Property Rights and Theory of Value

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Title:

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Abstract

This paper analyses and develops a conception of property rights and in turn makes possible the development of a new approach to the theory of value. As a result, the theory of value takes a more general form and the labor theory of value becomes one of special cases applicable to a primitive society only. Generally all three factors of production, namely the labor force, land, and capital, can create value, but only if there are property rights to them. This necessary condition has led us logically to a principle of relativity for property rights and, accordingly, value. Moreover, it is concluded that although capitalist economics considers practically everything as a commodity, there is, however, an exception – the labor force, which is only one that cannot be sold or bought.

Key words: Property Rights, Theory of Value, Capital, Commodities.

JEL Classification: D23, D46, P14

Theory of Value and Property Rights

I. Introduction

Efficiency in an economy directly depends on the efficiency of the protection of property rights. If one were to imagine an economic system as a function depending on a great number of parameters, then property rights will be one of the most important independent variables in this function.

This idea is quite obvious and in the history of economic thought it was always present, beginning from the classics of political economy. Adam Smith (1776 [2000]) considered the institution of private property rights on land and capital as a sign of more advanced nations who reached "improvement, in the productive powers of labour, and the order, according to which its produce is naturally distributed among the different ranks and conditions of men in the society". Note that in mainstream economics such an understanding was maintained along the whole extent of its development.

The modern interpretation of the property rights conception was developed by papers of Demsetz and Alchian.[1] Indeed, the bundle of property rights is "an instrument of society" that

[1] See Demsetz (1967) and Alchian and Demsetz (1973). Steiger (2006) relates these outstanding economists to new institutional economics and at the same time emphasizes that two conceptual approaches are developed in this direction.

helps it to introduce order into economic relations and therefore it is very important for development.

No wonder that this point causes permanent interest in property rights even in recent years. The theoretical aspects were touched upon by such authors as Field (1989), Hart and Moore (1990), Maskin and Tirole (1999), Neeman (1999), Dan-Cohen (2001), Grossman (2001), Cole and Grossman (2002), Antras (2005), Levine (2005), Hafer (2006), Mulligan (2007), Kimbrough, Smith, and Wilson (2008). The feature of recent research is that more and more empirical papers, which argued the presence of a direct link between property rights protection and economic growth, have appeared, in particular Torstensson (1994), Besley (1995), Johnson, McMillan, and Woodruff (2002), Glaeser, La Porta, Lopez-de-Silanes and Shleifer (2004), Gonzalez (2007), Dincer (2007), Gradstein (2007). It is unlikely that papers, which argued the inverse, can appear in future.

Nevertheless, in spite of advancement of the subject, questions, which do not have simple answers, still remain. For instance, how does property rights protection based on laws, unwritten rules and traditions (i.e. on intangible non-physical things) impact on such quite material processes as production of commodities and their consumption? Or which political or legal fundamentals lie in the nature of property?

Returning to the classics of economic science, it is necessary to note Adam Smith and David Ricardo linked the questions of the formation of property and the production process with a theory of value. In their opinion land and capital, on which property rights are applied, were those subjects thanks to which value was formed.

Because the theory of value relates to those few things in economics which still remain a subject of fundamental discussions, in my opinion the introduction of a new paradigm into it allows one to understand deeper aspects of value forming. In its turn, it lays a bridge to such applied processes as pricing or calculation of profit, for example. Thereupon, it would be very productive and interesting to analyze the link between property rights and value, taking into account modern economic ideas.

They speak quite often about the *degree* of property protection; however, a question *to what* property rights can be expanded is almost always put aside. Meanwhile the answer for this question is not so obvious as it seems. As I find in this paper, the general conception of property rights is expanded not only to ownership for land or capital, but also to the right of a man to his own labor force. Therefore, the objective of this paper is an advancing of a framework in which the theory of value would combine with a new conception of property rights. At the same time, some terminological questions in the explanation of the nature of commodities would be clear also.

The paper is structured as follows. In the next section generalized principles of production, from primitive to modern high-tech, are given. Then section 2 explains more clearly some terminological aspects regarding consumption. In section 3 a link between property system and value formation is developed. In the final section some conclusions are given which can result from the points described in the paper.

II. Nature of Production

Almost all processes in economics including property rights protection and formation of value are related to the production of commodities and services. Growth of aggregate production is an aim for governments of all countries. For our purpose, however, we should consider the most general, even abstract principles of production.

So, for clarity of analysis we shall simplify initial conditions to the maximum, by imagining our ancestor – a man of primitive society. He had no capital and no technology. This savage almost does not differ from animals surrounding him and also as they, he hunted for some inhabitants of the ancient forest and hid from others. Virtually, the economy of this society contained only one factor of production – the labor force.

Assume the process of production in this society is gathering fruits.[2] The man used his labor force to support himself, and the result of his work was expressed as the quantity of the gathered fruits. The man consumed these fruits for recovery of his forces, thus providing his existence.

It is obvious that there is a direct dependence between quantity of the applied labor and quantity of the gathered fruits. In other words, only labor determines the value of the fruits in this society and these arguments underlie the classical labor theory of value.

Consumption is a necessary condition of man's existence; however, there is no obligatory connection between consumption and production (i.e. use of labor force). The man may not work at all (in view of illness, infancy or old age), but nevertheless requires food. Definitely, the more a man works, the more he needs food; however the need for food grows to a lesser degree than quantity of labor bringing this food.[3]

If one describes graphically the dependence between labor and consumption starting from a point of origin, then at zero quantity of labor there will be some minimal volume of consumption, which one can call as the known term "autonomous consumption." When labor is increased, consumption is also increased, but to a lesser degree, and firstly exceeds the

[2] It is not far from truth: at early stages of development primitive mankind was engaged in gathering fruits and roots and hunted for small animals.

[3] In this part of the paper we can measure quantity of labor by a quantity of fruits, which this labor brings.

quantity of labor (or rather, quantity of a product appropriate to this labor). But at some moment consumption and product of labor become equal. Upon a further increase of labor the product, brought by the labor, will exceed consumption. This diagram looks very much like a Keynesian cross - only in application to the man, instead of to the economy.

The situation, when the food brought by labor exceeds consumption, has greatest interest for us, because it is encountered most frequently. Really, in an ancient tribe there were always some of its members who could not procure food (the above-mentioned patients, infants, and old men). Therefore, other members of the tribe should procure more food than it was necessary for their own nourishment.

It is possible to draw a very important conclusion from this fact, namely: the man is able to produce some surplus product (in this case, food) above that necessary for himself.

It can be presented visually as follows. Assume, 10 bananas (or other fruits) per day are necessary for the man from primitive society to restore his forces completely. But he is able to procure more, let us assume, 20 bananas per day. Only his wish is needed for this and if he wants to procure them, they, most likely, will be intended for his children. Or they will be used as a gift to win the heart of an ancient beauty. Or exchanged for a beautiful brilliant stone, which another man of the tribe has found. In any case, all these operations will be done with the *surplus*, which is already superfluous for the stomach of this savage, but nevertheless contains his labor.

Thus, the obviousness forces us to refuse the thesis that a labor force can only restore itself.[4] The gatherer, hunter, and even a lion in savanna can make not only food, necessary

[4] We could see an echo of this thesis in Ferdinand Lassalle's "Iron Law of Wages", which is, however, already rejected and forgotten for its nonconformance to reality.

for reproduction, but also some surplus. All of them can use additional food for an increase of their own force, and actually, more plentiful food will result in an increase of physical force. It is obvious, however, that it is impossible to increase force indefinitely by means of consumption of additional food, because there is some physiological limit.

In a general sense, the surplus, or, in other words, profit, is a basis for growth. If the tribe is able to procure more food than is necessary for current consumption, we will observe growth of this tribe's population. In case the tribe makes food sufficient only for the present members (i.e. there is a zero profit), the population of the tribe will be stable. The negative profit will cause a reduction of the population. By the way, it is characteristic not only for a human society: absolutely similar fluctuations, depending on the degree of access to food, are observed in any population of animals or birds.

It is clear that the ability of a labor force to produce is provided by the muscles of the man which are managed by his brain. Probably, this is a very simplified explanation, but it is correct as a matter of fact. Also it is correct that the muscles of animals work similarly to the muscles of a man, both functionally and physiologically. Accordingly, the muscles of an animal are able to produce food necessary both for their restoration and profit. Moreover, we can assert that with the use of animals by man, profit will be observed *in all cases*, because profit created by animals gives a sense to their preservation. If, for example, farming animals would produce only value, which would be equaled to costs for forage and a premise for them (and no more), their use would not have economic sense: with them or without them, the man *would not have* a surplus of food (or other product), for the sake of which he keeps the animals. Therefore, it is absolutely obvious that the animals are able to produce a surplus of value, which goes to the man's disposal (one can say, taken off by the man).

During the history of civilization, the man improved methods of production, replacing gradually his own labor force and animals by various tools and machines. Now we can see very complicated engines which do not have any external and technological similarity with the horse, for example; however, there is no difference between them from the point of view of an economic principle of production. Therefore, formation of profit takes place in absolutely the same way at all three factors of production: labor force, land or capital.

Any capital, for example, the ancient man's stone axe, requires time and efforts for its creation. There is a widespread mistake, when it is considered that the tool puts into a final product only value equal to labor which was used for manufacturing of this tool. So, the capital, used in a firm, is represented in a final product only as depreciation, i.e. as reproduction costs. At that, profit is considered as a derivative from other factors, but not from capital.

Meanwhile, if it would be so, the creation of any tools would not have an economic sense, because it would not bring profit. Imagine that the ancient man has two alternatives: either to gather fruits all day, or to use half a day for making a stone axe, in order to gather fruits the second half of the day with the help of this axe. Assume that expenses of human efforts (which we can measure in the charge of calories) are equal during all three operations, namely, at (a) gathering without an axe, (b) making of an axe, and (c) gathering with the axe.

In the first case he gathers 20 fruits. How many fruits will he gather in the second case? The axe helps to intensify work (i.e. to gather more fruits at the same efforts), but we do not know by how much. If in the second case the man will gather less than 20 fruits (degree of intensification $i<2$), the making and use of an axe is less favorable than simply gathering without an axe. If the man will gather equally 20 fruits ($i=2$), these alternatives are equivalent. The gathering more than 20 fruits (i>2) makes the second alternative more preferable.

As the axe is made in half of day, its value is equivalent to 10 fruits. If it would just add value to a final product, as a result the ancient man would have the same 20 fruits. It would not stimulate him to invent new technology such as an axe, and he, most likely, would continue to use the old proved method. Therefore, it is more probable that the ancient man with an axe gathered *more* fruits, for example, 25. And in this case we should pose a question concerning a difference in results between new and old methods, namely, 5 fruits. Due to what has it appeared, labor or axe? Taking into account an equality of human efforts in the first and second case, we cannot attribute these additional fruits to the labor force. It is more logical that just the axe is the reason for the additional profit.

Thus, the axe has its own value of 10 fruits and besides creates additional value of 5 fruits. Similarly, any capital (including both a primitive hoe and modern high-tech equipment) brings in the final product not only its own value, but also profit. It is necessary to note, however, that not each invented tool or machine is able to create profit. Mankind's wish to have profit rejects inefficient mechanisms, and therefore, we usually see only that capital, which as a result of such a peculiar selection has proven the right to existence, i.e. profitability.

Thus, the economy, which contains, let us assume, 2 factors of production (labor force and capital), summarizes a product from both factors: $Y = f(L + pL) + f(K + pK)$.

Here L and K are products of reproduction (or necessary values) for a labor force and capital accordingly. Similarly, pL and pK are profits (or surplus values), created by these factors of production.

The difference of a labor force from a capital is that the man can consume all the product of a labor force (i.e., both necessary product and surplus). Whereas the product of capital can be consumed by the man only partially, namely, only profit. The other part should be spent for restoration of the capital without fail.

III. Necessity and Commodity

Before proceeding to a definition of the link between value and property rights, we should clarify a terminological question: *what* can be consumed and *what* can be sold.

Consumption is often implied as man's consumption, and, consequently, the ideas about consumption usually come from this precondition. For strict adherence to the theory, however, we should proceed from a more general principle of consumption.

It is quite obvious that the necessity is usually an aspiration to restore the lost ability or to keep something. So, for example, a worker consumes a meal to restore physical forces necessary for him for the subsequent act of production. Similarly, we need houses to live somewhere, cars to move faster, books to satisfy our intellectual needs.

The economy, where the systems of exchange and money were established (this is any economy except for the economy of Robinson Crusoe), assumes that any necessity can be satisfied by means of purchase. In turn, the ability to be *bought* is one of the most important characteristics of a *commodity*.

From here we can draw an important conclusion: something can be called a commodity (i.e. can be sold) only if it is capable of satisfying some necessity. Contemporary society has (and wishes to have!) many more necessities than primitive. Most of them do not contradict human nature, but some necessities are useless and even harmful (for example, smoking or consumption of drugs). Nevertheless, they remain necessities and the goods or services satisfying them can be called commodities in full measure. Thus, commodity and necessity are economic interdependences.

However, in addition to man's necessities, the contemporary economy makes demands also for industrial buildings, equipment, software etc. (all these are united under the term investment commodities), which cannot directly satisfy the necessities of man. Their applicability is to satisfy the "necessities" of production. I.e., the factory "consumes" the new equipment to replace the worn out.

Thus, there are two non-intersecting flows of commodities, one of which goes for restoration of the labor force, and another goes to restoration of capital. The demand on them is made by the hired workers and owners of the capital accordingly.

It is necessary to emphasize that a labor force cannot consume the investment commodities (or capital). In other words, industrial equipment is absolutely useless for the worker. Similarly, meals, clothes and other consumer commodities have no value for the enterprise, because they cannot be used in its work directly.

I would like also to note that while the aggregate of the investment commodities is capital, however, the aggregate of consumer commodities cannot be labor force. The labor force is an integral part of the man, which in itself cannot be sold or bought in a contemporary society (in contrast to a slave-owning system).

Thus, capital and labor force cannot be each other's commodities, and in particular, capital cannot "consume" a labor force. Also, we can say in a more general context: the labor force cannot be sold just because it cannot satisfy any necessity in itself. The owner of the capital can buy, for example, equipment and buildings (i.e. that can replace worn out capital), but he cannot buy labor force, because in itself, it is not able to replace capital. This is a quality of a labor force in a contemporary society.

The impossibility of labor force sale is a fundamental principle of capitalism based on freedom and equality of people. This principle, however, is not characteristic for all social systems. For example, in a slave-owning society the sale of the man (and his labor force) was not just possible, but was the main principle of this system (see also Lagerlöf 2009). Slavery was based on an inequality of the people, i.e. on division of the society into free citizens and slaves. The slave was reduced to an instrument status, and the slave-owner, buying the slave, just invested funds for one more instrument of work. The slave received the minimal product for maintenance of vital forces (something like depreciation), and the slave-owner took all the profit made by him. Thus, a slave-owning system fixes by law the exploitation of one man by another. As the slave was a commodity, the owner of the slave (as the owner of the *commodity*) could do with him anything he liked (even kill!). It is obvious that only violence can support the existence of such an order.

It is absolutely obvious that at present, relations between the employer and worker are absolutely different, namely: the employer cannot encroach on the personal rights and freedom of the worker. The reason for this is that contemporary society proclaims equality of the people as one of its fundamental principles. It means that neither man, nor his labor force can be sold. Moreover, now these are, perhaps, the only things which cannot be sold.[5]

Though hiring for work often is considered as the sale of himself, however, it is not the act of a sale by virtue of the above-stated reasons. Actually hiring is a contract for access to

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[5] The conception of freedom in a capitalist system, see Friedman (1962), Sen (1999), Gwartney and Lawson (2003).

capital, agreement to joint activity between capitalist and worker. The connection of the capital and labor force is dictated by technology, and separately they cannot produce anything. It is a mutual advantageous process, which assumes cooperation absolutely equal in rights.

Both of them, capitalist and worker, get an income after some period of production: the capitalist gets a profit and depreciation, the worker gets wages. The known fact that a worker gets wages only some time after hiring serves as the obvious proof that the worker does not sell the labor force to capitalist (otherwise, he would receive the money right away, because a commodity is usually paid right at purchase). He acts as some kind of partner for capitalist, receiving his share usually after the product made will be sold in market. Marx's (1867 [1967]) hypothesis, that the worker in this case advances his salary to the capitalist, looks less convincing in comparison with the above described order.

We can compare hiring for work with the actions of an entrepreneur who wishes to become a supplier of components or services for a big corporation. In this case the entrepreneur does not sell himself; he just wishes to become a business partner for the corporation. The corporation does not need an entrepreneur: it needs steady deliveries of components (or services) for acceptable prices. Accordingly, the negotiations between the entrepreneur and the corporation can be successful or not.

Every day a thousand negotiations will occur all over the world. Negotiations between workers and employers happen even more, because hired workers are greater than entrepreneurs. However, both of them negotiate not to sell their freedom, but to have an opportunity to produce something.

IV. Value as Product of Property

Property and value[6] are the two most important categories in economics, which are often considered, however, as very far from each other. Besides, economists debate more about distribution of property than about property itself. Definitely, for one to speak about the prices for petrol is more topical than about petrol, but our aim here is the nature of the relationship between property and value.

It is universally recognized that contemporary society is based on private property; it is actually its foundation. However, in addition to the obvious and integral right of any man to have property, it is necessary to formulate one more important thesis:

So, ***value is created only in case there is property***.

This thesis explains why the value of an apple, grown in a wild forest, consists only of the labor for searching for this apple, while the value of an apple from a garden includes not only labor for harvesting the crop. Moreover, this value is also more than the maintenance costs of this garden.

As a proof, consider the above-mentioned garden and economic relations of its owner. He employs a gardener, who carries out all necessary work. The garden's owner pays for his work and all costs for horticultural sundry, fertilizers and other things. It is obvious that the income of the garden's owner exceeds these expenses; otherwise, there is no point to be the owner of this garden. Thus, the garden creates additional value, which undoubtedly belongs to the owner of the garden.

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[6] The concepts of value see Debreu (1959), Dobb (1973), Screpanti (2003), especially the labor theory of value Foley (2000), Mohun (2004).

Here we should pose a question that arises: why is there such a difference between a tree, growing in a wild forest, and garden tree? Why does the product value of the first one include only labor for searching, while the value of second one is not only labor, but also costs on capital plus profit? It is absolutely obvious that nature creates identical conditions for both. Both of them produce apples, on which natural minerals, water, solar light and other are spent. Then why does the tree in the garden create value, and tree in a forest does not? I believe that this fundamental difference springs only from the presence of property rights to the garden tree.

So, as there are no property rights to a tree in a wild forest, the product of this tree can have value only if the labor force (which is property of a man) will be applied to it. I.e., in this case not a tree, but labor force creates value as the object of the property. In a hypothetical case if, for example, one were to assume that the apple is delivered from a wild forest by some miraculous way without the application of a labor force, the value of this apple would be equal to zero.

If, however, there are property rights to the tree (as in the case with the garden), value of a product (apple) will include not only labor on cultivation and harvesting the crop, but also additional value.

An important remark. Many people mix the concepts "man" and "labor force," accepting them as the same. Meanwhile, from the economic point of view a man and a labor force are different categories. The man should be considered as the proprietor of a labor force and the fact that they represent a merged single unit should not lead one astray. Thus, the man can own to the same extent both his own labor force and any external assets such as capital, for example.

As it was mentioned in section 2, any factor of production (both labor force and capital) is able to produce not only product for the restoration (i.e. necessary product), but also profit (additional product). Here we can add one more necessary condition: for creation of value any factor of production should have a proprietor. It is of concern both to labor force and to land and capital.

In other words, we cannot speak about value with an absence of property. Thus, property should be considered in the widest context, i.e., not only property for capital and land, but also property for labor force.[7] Besides, one more specification is required: only man can be a proprietor. Naturally, it is applicable only if we talk about a human society. But because in economics we can talk *only* about a human society, no wonder that we put ourselves in the centre of the coordinates. In other words, a man and his property are elected by our society as a reference point, its main measurer. The reason of this state of affairs is simple: we are the people.

It is necessary to emphasize once again that the above-described anthropocentrism is applicable *only* to a human society. I.e., at the same time we should recognize a relativity of value. As we are the people, value of a commodity is determined only from our point of view. If, for example, birds took it into their heads to determine value in their world, the work of people would not represent any value for them. Value in the birds' society would have the food, caught by them, and the constructed nests.

[7] Remark: while the property on capital or land can be transferred from one man to other, transfer of the property on a labor force is impossible, however, in a contemporary society.

It is obvious that nature makes a huge number of efforts, and only a small part is valued by man. So, the heat produced by a volcano has zero value for us, while the heat produced by a thermal generator costs some money.

It is known that Einstein's theory of relativity has diverged from the concept of absolute space and absolute time of Newtonian physics. According to it, all inertial reference frames are equal, and the results of the physical phenomena do not depend on our choice of some reference frame.

In economics, however, we adhere only to one reference frame objectively. Therefore, on the one hand, we should realize a relativity of value, but on the other hand, concrete values of commodities are connected to the activity of the objects being the property of a man.

Thus, value depends on to which objects society distributes the property rights. World history is evidence that the quantity of objects of property is increased in the course of time. So, primitive society knew only one object of property – labor force. Later, when land had ceased to be a free commodity, it began to be bought and sold. Approximately 500 years ago capital passed from a category of auxiliary tools to a category of the full factors of production and, accordingly, became the same object of property. This world trend is shown further in the table.

<table>
<tr><th></th><th>PRIMITIVE SOCIETY</th><th>SLAVE-OWNING AND FEUDAL SYSTEMS</th><th>CAPITALISM</th></tr>
<tr><td rowspan="3">OBJECTS OF PROPERTY RIGHTS</td><td>Labor Force</td><td>Labor Force</td><td>Labor Force</td></tr>
<tr><td>-</td><td>Land
(Naturally Created Asset)</td><td>Land
(Naturally Created Asset)</td></tr>
<tr><td>-</td><td>-</td><td>Capital
(Artificially Created Asset)</td></tr>
</table>

Thus, because value is relative (i.e., there is a principle of relativity for this phenomenon), a system of the property rights protection has great importance in any society. We can even say that the efficiency of a society depends directly upon the effectiveness of the system of law acting on it. Hernando de Soto (2000) has specified directly on the weakness of the system of property rights protection in poor countries as the main reason of poverty in these countries. Though I doubt whether the problem of poverty can be solved only by simplification of the registration and legalization of property, in general, however, this approach is correct.

So, as we have found out, the feature of capital is that it can produce a commodity, which will cost more than the volume of labor necessary for creation of the capital. Thus, a condition of creation of additional value is the obligatory presence of the property rights for capital.

It is necessary to note that this process is usually understood not so clearly as in a case with a labor force or land. In a general case, both land and man with a labor force should be considered as naturally created assets. So the creation of additional value is usually recognized for these factors.

So, assume that all costs on nurture and education of a man from birth up to youth are equal, for example, $200,000. We can expect soundly that his earned income for all subsequent life will exceed this sum. But if we recognize the ability of the naturally created asset to create value (including surplus value), similarly we should also recognize the same ability for capital, which is created artificially.

Let us carry out a mental experiment. Assume an ancient man has an opportunity to bring up and train one more additional child. Another alternative is to direct these efforts (and funds) for creation of additional capital. The additional child will grow up a full member of society, who will be an owner of his labor force and produce something. This product will contain both necessary and surplus value. I think the father will not object for the clear reasons that his son would possess his own labor force and appropriate all product produced by him. Thus the tribe will have the proprietor and additional labor force creating some volume of value.

As regards another alternative as additional capital, as a result the tribe also will have a proprietor (that ancient man) and additional productive factor as the capital. It is logical to assume that similar initial efforts should lead to similar results. I.e., the additional efforts of the ancient man will result in the occurrence of a productive unit in any case: either as his son or in the form of capital. And it would be illogical if, in one case, a productive unit can create value, but in another one, it cannot.

Above I already gave an example using farming animals, which are functional analogues of contemporary engines. In both cases production both of value and of profit as its parts will take place. The mandatory condition is that all factors, i.e. the naturally and artificially created assets, must be possessed by the proprietor.

The difference is that considering the capital and its proprietor, we can easily divide the subject and object of the property. However unlike a man with a labor force, the connection between capitalist and capital is less precise, namely: the existence of capital has no direct influence on the proprietor. In other words, the work and restoration of the capital can take place independently of the owner of the capital. This difference endows the capital with quality, which a labor force does not have. The man cannot increase quantity of his labor force at will, because it is limited physiologically. At the same time, the proprietor of the capital can increase quantity of the capital belonging to him practically infinitely, and in this case, the limits will be only financial.

Capitalism has found a solution to the problem of productivity growth in the creation of capital and a steady observance of the principle of private property in it. In a certain sense we can say that a capitalist "exploits" capital, because he "takes off" an additional product produced by it. This process is absolutely similar to that 2000 years ago when a slave-owner took off the additional product of a slave. However, while the latter is forbidden by the law now, "exploitation" of machines can be never forbidden. In other words, in a contemporary society the principle of man's freedom can be infringed in no way, and consequently, "exploitation" can be applied only to machines.

The ability of capital for the creation of new value leads to an increase of its role in a production system. Already now robots and assembly lines carry out the most part of mechanical work, leaving the role of dispatcher for the man. In the future the occurrence of a society is possible in which all value will be created by machines (i.e. capital). It can sound fantastic, but if we continue the trend of the development of capitalism, its ultimate goal will be a society of sybarites, for whom machines will do everything. Certainly, such a picture of the future is exaggerated very much, but it is correct in principle.

But today we should already put a sign of equality between labor force and capital. If a country accumulates capital, it accumulates thus a labor force equivalent. A country's strategic potential is often wrongly estimated by the population only. For example, China is considered as a threat to the West because of its huge population in many respects. Meanwhile, I would like to point to the relationship of capital and the labor force as factors of production. I believe it is possible to derive some empirical ratio, where some quantity of capital would be equaled to a certain quantity of a labor force. And if we add the conditional quantity of capital to the available population, the resources of China and any country from the G7 will be equalized.

In other words, if a country has a large cumulative capital, it can surpass in productivity countries in which there is only an excess of working hands. I.e., the rich country with the 100-million population and large volume of capital will produce a greater GDP than the poor country with a billion population.

China can be an evident example, where the population is 4 times larger than in the USA, but China produces a much smaller GDP. But if one presumes that all the USA's cumulative capital is equivalent, let us assume, to 5 billion units of labor force and takes into account the use of higher technology and also the better qualification of the American workers, then it becomes clear why the USA GDP is 10 times greater than China's GDP.

Resuming the idea of dependence of value on property, I would like to point out that property rights should be considered in a general sense. In other words, it does not matter what kind the property is, public or private. It is important that it would be. In all cases, *any property* determines value. It is quite another matter that a public property is usually managed less effectively and losses are a usual phenomenon in the public sector. Note, however, that questions of the efficiency of public or private ownership are beyond this research.

V. Some Main Conclusions

I can suppose that the conception described here can have several fundamental consequences. The most important thing is that they, probably, indicate a direction to a general theory of capitalism. Hence I think the key points can be outlined as follows.

1) On the basis of the model offered, the theory of value attains a more general form. The labor theory of value becomes one of special cases applied to a primitive society only.

2) Capital as well as two other factors of production, namely labor force and land, can create value only if they belong to a proprietor. If we talk about a human society, the proprietor can be only man. Thus, capital and especially property rights to it have a determining importance for contemporary economy, because the capital's ability to create additional value is a basis for growth of industrial and post-industrial economies.

3) Contemporary capitalist economics can consider practically anything as a commodity except one – labor force, which is the only one that cannot be sold or bought.

The ideas stated in the paper are a development of the theory of value and principles of property into a more general theory, but I can suppose that the practical application of this theory will not differ from the classical formulae. So, Einstein's theory of relativity has added an understanding of the physical processes in the nature, but we continue to use the classical mechanics of Newton for usual assumptions and routine calculations.

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