this frame of reference is abolished in favour of one will planning. Why do competing heterogeneous interpretations about monetary appraisements lead to a much better outcome than under one will planning? The answer to this is no different from the answer to “why does freedom of entry lead to better economic results than monopolistic privileges?”.

CONCLUSIONS

The intent of this paper was to demonstrate creative and fruitful, yet to a large extent omitted, views on market socialism from the Socialist Calculation Debate. Those views appear to be elucidative, and they likewise have an intrinsic value, which can be spread onto other theoretical and practical considerations. As we saw, the Socialist Calculation Debate concentrated often on technical aspects of economic processes (arithmetic, surpluses and shortages et cetera). More important issues are, however, in the cognitive and institutional factors: who and how decides about the allocations in a world of ignorant human beings?

These questions and their possible answers allow us to understand more deeply the notion of economic calculation. The theoretical discussion can help us pose questions for real-world policies, for example in the case of a mixed economy like the Chinese one. The specificity of economic systems apparently does not depend exclusively on its approach towards calculation. Any system can be based on any envisioned form of “calculation” and designed price ratios. This does not say much, however, of how the underlying economic reality works. One always has to contemplate “what exactly is being calculated?”, “who calculates it?”, and “how the calculation is performed?” The Chinese economy is based on a form of calculation as in the case of Western societies, yet this is how things appear only on the surface. The answers to the above three questions can deliver explanations as

to why that calculation differs in these two models (despite the obvious fact that it does exist). In the Chinese economy, the calculation is done by other “ideal types” than in Western societies, it is being performed differently, therefore also something else is calculated.

As we see then, even though “market socialism” as developed by Lange and others does not and did not exist in reality, the study of such a theoretical model creates the space for possible practical insights ready to be applied to real world cases. This naturally remains as a goal for future and more extensive studies.

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