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THE AUSTRIAN THEORY OF PRICE: An example*

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This paper introduces a simple example for teaching the Austrian theory of price to undergraduate students. It is argued that market prices serve a social function, because plan discoordinations manifest themselves as discrepancies in prices. When plans can be freely expressed in terms of the same commodity (money), the quantities of this commodity (prices) can be compared with each other, and discrepancies between the plans (price differentials) can be perceived with relative ease by entrepreneurs. Traditionally, many economists have failed to understand that the function of market prices is more than merely summarizing market information.

1. Introduction

Economists almost always use equilibrium models when explaining the operation of the market to students of economics. Austrian economic theory provides an alternative by conceptualizing the market as a process rather than as a state of equilibrium. The purpose of this paper is to introduce a simple example that can be used to explain the Austrian theory of price in an introductory course on economic theory. The advantage of this approach is twofold. It produces a logical structure from a very simple initial setting and it introduces all the key concepts of price theory in a systematic fashion. It also serves as a general introduction to Austrian economics.[1] The approach does not adequately illuminate all aspects of Austrian economic theory, and in particular the nature of the market as a discovery of the unknown may be lost in the example in which many particular facts are assumed to be known.

In order to elucidate the Austrian insights, the neoclassical textbook treatment of static equilibrium (e.g. Gravelle and Rees 1981), henceworth called »the neoclassical model», is used as a basis of comparison. Even though the purpose of appraising the textbook model is primarily to criticize the mainstream approach to teaching economics, the criticism applies to a considerable part of neoclassical research as well. Admittedly, many of the insights to be provided in this paper are recognized, at least superficially, in some neoclassical models. However, these insights are never included simultaneously in neoclassical modelling, and they do not form a founda-

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[1] *For introductions to Austrian economics, see Littlechild (1978), Dolan (1976), O'Driscoll and Rizzo (1985) and Kirzner (1982), in this order.*

tion for the overall conception of society.[2] The neoclassical approach usually examines one economic problem at a time, and therefore can respond to almost any kind of criticism by referring to one of its thousand models.

In Austrian economics, the price system is conceived as an institution whose primary function is to transmit information about disequilibrium and by so doing to facilitate the discovery of disequilibrium.[3] This paper is not concerned with other market institutions that have evolved for the purpose of promoting the process of equilibration. This does not mean that business organizations, brandnames and labour unions, to mention just a few examples, would not have an important role in reducing the ignorance of market participants (Williamson 1985). The underlying economic system is assumed to be a pure market economy, which in Austrian economics is defined in terms of the rules that the members of society observe in their actions. The rules specify the actions that the members of society must not perform in situations of some general type, and they are based upon private property, free transfer of property rights and freedom of contract. Even if the government produces other public goods as well, the conclusions are not essentially affected, so long as the government acts under the law and, in other words, does not interfere with the operation of the market order. The very difficult question of how the market order and the government organization are made to operate harmoniously together in practice falls beyond the scope of this paper.

The Austrian theory of price is founded on the notion of price differential, which is defined as the positive difference between the demand price and the supply price. The defining features of disequilibrium are that new price differentials continuously emerge and market participants are incapable of instantaneously discovering the existing price differentials. My analysis starts with the assumption that in an initially fully equilibrated system someone succeeds in inventing a new product. The rest of the analysis deals with the market process, in the course of which the emerging price differentials are gradually discovered and eliminated. Finally, some features of the imaginary final state of equilibrium are examined, and the Austrian and neoclassical conceptions of price are compared.

[2] *O'Driscoll and Rizzo (1985), p. 231: »There is a 'sponginess' to neoclassical economics that enables it to absorb divergent elements around it without ever emphasizing their main points.«*

[3] *The classical Austrian treatises on the theory of the market, or »catallactics», are Mises (1949) and Hayek (1948).*

2. *Supply price and cost*

Let us assume that a car manufacturer invents a new combustion motor that consumes considerably less fuel than other car motors. At the moment of inventing the motor, the car manufacturer does not yet know whether it will be commercially successful, i.e., whether other market participants are willing to pay for the new car a price that exceeds the cost of producing it. In order to find out whether it is profitable to start producing the car, the inventor has to seek the price at which the product will sell in the market and the prices of the needed factors of production. We enter into the examination of this discovery process by inquiring how the inventor reaches an estimate of the supply price. For the purpose of simplification, the sale of only one unit of the product is assumed to be under consideration.

Supply price is defined as *the lowest price at which a seller is willing to sell a unit of a good (or factor).* The supply price depends upon the decisions the seller has made earlier. If the factors needed in the production have already been irrevocably acquired, the seller has to estimate the value of the product in the market, or in his own use, and the value of the products that he could alternatively produce by means of the factors. The supply price is equal to the highest of these three alternatives. If the factors have not yet been acquired, an estimate has additionally to be made of the value of the factors that could alternatively be acquired by the capital that is at the seller's disposal. It is henceforth assumed that the supply price of the car seller reached in the course of this kind of an evaluation process is 150 marks.

The supply price is equal to the cost of selling the product, i.e., *the value of the best for-*

gone alternative. If the car is eventually sold for 200 marks, the seller forgoes all the other alternatives, the best of which was assumed to be the 150 mark alternative. The information upon which the evaluation of cost is based is usually possessed only by the seller himself, and others do not have access to it in its entirety. Austrian economists, therefore, emphasize that cost is a subjective phenomenon that is not open to measurement by outside observers.

In practice, the car producer cannot survey all the possible uses of the factors he has acquired or can potentially acquire. At best he can know only a few, most of which are somehow linked to the production of his own product. Still, it is important that he include the value of the other uses in his cost calculation. Otherwise he might err by consuming resources that have more valuable alternative employments.

Information that the car producer needs of the alternative employments is incorporated in factor prices. For example, if the supply wage of a worker is 30 marks per hour, the producer knows that the cost of selling the labour resources is 30 marks, i.e., the worker assumes that he can find other jobs that pay the same 30 marks. It is also possible that even if the worker only expects to find other jobs at 25 marks, his supply wage remains 30 marks per hour. An explanation for this might be that the other options are less dangerous, provide better long-run prospects or confer other benefits that compensate for the lower wage. To forgo such benefits is also a cost, which is brought to the knowledge of the car producer through the supply wage. The wages paid in the other jobs are determined by the value of the products that the employers estimate to be capable of producing by means of the labour. If the labour is underpriced owing to monopsony in the labour market, the situation is quickly corrected as the employer is no longer the only bidder for the resource. Competition thus ensures that the factor prices follow »with the faithfulness of a shadow» the value of the final product (Schumpeter 1934, p. 160).

In this way, the factor prices tend to prevent the car producer from using productive factors in employments that are less valuable than those currently known by factor owners and other producers. As a consequence, the scarce productive resources tend to be continuously redirected to turning out goods that are most urgently wanted by the buying public. However, the price system cannot ensure that the factors achieve their most valuable employments, because there are always unutilized profit opportunities in the economy. It is very important to note that the car producer can increase the value of factors without knowing anything about ways the factors could alternatively be employed. In effect, the price system is able to economically transmit enormous amounts of information between the product markets and to summarize such information into a highly accessible form, without the producers or anyone else ever fully understanding this process (Hayek 1945).

In the neoclassical model, it is routinely assumed that the cost of selling one unit (the marginal cost) can be accurately measured by adding up factor prices (Gravelle and Rees 1981, p. 187). This assumption implicitly means that the producer does not himself value the products he produces, at least more than others, and that he can nowhere obtain profits or rents. In reality, the assumption is hardly ever valid. For example, if the producer can employ a combination of factors priced at 50 marks for the production of a good selling at 60 marks, the cost of employing the factors for the production of some other good is 60 and not 50 marks. Cost is thus dependent upon the entrepreneurial talent of the producer[4] and varies in accordance with the profit opportunities he succeeds in discovering. The neoclassical assumption can be valid only in long-run equilibrium, if even then, when all profits and rents have been competed away (Buchanan 1969, pp. 49—50).

When applied to explaining the operation of markets in disequilibrium, the neoclassical conception of cost can give rise to very misleading conclusions. For example, in the light of the neoclassical model, one could assume that the car producer can collect a »fair» price by basing his pricing decision on marginal costs that are calculated by the government. Yet, in reality, costs do not simply exist there waiting to be calculated. They have to be discovered. The government cannot then enforce the pricing rule without assuming the role of

[4] *Entrepreneurship is defined in the next section.*

the entrepreneur and essentially substituting central economic planning for the spontaneous order of the market.

3. *Demand price, price differential and entrepreneurship*

Besides making an estimate of the cost of production, the car inventor has to determine the price at which he can sell his product. For this purpose, he must seek potential buyers.

In the simple textbook model of neoclassical economics, the search for market opportunities is conceived as a procedure of optimization, in which the probability distribution of the price is assumed to be known, and the optimal rate of search is calculated by equating the estimated returns and search outlays at the margin (cf. Gravelle and Rees 1981, p. 145). The problem with this approach is that one must know what to seek in order to be able to optimize (Kirzner 1979, p. 142). It is often impossible to know in advance what kind of opportunities exist to be discovered. For example, in the search for buyers for his good the car producer can discover customers interested in other goods that he can produce at a larger profit.

In the neoclassical search model, the searcher remains ignorant of a particular opportunity, because it is assumed that search costs make it not profitable for him to remove the ignorance. In contrast, if search is conceived as a discovery of entirely unknown opportunities, ignorance is not caused by scarcity. Since it is clearly not possible to deliberately direct resources to the search of an opportunity which is not known to exist, the discovery of the opportunity occurs essentially without cost (Kirzner 1985, p. 24). The error of the searcher is then not caused by the costs of forestalling the error, but by his failure to perceive the unnoticed opportunity. Still, the search for unknown opportunities is to be conceived as purposeful, like all human action, in the sense that by seeking for opportunities *in general* individuals aim to improve their well-being.

In order to accentuate the peculiar nature of the search for unnoticed market opportunities, Austrian economists preferably speak of alertness toward new opportunities. Such alertness is called entrepreneurship, and entrepreneurs are, accordingly, *market participants who indicate alertness to new market information in their actions.*[5]

Let us assume that the car inventor discovers three potential buyers. Each of them has a demand price, which is defined as *the highest price that a buyer is willing to pay for a unit of a good (or factor).* The demand prices are assumed to be 250, 250 and 100 marks, respectively. A buyer chooses his demand price by comparing the value of the car with the combined value of all those goods that he could alternatively buy with the quantity of money equal to the demand price. For example, the first buyer above estimates the value of the car to just exceed the value of the best alternative use of 250 marks. It is customary to conclude from this reasoning that the value of the car can actually be measured in terms of money. Strictly speaking, the most we can say is that the car is a bit more valuable to the buyer than a collection of some other goods. Prices thus only facilitate a comparison of values. Note that in order to perform such comparisons and to make good buying decisions the buyer need only know the supply prices of the sellers and nothing more of their plans.

If any of the demand prices is higher than the supply price, a price differential is said to exist in the market. Assuming that the demand prices are discovered at one time, the price differential is 250—150 = 100 marks in my example.

Entrepreneurship can be either creation of new price differentials or discovery of existing but previously unnoticed price differentials. The latter kind of entrepreneurship is equilibrating, because it increases the information that market participants have about each other's plans. This is true, of course, only when entrepreneurial action is successful. In contrast, innovative entrepreneurship, when successful, creates entirely new opportunities. These opportunities are normally utilized by the innovator himself, as in my example, but their complete utilization requires the alertness of numerous other individuals. Innovative entrepreneurship is disequilibrating and tends to produce plan discoordination, but, we shall

[5] *For the Austrian theory of entrepreneurship, see Kirzner (1973, 1979 and 1985).*

see in the next section, it is not necessarily socially harmful.[6]

4. Coordination and efficiency

A discovered price differential means that there is an opportunity for a mutually advantageous trade in the market. In the special case of my example, we can predict that the market price will be 250 marks. The purpose of this section is to demonstrate that when price differentials are discovered and trade takes place, the plans of market participants become better coordinated and the utilization of resources becomes more efficient than before.

Coordination is defined as a situation in which the plans of the actors involved are consistent with each other, i.e., *everyone has perfect knowledge of that information possessed by the others which is relevant for his own actions.* Unutilized price differentials indicate that there are those who make errors as a result of their ignorance of valuable pieces of information known by others. When a price differential is noticed, the actors involved obtain better information of the plans of each other, and they can then eliminate some of their errors by revising their plans. Through the process of such revisions in plans the coordination of plans is gradually increased in the economy.

A voluntary trade has also the effect of increasing the efficiency with which resources are used in the economy. In human action, efficiency means that the fullest use is made of the available means in the pursuit of a given end. On the level of society, efficiency so conceived has no meaning, because the society does not have its own ends and the ends of members of society are often in conflict. However, if the rules of society providing a procedure for reconciliating the conflicting ends are taken as given, efficiency can be defined as a state in which *everyone makes the fullest use of the existing means in the pursuit of his own ends under the given framework of rules.*

In Austrian economics only the rules of the pure market economy are conceived to make peaceful cooperation among a large number of individuals possible, and so these rules are taken as given while appraising the efficiency of social states. In more practical terms, efficiency then means that there are no unutilized price differentials and that no one is willing to pay more for anything than the price at which someone else is willing to sell it. A trade compatible with the rules of the market is conceived, accordingly, to always increase efficiency and to be socially beneficial. Since such a trade is also coordinating, efficiency and coordination turn out to be two different conceptions of the same phenomenon. It is often said that increased coordination or efficiency creates new value for society and that, for example, the trade of the car moves the good to a higher-valued use. Taken literally, this is misleading because the values of separate individuals cannot be compared, but I consider it acceptable if we remember that gains and losses can only be experienced by individuals.

An important feature of the market order is that market participants can contribute toward greater coordination and efficiency unintentionally and simply by entering into profitable trades with each other. The only thing that the car seller need know is that the demand price exceeds his supply price. He need not know the particular ways in which the buyer could alternatively use his money, or the particular use to which the factors he uses could alternatively be put. Similarly, the only thing that the buyer need know is that the supply price goes below his demand price. He need not know what kind of goods could alternatively be produced by means of the factors that have been used by the car seller, or whom he deprives of the possibility to buy those goods.

Even though it is obvious when applied to the parties involved that a trade coordinates plans, it is not so obvious that the same conclusion applies to the economic system as a whole. A trade may appear discoordinating, because it usually has harmful effects on third parties. In my example, when the car is bought, the demand for other goods and services such as bus transportation declines, and the workers, capitalists and producers associated with the bus business suffer from a decline in demand. Yet the plans of these people are not necessarily disappointed, and in any case disappointments are helpful in increasing coordination.

Producers operating in the market order

[6] *The best-known theory of innovative entrepreneurship is that advanced by Schumpeter (1934).*

know that without explicit long-term contracts they do not possess rights to repetitive trade. They know that the only way to preserve the patronage of consumers is to continue to produce goods which are better or cheaper than those of their competitors. This knowledge motivates producers to strive to foresee changes that affect their plans and to prepare themselves for such changes in good time. The same applies to factor owners, who have an incentive to make certain that their resources are not too specific to their current employment, and that they are continuously aware of alternative opportunities to sell their resources. Nevertheless, even in the best of all cases, producers and factor owners cannot completely avoid making mistakes when preparing themselves for changes. The price system tends to ensure, however, that those harmed by changes will incur losses only to the extent that the losses are more than offset by gains obtained by other market participants.

A bus owner whose demand is decreased by the competitive supply of the car may try to maintain his sales by lowering the price of his product. In effect, this increases the cost of the new car for the consumer, and, as a result, he might re-evaluate the relative attractiveness of the available market opportunities. The value that the bus owner attaches to the production of the old product is reflected in his willingness to lower the price, and it is determined by the extent to which factor owners are willing to accept smaller factor payments. The cost to the consumer for maintaining the demand for the old product, i.e., the value of the forgone opportunity to buy the car, is reflected in his willingness to accept price reductions. If the cost of maintaining the old production exceeds the value attached to the old production, the price reduction is not sufficient to make the consumer give up the new opportunity, and the production structure is bound to change (Demsetz 1966, p. 63). The change is coordinating, because the losses caused to factor owners are more than offset by the gains obtained by the consumer.

By means of the price system, the producers of old products can thus cheaply bring the social cost of innovations to the attention of those who ultimately cause the cost, i.e., the consumers. It is especially worthwhile to note that this testing of the social desirability of innovations occurs without the producers and the innovators, or the consumers and the factor owners, knowing anything about each other's intentions besides the market prices. For example, in order to make correct choices, the consumers need know nothing about the distress they cause to workers who have to content themselves with lower wages or to move to other jobs.

Besides value creating, changes permitted by the rules of the market order are of necessity also value distributing. It is entirely possible that in the course of the redistribution process the incomes of many fall to unreasonably low levels. This feature of the unhampered market has always been regarded as cruel and inhuman and the very reason why the market economy does not seem to be a desirable social system. However, the cruelty of the market order has a specific function to perform, which the economists should always emphasize. When market participants know that they bear themselves the costs of disappointed plans, they have an incentive to attempt to foresee changes and to adjust to changes as quickly as possible. If they were entitled to compensation whenever harmful changes occur, the incentive would largely be paralyzed, and the economic system would lose its capability to adjust to perpetually occurring changes.[7] There is no way for a legal system to protect all expectations if individuals continuously discover new information and society wants that individuals make use of this information (Hayek 1973, p. 103).

In summary, the operation of the market order can be described as a process in the course of which new information is continuously discovered and new opportunities are created. The changes inevitably following the discoveries take place because people are compelled to adjust themselves to the changes. A great advantage of the spontaneous order of the market is that in order to discover new information people need not deliberately pursue the public interest or know about the particular purposes for which the information will be utilized. They can provide valuable

[7] *Mises (1949), p. 848: »In an unhampered market economy the absence of security, i.e., the absence of protection for vested interests, is the principle that makes for a steady improvement in material well-being.«*

services to each other simply by pursuing what in their, of necessity very limited, knowledge seems profitable.

5. *Entrepreneurial profit and freedom*

When the entrepreneurial car producer discovers the price differential and exploits it, he obtains a profit equal to the difference between the demand and supply price. Entrepreneurial profit is defined as *the reward that an entrepreneur obtains when exploiting an unnoticed market opportunity he has discovered.* In some cases, like my example, the entrepreneur has first created the opportunity for profit by innovative action. This section looks at those institutions under which entrepreneurship is as vigorous as possible.

Any individual can be an entrepreneur. For example, a consumer whose demand price is higher than the price at which the car innovator is currently selling may be alert to the opportunity and help to increase coordination and efficiency. Even if everyone is capable of entrepreneurial discovery, the skill of alertness, like the skill of singing or teaching, can be expected to differ among individuals. More importantly, all individuals are not equally capable of discovering any particular opportunity. Owing to the division of labour each one is engaged in different activities and therefore possesses more or less unique information of the special circumstances of time and place (Hayek 1945, p. 80). Since we cannot know in advance *who* will discover *which* opportunities, Austrian economists conclude that freedom of action should be conferred on everyone and in all circumstances.

It is important to understand that freedom is valuable because it enables individuals to increase the number of yet unknown opportunities available to others, and not so much because it enables individuals to choose freely among known opportunities (Hayek 1960, p. 32). This insight is ignored in the neoclassical model, which assumes that all opportunities are already known and a restriction of freedom leads to the loss of only known opportunities. As a consequence, neoclassical economics considers freedom less valuable than what is in fact the case.

Driven by the logic of their argument, Austrians usually advocate the principle of individual freedom in a dogmatic and uncompromising way. This aspect of the Austrian theory has been much criticized, and many have accused Austrian economists of ideological bias in their allegedly valuefree reasoning (Hutchison 1981, pp. 221—222; Caldwell 1982, p. 130). A possible explanation for the emergence of such criticism is that inappropriate social theories have been used to evaluate the Austrian conclusion. For example, against the background of the neoclassical model, the emphasis laid on individual freedom must appear exaggerated, because in equilibrium no new information can be discovered and entrepreneurship is a totally redundant function.

In practice, freedom of action is ensured by enforcing rights to private property. The function of such property rights is to define in terms of general principles how individuals are allowed to make use of the resources they possess. The owners of the rights are entitled, as it were, to a private domain within which they are free to make use of their knowledge, and which they know no one else is permitted to intrude upon (Hayek 1973, p. 107). When the government enforces voluntary transfers of property rights, it automatically assigns entrepreneurial profits to the possession of those who have discovered them. The government is well advised to do this because property owners have then an incentive to seek higher-valued uses for their resources. We should be cautious, however, when stating that profits act as incentives to entrepreneurial discovery. First, profit opportunities are by definition unknown before they are discovered, and, as such, they cannot attract entrepreneurial alertness. Second, rewards equal to the price differential appear to be excessive and any profits above zero appear to be sufficient because the exercise of alertness is essentially costless.

The fundamental Austrian insight is not that an isolated opportunity for profit calls forth alertness to that particular opportunity. Rather, anticipation of obtaining profits wherever opportunities can be discovered makes entrepreneurs alert to opportunities in general (Kirzner 1985, p. 109). This means that if profits are to serve the function of motivation, property rights to profits must be enforced universally and without exception. Since individuals cannot foresee the markets in which they will discover opportunities, con-

fiscation of profit in one instance may be detrimental not only because it discourages enterprise in that particular market but, more significantly, because it depresses the alertness of entrepreneurs in general.

The Austrian view stands in sharp contrast to the way the neoclassical model conceives incentives. In equilibrium, all opportunities are known, and a taxation of profits can only affect the incentives to utilize known opportunities. The loss of opportunities can then be calculated in detail, and it seems as if it is possible to introduce an optimal rate of profit taxation. It is also natural to conclude that most of the pure profits could actually be taxed away. The most that entrepreneurs appear to require in order to remain in business is a revenue just exceeding the accounting cost. Against the background of the neoclassical model, to maintain that the principle of private property should be adhered to without compromise logically appears to be ideologically biased.

6. *Competition*

We carry on the examination of the market process by assuming that the trade is repeated at the price of 250 marks. Even if the plans of those participating in that trade are coordinated, unnoticed price differentials may still remain. For example, another buyer may be willing to pay more than 250 marks for the car or another producer may be able to produce the same product for less than 250 marks.

The realized trade acts as a signal which alerts entrepreneurial consumers and producers to existing opportunities. An important signalling function is served by the accounting profit of the car innovator. The profit transmits information to imitators, who are perhaps capable of acquiring factors at the same prices and of making use of them as efficiently as the innovator. This does not mean, however, that the imitators cannot operate below the supply price of the innovator, because they may be able to purchase factors cheaper and use them better. The pioneering entrepreneur can then fail to survive the competitive process and be displaced by more efficient producers.

In Austrian economics, competition, or rivalry, is conceived as *a process in which individuals attempt to outdo one another by offering better opportunities in the market* (Mises 1949, p. 274). In the current example, the effect of competition can be seen when independent producers start supplying cars equipped with the new motor consecutively at slightly lower prices and the demand prices of the consumers gradually decline. Provided no further changes occur, the profit opportunities are eliminated and the market price approaches the value of the factors in the production of other goods.

Competition, like entrepreneurship, can be either coordinating or innovative (Paakkanen 1962, p. 122). Besides utilizing existing opportunities, competition can thus create entirely new opportunities and, consequently, offer more opportunities in the market. Economic theory tends to neglect innovative entrepreneurship prerequisite for this kind of competition, and even my analysis has logically led to a conception of competition that overemphasizes the discovery of existing information. This is a disadvantage connected with the use of concrete examples in which one must assume that many particular facts are already known. In practice, the performance of economic systems depends greatly upon how they succeed in calling forth innovative effort. It has even been said that the superiority of the order of the market is specifically based on its ability to encourage innovation and that the coordination of existing knowledge can be brought about, even if with difficulty, by other conceivable systems as well (Loasby 1982, p. 240).

Competition takes on quite different meanings in equilibrium and Austrian theories. The perfect competition of neoclassical economics refers to a situation in which competitors offer opportunities *of the same kind* in the market. This imaginary state of affairs can emerge only in equilibrium, in which all price differentials have been removed by the competitive process and no one is capable of outdoing another by superior entrepreneurial capacity. At first glance the definition of a concept may appear merely as a matter of convention. However, since competition still comprises the dynamic meaning in common parlance and is therefore considered highly desirable, the neoclassical definition can give rise to the very erroneous idea that actual com-

petition should resemble as far as possible the ideal state of perfect competition (Hayek 1948, pp. 92 ff.). It may then appear that the virtue of competition is in the uniformity of the knowledge and effort of individuals and that deviating behaviour is somehow socially harmful.

Actually, competition is beneficial, because in competitive markets individuals are free to act in *different* ways and to carry out their peculiar ideas on the basis of the unique knowledge they possess. Successful ideas will in time be imitated, and the benefits, initially obtained mainly by the pioneering entrepreneurs, will be gradually spread to other sectors of society. The selective order of the market thus makes it possible for society at large to make use even of such knowledge that was initially possessed by only a few. The order produces good performance whenever different individuals know different things or, even when everyone has the same knowledge, different individuals perceive the value of ideas in different ways (Fehl 1986). The value of competition is best shown by innovations whose full value was perhaps unknown even to the inventor but which is eventually considered valuable by practically everyone.

With hindsight, after it is generally known which entrepreneurial actions were successful, it may appear as if the gains obtained by entrepreneurs were excessive or unjust. Similarly, after it is generally known which actions turned out to be failures, the competitive process may appear wasteful and in need of more rational planning mechanisms. However, *before* the results of the competitive process are known, it may be expedient to allow an »unjust» distribution of incomes to emerge. Otherwise, entrepreneurs would not have incentives to be alert to opportunities and society would lose the benefits from innovations and equilibration (Lachmann 1956). Similarly, if there is uncertainty as to which expectations are going to prove correct, competition may be the best, albeit a costly, procedure of finding out which entrepreneurial actions are successful.

7. *Equilibrium and rent*

In Austrian economics, it is usually assumed that free individuals are capable of learning, and that there is an inherent tendency for unutilized price differentials to be discovered in the unhampered market economy. So far as this is true, the competition of the sellers and buyers of cars would gradually bring about equilibrium if there were no other changes. It makes no sense to speak of the partial equilibrium of a single market when individuals operating in other markets have to revise their plans in response to changes that occur in the car market. The notion of equilibrium thus refers to the general equilibrium of the whole economic system.

The most important prerequisite for the emergence of equilibrium is that changes cease to occur in the external data, i.e., resources, methods of production, and tastes remain constant.[8] In such imaginary circumstances, market participants would sooner or later succeed in discovering all existing profit opportunities, and the economic system would be in full equilibrium. Austrian economists call such a system *the evenly rotating economy,* because the market participants would then find it profitable to indefinitely repeat the same patterns of behaviour, shown to be optimal during the preceding process of learning under the given framework of rules (Mises 1949, p. 248). There are, of course, many technical requirements that also have to be fulfilled before an economic system can attain equilibrium (Cowen and Fink 1985), but they are far less important than the requirement of the absence of change mentioned above.[9]

In static equilibrium, the plans of market participants are perfectly coordinated. Market participants have then perfect knowledge of the plans of each other, which essentially means that they can correctly anticipate all the actions of the others (Hayek 1948, p. 38). This amazing capability is possible because in equilibrium all action is repetitive and therefore easy to predict. In the imaginary state of equilibrium resources are allocated as efficiently as possible. There are no longer any unnoticed

[8] *In principle, it is conceivable that regular changes of simple description could be compatible with equilibrium. For example, the consequences of crops of equal size getting ripe of regular intervals could perhaps be perfectly anticipated by all individuals concerned in otherwise stationary circumstances.*

[9] *A stochastic equilibrium is not conceivable in the real world, because individuals cannot be expected to possess the requisite computational capacities.*

price differentials, and opportunities to move resources to higher-valued uses have been fully exhausted. The allocation produced as an unintended consequence of the market process is optimal in the sense that no one is willing to pay a higher price for anything than that at which someone else is willing to sell it.

It is possible that in equilibrium the car innovator still earns an accounting profit. He is then collecting a higher price than the value of the factors in the production of other products. Since we have assumed that there is perfect knowledge of existing market opportunities, the accounting profit is not called a profit, but it is a *rent*. The reason for the appearance of the rent is that entrants usually do not find it economical to build up their production facilities hastily and to enter the market as quickly as technically feasible. Like all equilibrium phenomena, rent is not an information problem to society; it is a consequence of scarcity that could be eliminated only at a cost exceeding the benefits of a faster entry. For elucidation, we could say that entrepreneurial profit is a reward for discovering valuable information, whereas rent is a reward for entering a market ahead of others.

In practice, the market economy can never attain the imaginary state of equilibrium. This is because there are always changes in the external data, and the entrepreneurs are not capable of discovering the emerging price differentials instantaneously. Austrian economists still have the conviction that the market order has a stronger tendency toward equilibrium than any other conceivable economic system. The conviction is unshakable primarily because it emerges from a theory that explicitly examines the process of an actual coordination of plans.

8. *Monopoly*

It is possible that the car innovator continues to earn rent, ceteris paribus, even if a sufficiently long time has elapsed for competitors to enter the market. There are three explanations for this state of affairs.

First, it is possible that competition is not profitable for potential competitors. If the long-run average costs are declining in the production of cars, it is possible that in the hypothetical long-run equilibrium only one producer, the natural monopolist, can operate profitably. Even though entry is unrestricted no competitors appear because the resources needed for additional production can be more profitably used in alternative employment. Second, competition can be prevented if the car innovator is a resource monopolist who owns alone or jointly with others all or most of the stock of a resource necessary for the production of cars (Kirzner 1973, p. 21). The monopolized resource can also be knowledge such as the production technique. Finally, the government can forbid competition by investing a market participant with a privilege of monopoly. In short, competition is impossible and rents do not disappear in a market that is occupied by a monopoly.

Monopolies should always be considered harmful and in conflict with the harmony of interests otherwise prevailing in the market order.[10] Monopolies are harmful because they can choose to increase their rents by withholding their supplies rather than by offering better opportunities to others. If they opt to withhold, unutilized price differentials remain in the market. In this case, resources are not misallocated because of ignorance, but because the only agent who is in a position to exploit the profit opportunities does not find such exploitation privately profitable. Monopolies are also harmful because in an environment of weak competitive pressure they are less alert to new information such as price differentials and new production methods (O'Driscoll and Rizzo 1985, p. 147).

In neoclassical economics, monopoly is usually defined as the single seller of a good. This definition is problematic because there are many situations in which a market is occupied by a single seller, but competition is still possible and the monopoly does not misuse its market power. For example, innovators often obtain such monopoly positions; it almost always takes some time for competitors to discover the emerged price differentials (Menger 1871, p. 217), and the market power is not misused in fear of making potential competitors alert to the unutilized profit opportunities. Monopolies of this kind earn monopoly profits, not rents, which are socially as beneficial as any entrepreneurial profits.

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[10] *Mises (1949), p. 677. Compare, however, Rothbard (1962), chap. 10 and Armentano (1982), pp. 42—43.*

Monopoly profits serve a social function because the prospect of obtaining them makes entrepreneurs alert to new opportunities which otherwise would not perhaps be discovered at all. In the equilibrium models of neoclassical economics, monopoly as a disequilibrium phenomenon is not possible, and monopoly defined as the single seller is always socially harmful. Since in reality this is not necessarily true, Austrian economists prefer to define monopoly as *an exclusive right to a market or market share* (O'Driscoll 1982).

Austrian economists hold that government antimonopoly policies are necessary to dissolve the monopolies granted by the government itself. Some Austrians even argue that patents hamper the competitive process and should not be legally enforced. Otherwise, monopoly is usually considered a minor problem, which should of course be solved but which is overshadowed by more acute problems that threat the preservation of the market order.

9. *The meaning of price*

In this concluding section, we make some finishing comparative inquiries into how prices are conceived in the Austrian theory and the neoclassical textbook model of static equilibrium. I am going to argue that the theories apply in quite different circumstances and that serious confusion is produced by applying the equilibrium conception of price to markets in disequilibrium.

In the Austrian theory prices are quantities of money which individuals choose as expressions of their plans and which therefore transmit information about these plans. In real life, information is transmitted through numerous other institutions as well, but the price system is obviously the most important of such institutions. In the neoclassical model of perfect competition, prices are parameters which individuals take as given and to which they passively adjust their actions. Prices are conceived as accounting units which make it possible for individuals to calculate their optimal actions, perfectly coordinated with the actions of others. Prices can serve such a function only in equilibrium in which there are no unnoticed opportunities.

The information transmitted through prices is needed in particular in disequilibrium in which individuals are partly ignorant of each other's plans. Strictly speaking, the price system is no longer needed at all in static equilibrium. Equilibrium is achieved when changes cease to occur and the market participants are in a position to fully learn the facts of the market. The economy becomes evenly rotating, which means that the market participants start routinely repeating the same patterns of behaviour all over again. Since in such imaginary circumstances there is no new information for the market prices to transmit, and since the old information is already fully incorporated in the constant patterns of conduct, the market participants can rely on their memory to make their decisions. Even though the prices in equilibrium are of an entirely different nature than the prices we are accustomed to, they are prices of a certain kind and they can still be conceived as freely chosen by the market participants. Such prices also transmit information just like disequilibrium prices. However, since it is profitable for the market participants to repeatedly choose the same prices, the information is available also in another form, viz., the constant patterns of behaviour, and prices no longer serve the function that they once served.

When the neoclassical model is applied to explaining the operation of the market in disequilibrium, it may produce very misleading conclusions. For example, it may appear as if accounting prices given by the government could serve the function of market prices. In its extreme form, the neoclassical view appeared in the famous debate on socialist calculation. In this debate, Oskar Lange and other socialist participants conceived a »market socialism» attainable, in which prices are set by a central planning agent and adjusted according to emerging disequilibria in markets (Lavoie 1985, chap. 5). In reality, such accounting prices do not serve the function of market prices, because they incorporate only the information, of necessity very limited, that is possessed by the central agent. For example, if a producer innovates a new cheaper method of production and the central agent does not have access to this piece of local information, the central agent may overprice the product and prevent the innovator from entering the market. Such information failures do not occur in the market economy, in which the

innovator is free to lower the price himself and by so doing to transmit the information of the new production method to the attention of consumers (Hayek 1948, p. 196). The Austrian case against socialism thus mainly consists of the insight that, even when honestly striving for the public interest, central planners do not possess the information needed in order to attain the complexity and performance of the spontaneous order (Mises 1920, p. 120).

Another example of the confusion produced by the neoclassical theory of price is the assertion that trading at false prices indicates a failure of the price system (Leijonhufvud 1969). This is true in the sense that if market participants choose disequilibrium prices, they leave price differentials unutilized and resources are not as efficiently used as possible. However, this is caused by ignorance that is not a failure of the market but a consequence of human fallibility. The market order performs well when this ignorance is reduced more efficiently than by any other conceivable institutional arrangement. In the market economy, plans can be freely expressed in terms of the same commodity (money), and the quantities of this commodity (prices) can be easily compared with each other. Discrepancies between the plans (price differentials) can then be perceived with relative ease by entrepreneurs. In the Austrian view, unutilized price differentials should not be primarily conceived as socially harmful phenomena, but rather as indispensable signals which alert entrepreneurs to discoordination and waste.[11] Trading at »false» prices then implies that *more* scope should be given to free enterprise and not that the price system should be supplemented by central planning.

In summary, the neoclassical model examines the role of prices in the final state of equilibrium, whereas the Austrian theory examines the role of prices during the process which tends to bring about that final state. The purpose of this paper has been to argue that the Austrian theory provides a better foundation for understanding and teaching the operation of the market and the price system. For example, I have attempted to show that basic economic phenomena such as cost, incentive, and competition cannot be properly understood in their disequilibrium or real-world meaning if they are conceived in terms of equilibrium and known opportunities. From the point of view of practical policy, the main conclusion of this paper is that the neoclassical model does not produce unbiased policy implications. The main concern of economics and other social sciences is to explain how society can make use of knowledge which is dispersed in the minds of millions of men and which changes perpetually (Hayek 1945). According to the Austrian theory, this problem can be successfully solved only within a framework of individual freedom and private property. When the problem is assumed away by postulating continuous equilibrium, society is depicted as if it were the product of one mind, out of which emerges a systematic bias toward centralized economic planning.

[11] *The difference between the Austrian and neoclassical theories of price is best perceived by Kirzner (1984).*

References

Armentano, Dominick T. (1982), *Antitrust and Monopoly. Anatomy of a Policy Failure,* John Wiley & Sons, New York.

Buchanan, James M. (1969), *Cost and Choice. An Inquiry in Economic Theory,* Markham Publishing Co., Chicago.

Caldwell, Bruce J. (1982), *Beyond Positivism: Economic Methodology in the Twentieth Century,* George Allen & Unwin, London.

Cowen, Tyler and Fink, Richard (1985), »Inconsistent Equilibrium Constructs: The Evenly Rotating Economy of Mises and Rothbard.» *American Economic Review* 75, 866—869.

Demsetz, Harold (1966), »Some Aspects of Property Rights.» *Journal of Law and Economics* 9, 61—70.

Dolan, Edwin G. (ed.) (1976), *The Foundations of Modern Austrian Economics,* Sheed & Ward, Kansas City.

Fehl, Ulrich (1986), »Spontaneous Order and the Subjectivity of Expectations: A Contribution to the Lachmann—O'Driscoll Problem.» In: Israel M. Kirzner (ed.), *Subjectivism, Intelligibility and Economic Understanding. Essays in Honor of Ludwig M. Lachmann on his Eightieth Birthday,* Macmillan, London, 72—86.

Gravelle, Hugh and Rees, Ray (1981), *Microeconomics,* Longman, New York.

Hayek, Friedrich A. (1945), »The Use of Knowledge in Society.» In: Hayek (1948), 77—91.

Hayek, Friedrich A. (1948), *Individualism and Economic Order,* Routledge & Kegan Paul, London 1976.

Hayek, Friedrich A. (1960), *The Constitution of Liberty,* University of Chicago Press, Chicago 1978.

Hayek, F.A. (1973), *Rules and Order.* Volume 1 of Law, Legislation and Liberty. A New Statement of the Liberal Principles of Justice and Political Economy, Routledge & Kegan Paul, London.

Hutchison, T.W. (1981), *The Politics and Philosophy of Economics. Marxians, Keynesians and Austrians,* Basil Blackwell, Oxford.

Kirzner, Israel M. (1973), *Competition and Entrepreneurship,* University of Chicago Press, Chicago 1978.

Kirzner, Israel M. (1979), *Perception, Opportunity, and Profit. Studies in the Theory of Entrepreneurship,* University of Chicago Press, Chicago.

Kirzner, Israel M. (ed.) (1982), *Method, Process, and Austrian Economics. Essays in Honor of Ludwig von Mises,* Lexington Books, Lexington.

Kirzner, Israel M. (1984), »Prices, the Communication of Knowledge, and the Discovery Process.» In: Kurt R. Leube — Albert H. Zlabinger (eds), *The Political Economy of Freedom. Essays in Honor of F.A. Hayek,* Philosophia Verlag, München, 193—206.

Kirzner, Israel M. (1985), *Discovery and the Capitalist Process,* University of Chicago Press, Chicago.

Lachmann, Ludwig M. (1956), »The Market Economy and the Distribution of Wealth.» In: *Capital, Expectations, and the Market Process. Essays on the Theory of the Market Economy,* Sheed Andrews and McMeel, Menlo Park 1977, 308—322.

Lavoie, Don (1985), *Rivalry and Central Planning. The Socialist Calculation Debate Reconsidered,* Cambridge University Press, Cambridge.

Leijonhufvud, Axel (1969), »Keynes and the Classics: Two Lectures.» In: *Information and Coordination. Essays in Macroeconomic Theory,* Oxford University Press, Oxford 1981, 39—78.

Littlechild, Stephen C. (1978), *The Fallacy of the Mixed Economy. An 'Austrian' Critique of Economic Thinking and Policy,* Institute of Economic Affairs, Hobart Paper 80, London.

Loasby, Brian J. (1982), »The Entrepreneur in Economic Theory.» *Scottish Journal of Political Economy* 29, 235—245.

Menger, Carl (1871), *Principles of Economics,* translated by James Dingwall and Bert F. Hoselitz, Free Press, Glencoe 1950.

Mises, Ludwig von (1920), »Economic Calculation in the Socialist Commonwealth,» translated by S. Adler. In: F.A. Hayek (ed.), *Collectivist Economic Planning. Critical Studies on the Possibilities of Socialism,* Routledge & Kegan Paul, London 1963, 87—130.

Mises, Ludwig von (1949), *Human Action. A Treatise on Economics,* William Hodge, London.

O'Driscoll, Gerald P., Jr. (1982), »Monopoly in Theory and Practice.» In: Kirzner (1982), 189—213.

O'Driscoll, Gerald P., Jr. and Rizzo, Mario J. (1985), *The Economics of Time and Ignorance,* Basil Blackwell, Oxford.

Paakkanen, Jouko (1962), *Comparative Statics and the Process of Competition* (in Finnish, English Summary), Liiketaloustieteellisen Tutkimuslaitoksen julkaisuja 26, Helsinki.

Rothbard, Murray N. (1962), *Man, Economy, and State. A Treatise on Economic Principles,* Nash Publishing Corporation, Los Angeles 1970.

Schumpeter, Joseph A. (1934), *The Theory of Economic Development. An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle,* translated by Redvers Opie, Harvard University Press, Cambridge, Mass. 1968.

Williamson, Oliver E. (1985), *The Economic Institutions of Capitalism. Firms, Markets, Relational Contracting,* Free Press, New York.