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SHORTAGE ECONOMY - SURPLUS ECONOMY

I recently published a short book about capitalism: *Dynamism, Rivalry, and the Surplus Economy* (Oxford University Press, 2013). My talk at the WINIR Congress is intended to introduce the audience to some of the ideas in the book.[1] The paper contains three parts:

1) Description of the phenomena. General propositions

2) Explanation

3) Consequences and appraisal

1) DESCRIPTION OF THE PHENOMENA

Let us start with the example of the automotive industry.

Under the socialist system the customer who wanted to buy a car and was prepared to pay the price had to place an order and then wait for long years until he finally got it (see Table 1). The future owner was obliged to pay part or even all of the price in advance, when he ordered the car. He did not get a loan from the seller or from a bank to financing this substantial purchase; on the contrary, he was lending his money to the seller. Young people living in post-socialist countries cannot even imagine this situation.

Table 1 Waiting time for cars in socialist countries, 1989

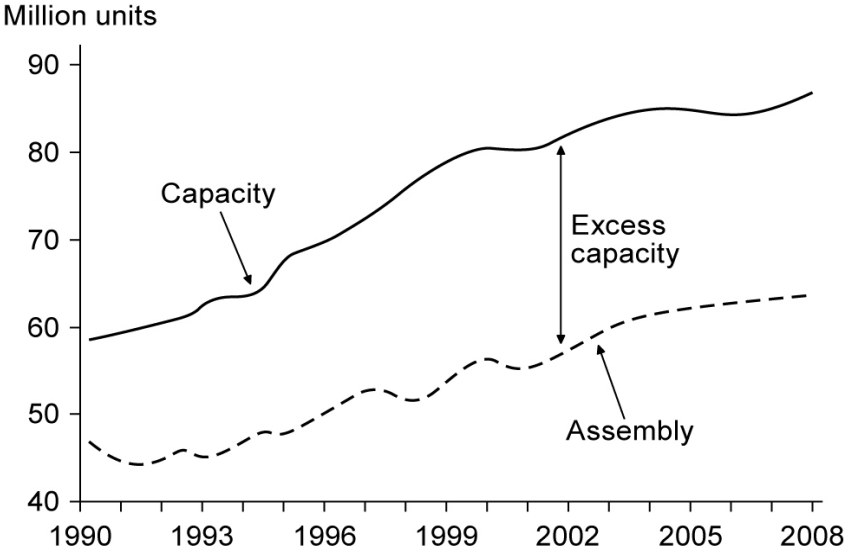
	Waiting Period in Years					
	Make of Car					
	Lada	*Skoda*	*Moskvich*	*Wartburg*	*Trabant*	*Dacia*
Bulgaria	10-12	5	2	2	1	1
Czechoslovakia	3-4	-	-	-	-	-
East Germany	17	16	-	14-16	14	15
Hungary	4-6	6	-	1	0	-
Poland	5-6	6-8	-	3-4	2-3	-
Romania	-	-	-	-	-	4-6

[r] This is not a self-contained paper for printed publication in an academic journal; it is not equipped with the usual apparatus of footnotes, references and the sources of data. All of that is available in the book. It serves as a background paper for a brief oral presentation.

Under the capitalist system buying a car is a radically different affair. There is ample supply. The buyer can look around the salerooms; if he finds the right vehicle, he can buy it on the spot. Or if he has specific demands, his order will quickly be satisfied. The waiting time is minimal: just enough for the rapid assembly of the parts needed to meet the customer's special requirements, and for transportation from the factory to the dealer.

There is huge unutilized capacity in the automotive industry all over the world (see Figure 1). The graph shows that excess capacity did not appear in 2009, as a consequence of the financial crisis. It was already there during the years of growth. Sales keep increasing, and so does production. The gap between the two indicators, representing unutilized capacity, remains stubbornly persistent. Recent data show that after the shock of 2009, during the years of the financial crisis and later, when the first signs of a recovery appeared, the basic features of the situation remained unchanged: while there was and still is persistent unutilized capacity, new capacities are developed and added to the existing ones. If there were full utilization, output could be increased by a quarter or even by a third.

Figure 1 Excess capacity in the automotive industry, 1990-2008



The situation of the automotive industry and market under the two systems is a good example. However, the phenomena illustrated by the example are quite general. There are many more examples and statistical data in the book.

Here a brief detour about a *conceptual issue* is needed. There are two important terms that I have used in my earlier work and in this book: "shortage phenomena" and "surplus phenomena".

"Shortage phenomena" is a *generic* term, closely related to the concept of excess demand at the *micro* level. When demand exceeds supply, demand cannot be observed directly, since actual transaction data reflect supply and not demand. Nevertheless, the presence of shortage can be recognized by observing various indicators, for example the waiting time between the placing and the fulfillment of an order (as in Table 1), or the length of a queue waiting for service. We can describe actual rationing schemes involving coupons, etc. We might also complement objective observation by applying a subjective approach: questionnaires to or interviews with customers about their buying intentions and their satisfaction. In any case, the more wide-spread the instances of unsatisfied buying intentions are, the more serious become the difficulties in observing and measuring unsatisfied demand, and formulating a rigorous definition of "excess demand". This is why I use the broader concept of shortage phenomena.

Similarly, "surplus phenomena" is also a *generic* term, closely related to the concept of excess supply at the *micro* level. When supply exceeds demand, "supply" cannot be observed directly, since actual transaction data reflect demand and not supply. Nevertheless, the presence of surplus can be recognized by observing various indicators. Capacity is regularly observed and can be regarded is a crude approximation of the sellers' intention. "I would be ready to utilize fully my capacity – if there were a sufficient market to absorb my output." Following this line of thought, unutilized capacity (as shown in Figure 1) is a surplus indicator. The observation of the dynamics of the size of inventories is another instrument to measure surplus. Again, we might complement objective observation by applying a subjective approach: questionnaires to or interviews with producers and sellers about their intentions. In any case, the more wide-spread the instances of unsatisfied producing and selling intentions are, the more serious become the difficulties in observing and measuring unsatisfied supply, and formulating a rigorous definition of "excess supply". This is why I use the broader concept of surplus phenomena.

The book devotes a great deal of attention to conceptual clarification and to the grave difficulties of observation and measurement. The reader will find a detailed discussion of the relationship between my concepts and the more traditional terms. Here I will mention just one point, explaining why I do not stick to the widely accepted term "excess demand". .

When we introduce the concepts of demand and supply in our micro-courses, it is done in a static time-frame. However, demand-formation and supply-formation are dynamic processes. A housewife in a shortage economy wants to buy some beef. In the store it turns out that beef is not available. We may, for a static moment, call the difference between her original demand for 1 kilogram beef and the 0 supply "excess demand". Yes, but the demand-formation process does not stop at this point. Our housewife looks around: could she buy some chicken? And if not? Then perhaps some other meat? Finally, she ends up buying whatever food she can get to feed the family. This is what we call "forced substitution": what we witnessed here was demand being *forced to adapt* to supply. We are not able to observe the original intentions of the buyers objectively because of this adaptive process.

Mutual (forced and voluntary) adaptive processes are present in both market-regimes. This, and many other difficulties affecting definition and measurement, motivated me to use the broader terms "shortage phenomena" and "surplus phenomena" which cover a variety of observable events and processes.

And now we turn to the central theme of the book. We start with two definitions. In a shortage economy shortage phenomena are predominant. They are *frequent*, *intensive* and *chronic*. In a surplus economy surplus phenomena are predominant. They are *frequent*, *intensive* and *chronic*.

Events belonging to the opposite category are not excluded. In a shortage economy frozen, unsalable inventories and idle capacities do sometimes appear. In a surplus economy goods are occasionally in short supply, especially new products. Nevertheless, the events belonging to the opposite category are *rare*, *not intensive*, and *not chronic*.

We now have the conceptual tools to sum up the two propositions, summarizing the core ideas of the book.

1. It is a characteristic feature of the nature of the socialist system that it generates a shortage economy.

2. It is a characteristic feature of the nature of the capitalist system, that it generates a surplus economy.

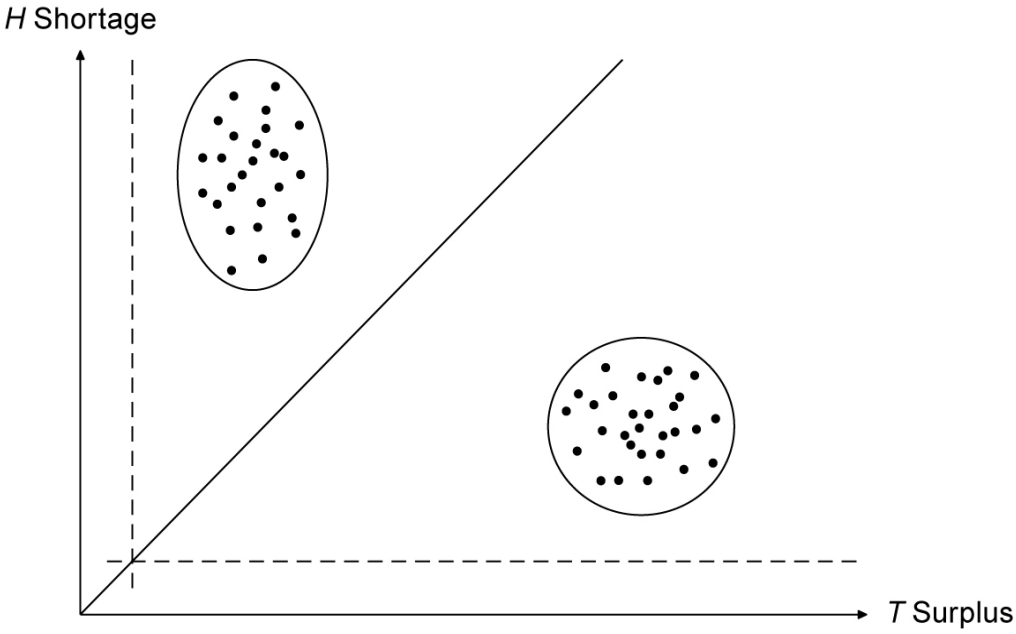
Let me draw your attention to the formulation: the "nature" of a system. The term is borrowed from biology, and it is used in the same sense in everyday language. Certain living organisms, certain creatures, have a "nature": the tiger or the wolf is a predator, the rabbit is a shy animal and flees if it perceives signs of danger.

There are strong *propensities, inclinations and pre-dispositions*, which make a socialist system a shortage economy and a capitalist system a surplus economy

"Utility" is an intangible notion. A psychologist cannot use it operationally. In contrast, "propensity" or "inclination" -- these are tangible, observable phenomena, used by scholars in many fields concerned with human behavior.

For the sake of visual illustration, a graphical scheme is shown on Figure 2.

Figure 2 An illustration of the shortage and surplus economies



As already mentioned in the earlier comments on observation, neither shortage, nor surplus can be measured by one single observable indicator. This is regrettable, but there are insurmountable difficulties with aggregation. (More details appear in the book.)

Depending on a specific set of shortage and/or surplus phenomena, we have to choose a proxy measure. Since in the present context the figure serves only as an instrument for explanation, it will be convenient to return to the earlier example, the auto industry and market. On the vertical axis the backlog of orders is indicated, i.e. the number of cars demanded and ordered but not yet delivered. This is a shortage indicator. On the horizontal axis we plot the number of cars which could be produced on the unutilized capacity but are actually not produced. This is a surplus indicator.

Let us remember: the auto market is only an example; the figure is a graphic illustration of certain general properties of the market under different regimes. All points on the diagram represent, say, a country at a given time. The origin, the zero-point is the only place where there is no shortage and no surplus. In the language of economic theory, that is the point of

Walrasian equilibrium. At all other places on the figure there is shortage and surplus side by side.

The figure illustrates the two central propositions. Shortage economies are represented by the points in the cluster on the upper left side. Surplus economies are represented by the points in the cluster, in the "sack" on the lower right side.

Here we have arrived at the fundamental difference between the approach implemented by mainstream economics and the approach applied in the *Dynamism, Rivalry...* book.

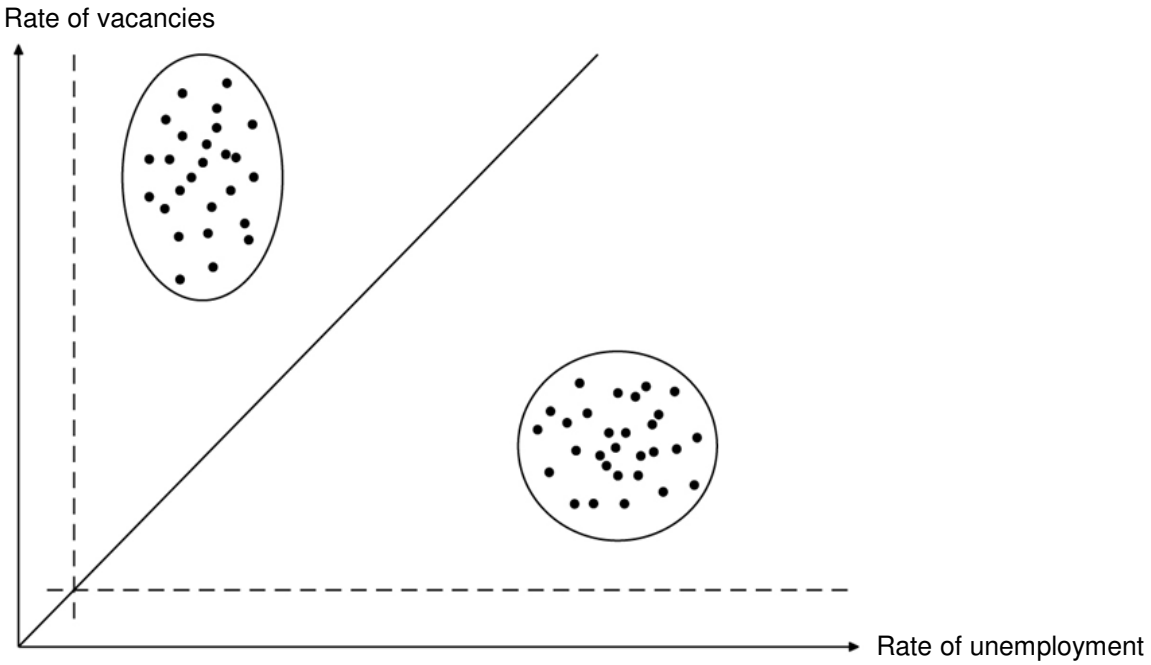
Mainstream economists would easily go along with one half of the argument: yes, since socialism is a perverse system, it generates chronic shortages. But in their mind, capitalism is a healthy system. It generates a constellation of demand and supply, where the typical situation is "supply = demand" .

Mainstream economists would admit that supply is not equal to demand at every moment. There are, of course, short time fluctuations around the Walrasian equilibrium. In addition, there are even medium-term fluctuations around the Walrasian equilibrium, related to business cycles. However, there is no persistent departure from the overall situation of "supply equals demand". Fluctuations around the Walrasian point are *symmetrical*. In contrast to this view, I suggest that on the market of the capitalist economy *asymmetry* prevails. The supply-demand configuration is, in a persistent manner, either on one side, or on the other.

Here an important remark must be added. Everything I have said so far is valid not only in case of the market of goods and services, but also in the case of the *labor market.* Constructing Figure 3, we merely translate the well-known language of labor economics into the more generic conceptual framework applied in *Dynamism, Rivalry, and the Surplus Economy.* On the vertical axis we see a shortage indicator: the rate of vacancies. On the horizontal axis we see a surplus indicator: the rate of unemployment.

Vacancies and job-seekers appear side-by-side in both systems, but under capitalism persistent unemployment is the dominant phenomenon and under socialism, at least in the developed socialist economies, persistent labor shortage is the dominant phenomenon.

Figure 3 Shortage and surplus in the labor market



A few words about the terminology will be in order. Table 2 lists a series of terms (or more precisely, of pairs of terms) characterizing the state of the market. Each pair answers a different question.

Table 2 Term pairs

1. Shortage economy *vs.* surplus economy
2. Demand-constrained economy *vs*. supply-constrained (or resource constrained) economy
3. Sellers' market *vs.* buyers' market
4. Buyers' competition *vs.* sellers' competition

1. Shortage economy vs. surplus economy. Which type of failed intention dominates: the shortage phenomena, or the surplus phenomena?

2. Demand-constrained economy vs. supply-constrained (or resource-constrained) economy. Which is the dominant constraint hindering the expansion of production?

3. Sellers' market vs. buyers' market. Which side is stronger?

4. Buyers' competition vs. sellers' competition. Who is fighting to win the favors of the other side?

In every line of the table there is a *pair* of concepts, describing the market's asymmetric situation. Either – or. The market is persistently either on this side, or on that side.

No. 4 deserves special attention, because here *competition* is emphasized. Either buyers compete for the favors of the seller or sellers for the favors of buyers. In the surplus economy producers compete for consumers, sellers for buyers. "Surplus economy" and "rivalry" – these two terms throw light from different angles on the same phenomenon.

2) EXPLANATION

It would be helpful to compare the shortage economy and the surplus economy at each point of the train of thought. However, the remainder of the paper will be devoted only to causal mechanisms operating in a capitalist economy.

Exploring causality, it seems to be impossible to highlight one single factor as *the* cause of the occurrence of surplus. The book examines various factors influencing the processes of supply formation, demand formation and price formation. Here only two will be discussed.

An important explanatory factor is the prevalence of *imperfect competition*, and more specifically, one important variant of this: *oligopolistic competition*. (Some economists prefer the name *monopolistic competition*.) In any case, it means rivalry between a *few* firms. This is the dominant market structure in most sectors of modern capitalism.

Here I enjoy an easy situation, because I can refer to standard microeconomics, which provides rigorous proofs: under imperfect competition and with revenue-maximizing firms excess capacity must appear. The teachers of the course and the textbooks are rather ashamed when they talk about this undesired side-effect, since excess capacity means, in their judgment, a waste of resources.

I take a different view. Do not be ashamed! The existence of persistent excess capacity is one of the great advantages of capitalism because it is a driving force of innovation and technical progress.

Although it is linked to the factor discussed above, special attention must be paid to the historical process of *innovation*. Schumpeter gave it the well-known and apt name: *creative destruction.*

In the process of technical progress new capacities are created, and old capacities are destroyed. These two types of changes occur side-by-side in various proportions. Typically, the old capacities do not disappear right away. The owners, mangers and employees are fighting for survival. As a result, the total potential supply of the two spheres (the old plus the new) exceeds demand.

The story of synthetic materials comes to mind. They are gradually replacing to a large extent the main materials of the past, iron and steel. As a consequence, we have rusty "brown

field belts", once lively, now run-down places which used to produce huge amounts of various iron and steel products and are now idle. Dying sectors fight for survival, and even try to get state support and bail-outs. Therefore it quite often happens that destruction is slower than creation. This means that the total capacity of the old and the new spheres together would be able to produce more than total demand.

We do not witness this process only within the borders of a certain country. Creative destruction goes on on a global scale. The rapid development of China, India, and other emerging economies provides relatively cheap products for export. Looking at this development from the perspective of the developed world, cheap imports are replacing a large part of the more expensive domestic production in the rich, highly developed countries. The capacities (fixed equipment, buildings and skilled labor for the no-longer-competitive production) do not disappear immediately. Owners, managers and employees resist, and fight for survival. As a result, the sum of old capacities in the developed countries plus the new capacities in the emerging countries add up to more than world-wide demand can absorb.

While we cannot discuss all the other explanatory factors here, we must draw the readers' attention to a deeper level of explanation, underlying the various causal mechanisms.

Capitalism is a system with predominance of private property and market coordination. Let us return to the introductory example, the automotive industry and market. Imagine for a moment: the world-wide production of cars is in the hands of a single monopoly. "Car producers of the world – unite!" The rivalry between the auto-producing giants, who are adding (to a large extent excess) new capacities to the existing ones, hoping to get a larger market share, would cease. Instead the central planner of the global auto-sector would drive production up to the limits of physical capacities. (A situation well-known in centrally planned shortage economies.) A much smaller excess capacity, or practically no demand-constrained idle capacity, would be maintained. Only a certain frictional excess capacity would remain.

Fortunately, this is only an imaginary dystopia. Because of the dominant role played by private property in the automotive industry, the situation can be regarded as a non-cooperative game. Each player tries to expand in spite of the huge excess capacity that already exists, hoping that he will be able to grow at the expense of his rivals. In turn, each of them is suffering from the difficulties on the market, and for the immense costs of underutilized resources.

The surplus economy is ultimately explained by the nature of capitalism.

3) CONSEQUENCES AND APPRAISAL

The fact that a capitalist system generates a surplus economy has several important consequences. In this short paper only five themes can be mentioned.

First theme: technical progress. Surplus, rivalry and technical progress form an interactive triad; each element in this circular linkage is cause and consequence at the same time. That is the core explanation of the dynamism of capitalism.

There is a table in the book (on p. 6) which lists 111 revolutionary innovations, introduced in the period from 1917 through 2010. The initial year 1917, the birth date of the socialist system, was chosen deliberately because we want to compare the contribution of the socialist and the capitalist systems to technical progress. The original table indicates for each item not only the name of the product or service, but also the name of the company which introduced it for the first time in a commercially successful way. It is not a list of inventions, but of innovators, in the true Schumpeterian sense. Beside the name of the product and the company there is also the date of introduction and the name of the country where the innovator company was registered.

Table 3 Revolutionary innovations 1917-2010

COMPUTER, INFORMATION, COMMUNICATION
integrated circuit, touch-tone telephone, fax, optical fiber cable, pocket electronic calculator, word processing, microprocessor, laser printer, modem, MS-DOS operating system, hard disc drive, graphical user interface, laptop, touch screen, mobile telephone, mouse, web search engine, USB drive, Skype (peer-to-peer phone), YouTube video sharing website
HOUSEHOLD, FOOD, CLOTHING
tea bag, hair dryer (hand held, electric), wall plug, spin-dryer, automatic pop-up toaster, steam electric iron, electric refrigerator, air conditioning (home), neon light, instant coffee, electric clothes dryer, nylon, espresso machine (high pressure), microwave oven, drive-through restaurant, saran plastic wrap, polyester, Tefal kitchenware, hook-and-loop fastener (Velcro), athletic shoe, halogen lamp, food processor, Tetra Pak, beverage can
COMMERCE, BANKING
supermarket, shopping cart, shopping mall, charge card, credit card, Automated Teller Machine (ATM), express shipping, bar code, e-commerce
HEALTH, COSMETICS
adhesive bandage (Band-aid), facial tissue (Kleenex), paper towel, electric shaver, aerosol container, disposable diaper, transistor hearing aid, roll-on deodorant, disposable razor, liquid detergent
OFFICE
adhesive tape (pressure sensitive Scotch tape), ball point pen, correction fluid, copy-machine, „Post-it”
TRANSPORT
escalator, parking meter, scooter, jet-propelled passenger aeroplane, black box (for aeroplanes).
LEISURE
drive-in cinema, instant camera, TV remote control, plastic construction toy, Barbie doll, quartz wristwatch, Video Casette Recording (VCR), Walkman, Rubik’s cube, CD, Portable video-game, digital camera, book trade on the internet, DVD

Table 3 contains, for the sake of brevity, only the names of the products. The list includes items from transistors, microprocessors, touch screens and other ground-breaking innovations of the high-tech sector through the contraceptive pill, CT and MRI, to simple household goods like paper towels and disposable diapers or dishwashers. These are the most important, truly revolutionary innovations which have radically changed the life of everybody.

Only one of the 111 items was introduced in the USSR: synthetic rubber. If producers operate in a shortage economy, where they do not have any difficulty in selling their output, but on the contrary there is a long queue waiting for the old products, why should they strive to introduce new ones? The remaining 110 innovations are the creations of capitalism, or more precisely, the results of the pressure of surplus, competition, rivalry and entrepreneurship.

Second theme: power. What is the relative strength and power of the trading partners in a market economy?

The subject of the book and the present short summary is not simply an economic phenomenon, in a narrow sense of the word. It is about the *social relation* between people on the supply side and people on the demand side, between living persons, sellers and buyers.

Many authors assert that the market economy guarantees "consumer sovereignty". That is a somewhat oversimplified and exaggerated proposition. Supply undoubtedly exerts a strong influence on taste. This influence is to a large extent progressive; innovation is created on the supply side and demand shifts toward the new products There is also some manipulative influence exerted by producers and sellers trying to market fake novelty.

Admitting the strong influence of the supply side, it is nevertheless true that the final decision is in the hands of the buyers. Producers try to please the customer in many ways, offering various favors -- but the ultimate choice is made by the buyer. If she does not want to buy, she cannot be forced to do so. The exit option is open all the time: the individual customer can voluntarily choose another product, or leave the shop and go to another; the firm as a buyer can break off relations with the earlier supplier and choose another one. This gives a reassuring feeling of power.

The situation is just the opposite in a shortage economy. The buyer is subjected to rude treatment, impolite service. She may even feel humiliated, being at the mercy of the seller. It is up to the seller to decide who will get the product or the service which is in short supply, and this strengthens his sense of power. The customer tries to win the attention and the favor of the seller; he is ready to flatter him.

People in post-socialist countries are inclined to forget the importance of this change.

Third theme: employment. Persistent unemployment is an inevitable consequence of capitalism. The book discusses several factors leading to this permanent state of the labor market. The causal factors determining surplus on the market for goods and services and on the labor market are intertwined. The more dynamic the process of creative destruction is, the speedier the structural changes of the economy will be. Certain product-lines, even whole sector, are shrinking or disappearing. It is a familiar scenario: technical progress, welcomed by most people, brings misery to many workers who lose their jobs and are not able to learn new skills fast enough. The unemployed are not only the only victims: it generates fear and servile obedience among the employed as well.

To make evaluation even more complicated, even this obedience has favorable consequences, because it stimulates discipline, more intensive work, and ultimately more efficient production.

Fourth theme: waste. Here I touch upon an important characteristic feature of the approach suggested in my book. Many firms try to calculate the optimal size of inventories or capacity utilization and conclude that up to a certain critical point the inventory, or unutilized capacity, is a justified reserve, but above the critical point it becomes unjustified waste. This might be a useful exercise at firm level. But for an academic observer of the nature of capitalism this critical point is irrelevant and meaningless. Any size of inventory and unutilized capacity is reserve *and* waste at the same time. Capitalism is a wasteful system – but this wastefulness is inseparable from rivalry, innovation and dynamism.

Fifth theme: corruption. Or more precisely, corruption in the narrow sense of bribery. Unfortunately, it occurs in every society. The relevant issue is the *direction* of bribery. Who is bribing whom?

Under the socialist system the buyer bribes the seller. What is going on is usually a petty affair: a pack of American cigarettes handed over to the butcher by the housewife who hopes to get better meat.

Under the capitalist system it is the other way around, the seller tries to bribe the buyer. The main area of corruption is the handling of governmental orders, the intricate mechanism of state procurement. Honest and transparent procedures are prescribed by law. But behind closed doors corrupt deals are struck quite frequently. These are usually not petty affairs. The volume of a state order might be in billions of dollars, and a bribe of millions paid to the decision-makers is just a small percentage of total costs. The temptation is quite strong in the typical case, when there are a few big rivals competing for a certain state order. Rivalry and the surplus economy generate this form of corruption.

Once I gave a lecture in Ireland in honor of the distinguished economist-statistician Roy C. Geary. I made a comparison between the socialist and capitalist economies. At the end Professor Geary raised the question: Why do we not take over from capitalism the abundant supply of goods, and from socialism full employment?

My answer was, and still is, this: regrettably, history does not offer such lucky combinations. A system is a "package", containing beneficial and harmful properties. This short paper (and the book summarized in it) does not discuss the relationship between capitalism and socialism, and such primary values as democracy, human rights, equity, social justice and so on. The discussion is restricted to a narrow subject: the consequences of shortage and surplus. However, even within this restricted domain, I maintain the proposition: if you choose capitalism, you get a package. Consequences 1. (innovation) and 2. (the ultimate decision-maker is the buyer) are evaluated by most people as merits or virtues of the surplus economy. In contrast, consequence 3, unemployment is, a cruel result, causing suffering and humiliation. Consequences 4 (waste) and 5 (certain type of large-scale corruption) are appalling in the eyes of most people, too. Capitalism, inevitably, by its very nature and genetic inclinations has both attractive and ugly sides.

Both *Dynamism, Rivalry, and the Surplus Economy* and this paper are written in the tradition of old-style comparative economics, comparing the socialist and the capitalist systems. The more fashionable approach is the study of the varieties of capitalism. The latter is, of course, a legitimate way of understanding systems. I join this current of research in some of my works, for example nowadays, paying special attention to the recent Hungarian variety of illiberal capitalism. But the book and the present short summary try to demonstrate that there are still legitimate grounds for contrasting the two "grand systems". While both of them have many varieties, each one has certain *common general properties.* It is easier to understand features that are common to all capitalist systems if we compare them with the system-specific characteristics of the socialist system.

The world resounds with attacks on capitalism. The rhetoric is directed not against this or that variety of capitalism, but against *all* kinds of capitalism, against *the* capitalist system. This makes the understanding of the nature of capitalism quite timely. We can understand its properties only when we juxtapose it to a non-capitalist system. Not to an imaginary, utopian dream world, but contrasting historical realities, *real* capitalism against *real* socialism.

This approach does not imply a fatalistic position or the passive acceptance of every hideous feature of capitalism. Even if such attributes as the predisposition to unemployment or corruption are "genetically coded" into the nature of the system, they are only inclinations.

They can appear with extreme intensity, or they can be contained and rolled back. The book advocates a reformist approach in order to get closer to more humane varieties of capitalism. But it suggests that we should fight against the ugly sides of capitalism without illusions; they will show up time and again, and if we do not fight them with sufficient resolution, their threat will become stronger.