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“Old Economy” and New Problems. Prospects for Slow Growth in Post-socialist Countries

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Summary

Emergence of venture capital (VC) after the II World War was the main driving force behind the process of creative destruction and ensuing significant market changes. Contrary to beliefs, neither IT companies (which did not yet exist at that time) nor R&D laboratories (which had existed for rather short time) did contribute to these powerful market changes as much as VC did.

A slow pace of development of VC in post-socialist countries and its weak contribution to financing start-up business enterprises is due to relative dearth of technological ideas, which could succeed in the global marketplace. This is why VCs operate locally more in speculative rather than „classical” way.

Opportunities exist for not only faster growth, but also for assuming leadership in global, or at least European economic development. In order to take advantage of these opportunities, we need to search for building elements of entrepreneurial society. The search should be based on detailed analysis of what really succeeded in the marketplace in the last couple of years and what has chances for further development in future.

"... to declare the truth about matters of high interest which a man honors and loves among wise men who love him need no fear of faltering in his mind; but to carry on an argument when you are yourself only a hesitating enquirer, which is my condition, is a dangerous and slippery thing; and the danger is not that I shall be laughed at (of which the fear would be childish), but that I shall miss the truth when I have most needed to be sure of my footing, and drag my friends after me in my fall."

(Socrates, according to: Plato "Republic" Fifth Book)

"Technology is neither good, nor bad, nor is it neutral"

(Melvin Kranzberg: "The information age: evolution or revolution")

"... capitalism appears when credit creation begins"

(Joseph A. Schumpeter: "Business Cycles")

1. Why is the thing slippery and dangerous?

I believe that concentration on prospects for quick growth in post-socialist countries as such does not seem to be either slippery or dangerous. Discussions about future mainly focus on correct assumptions and precise reasoning. We base our judgements on past experience, and they can be verified only from the logical point of view, that is from the point of view of formal consequence of conclusions and assumptions. Actual events often result from the logic that is different from the logic constituting our today's speculations. These events often overturn our initial assumptions and do not confirm the development scenarios established on their once existing basis. The discussion about quick or slow growth of a given country (in our case – group of countries) in fact can be reduced to discussion about assumptions. And it is the assumptions that may seem "very slippery and dangerous".

In my opinion, presumed assumptions of the conference title are the following:

- we face the "new economy";
- which does not solve old problems;

- despite such problems, there are some prospects for quick growth in post-socialist countries.

My contradictory focus on the prospects for rather slow than quick growth in post-socialist countries in the title of the paper constitutes only a peculiar shift of emphasis. It is obvious that we always discuss a growth rate, which is expressed in a concrete number ratio. We know that the Polish government assumes that in year 2002 GNP growth ratio will amount to 1 %. Nevertheless, this dramatically low growth rate should be referred to growth in other countries of similar and different development patterns. Moreover, in order to regard it as “slow” or “quick”, we have to refer it to former and prospective growth and development trends as well as inflation and unemployment ratios. If we consider falling inflation and rising unemployment, we can see that the poverty ratio does not fall. Accordingly, I am afraid that in the foreseeable future the “new economy” will not have bright prospects for significant improvement in our country and in majority of other post-socialist countries. Or perhaps, my assessment of this new economy and its essence is wrong. For, I believe, it is this essence that seems to be “very slippery and dangerous”.

Let us now return to the conference title. It suggests that if there is any “new economy”, then, such an economy must lead to some new problems. If such problems are not visible, if the activities by the government and its state agencies, let alone entrepreneurs, confirm that old problems are still up-to-date (e.g. excess administration and tax burdens, labor costs, and expensive credit difficult to obtain), then, we can come to a simple conclusion that the “new economy” still does not dominate our market, or it exists indirectly, a fact which actually constitutes one of the theses of this paper to be discussed later. Anyway, if such tendencies appeared and if the new economy was present on the Polish, Romanian or Slovak market, we would consequently face new problems.

But what if this “new economy” has so far been “a story about future” in our conditions (of European post-socialist countries)? What if we assume that it still does not exist on our markets? In such a case, also new and significant problems will appear, since this new economy constituted one of the most significant elements of global economy characterizing both method and direction of its development (at least till 11th September 2001 – a problem to be discussed later). For sure, we face many new problems related to the “new economy”, “through the new economy” and “through potentially less influence exerted by it”. A very

crucial problem is the degree to which post-socialist countries are and will be the participants of “new economy” and the character of such participation. And this issue is certainly a new rather than old problem. And even newer one after the date of 11th September 2001.

The thing is also very slippery and dangerous due to another reason. I do not have time nor funds to engage into such a detailed statistical and analytical study into discussed issues as the pioneer analyses of Castells (who, as a precursor, announced the birth of new economy and specified its beginning as middle seventies¹), Norton², or – considering post-socialist countries - Gorzelak and partners³. The limitation of space does not allow me even to express my opinion on collective works closely related to this paper, namely the works written under the supervision of professors Antoni Kukliński⁴, Tadeusz Zasepa⁵, and – first of all – Grzegorz Kołodko, thy initiator of the study into the new economy and its consequences for the development of post-socialist countries⁶ organized and institutionally grounded by TIGER.

The very interpretation of the “new economy” is in the Polish and international literature so diversified, and the topic to be discussed so difficult, that I will not be able to refer to sufficient number of authors. Nevertheless, I hope that my theses will be controversial enough to stir up discussion.

2. “New economies” as subsequent waves of creative destruction?

Norton’s convincing and well documented analysis of development of American global “new economy” presents the new economy as a subsequent fifth mutation of “new economies” initiated by the industrial revolution and identified with “Kondratiev’s waves” popularized by Simon Kuznets⁷. Each wave begins with landmark innovations and gives birth to the seeds of new innovations initiating destruction of the old methods of management. The “new economy” of industrial revolution was based on the steam, steel and textiles and its power

¹ / Castells Manuel, 1996, *The Rise of the Network Society*, Blackwell

² / Norton R.D., 2001, *Creating the New Economy*, Edward Elgar

³ / Gorzelak G., Ehrlich E., Faltan L., Illner M., (ed.), 2001, *Central Europe in transition: Towards EU Membership*, Scholar

⁴ / Kukliński Antoni, (ed.) 2000, *The Knowledge Based Economy, The European Challenges of the 21st Century*, KBN and Kukliński A, Orłowski W. (ed.), 2000, *The Knowledge Based Economy, The Global Challenges of the 21st Century*, KBN

⁵ / Zasepa T., (ed.), 2001, *Internet, fenomen społeczeństwa informacyjnego*, Wydawnictwo Świętego Pawła

⁶ / Kołodko Grzegorz W., (ed.), 2001, *“Nowa gospodarka” i jej implikacje dla długoterminowego wzrostu w krajach posocjalistycznych*, LKAEM Publishers

⁷ / R.D. Norton, op. cit. p. 41

consisted in a proper localization ensuring access to raw materials and sales markets. The steam railway dramatically removed geographical barriers and thus enabled the conquest of new regions and new markets of sales and raw materials supply. During the next wave of “new economy”, electricity supplanted steam as a basic energy carrier, and the car and plane (driven by oil motor) overcame communication barriers related to rails. Accordingly, resignation from old and use of new technological solutions accelerated the economic growth rate, increased prosperity growth and consumption related to it, as well as improved life quality. Each “long wave of new economy”, related to concrete technological solutions, was accompanied by crucial social and organizational transformations. The industrial revolution established large workplaces and labor movements. The iron railway contributed to urbanization, the car provided pervasive mobility, and electricity accompanying the car totally changed lifestyle, including personal hygiene, household appliances, school and holidays.

Two next waves of new economy, already differentiated by Norton, are specific. The first wave, lasting between 1939 and 1989, and called the wave of “cold war”, was based on arms, television and large computers. The second wave beginning in 1989 called “information age” is based on networked personal computers, telecommunication and mass entertainment.

Similarly to numerous other authors, and contrary to Castells referred by him, Norton does not attach great significance to cultural, social and even political factors. His conclusions are surprisingly simple:

“Here we have it. In the 1990s, ‘technology has made this planet of shared experiences’. The technology in question is digital.

I conclude from all this: there is a New Economy. Part macro, part micro and all digital, it has provided a gradually building shockwave that has renewed the US economy and restored it to global leadership”⁸.

Paradoxically enough, the new “information age“ is not the age of global economy but of global leadership of American economy. This significant difference related to the interpretation of globalization essence depends on the technology applied in given societies and influences the development and growth of such societies!

⁸/Norton, op. cit., p. 42

In order to understand what has happened and what may happen in future, the characteristics of two last waves of “new economy” described by Norton have to be supplemented by social and political factors. Since they influenced the world much more than the previous waves, such social and political factors should be considered from the global point of view. And they are easy to identify. Each period differentiated by Norton is clearly characterized by basic waves of destruction of old orders and introduction of new ones. During the period called by Norton “cold war”, the old order was destroyed by the fall of colonialism accompanied by strengthening of communism and international corporations called by Drucker “the most fruitful social innovation of the century”⁹. Another significant social and political innovation was the establishment of intellectual and institutional frameworks for repressing local armed conflicts and preventing their transformation into next world wars. Anatol Rapoport¹⁰, one of the precursors of world warning and negotiating systems, mentioned this issue as early as during the age of large computers used only for defense and war purposes, and of the same world divided by oceans and wire entanglements. Fifty years later, the master of global negotiations, Henry Kissinger, expressed it clearly and in short: “The age of atom transformed the strategy into determent, and determent into esoteric intellectual struggles”¹¹.

The last “new economy” identified by Norton is the information age which commenced in 1989. Let us begin with its starting date. Contrary to previous Kondratiev’s waves, it is difficult to find grounds for such a date if we take into account traditional technology. This date was probably chosen on the basis of simple calculation (fifty years from the beginning of the previous wave), and it might be immediately associated with Poland and the fall of communism (similarly to the starting date of cold war, which at the beginning was a “hot” war for Poland at least). Contrary to the previous period specified by Norton, the fall of world communism is not accompanied by the process of “filling vacuum” in the political system of global balance. There is no opponent against whom the countries could wage global wars and who could be deterred. “Esoteric intellectual struggles” could be carried on only in the computer games and relaxing movies. Consequently, at the beginning of the nineties, it was widely believed that “the history has come to an end” and the USA not only with respect to economy but also culture leads global civilization. On 11th of September 2001, we all saw that

⁹ / Drucker Peter, 1985, Management. Tasks, Responsibilities, Functions, Harper and Row, Colophon Books, p. 364

¹⁰ / Rapoport Anatol, 1961, Fights, Games and Debates, University of Michigan Press

such a belief was delusive. The planes full of defenseless passengers became a perfectly effective tool of mass murder perpetrated by suicidal terrorists. Accordingly, radically new applications of widely known products were found and implemented. It would be difficult to classify them as some form of Schumpeter's "creative destruction". Perhaps, in our world that is gradually more difficult to comprehend, the date of September, 11, 2001 will become the beginning of new understanding of economy, politics and culture and – in the context of our discussion – mainly, new understanding of technology? If Norton was brave enough to classify the beginning of the second world war as the beginning of long wave of creative destruction (which in my opinion is a misunderstanding since the next wave began exactly in 1946, an issue to be discussed later), then why could we not specify year 2001 as the beginning of the next wave? At least, this would comply with calculations assumed by Kondratiev who estimated that each next development wave lasted from fifty to fifty five years!

3. Why is technology neither good nor bad nor neutral?

For almost ten years, I have been struggling in vain to disseminate the understanding of technology which includes not only the characteristics of tools and equipment applied in the work process (Technoware) but also the skills and experience of people handling such equipment (Humanware), facts and information known to them concerning possible use of such equipment (Infoware), and finally, the structures within which such people work (Orgaware)¹². This broad approach towards technology has been accepted in the Far East and takes into account the context of various applications. It helps us to understand why technology is not and will never be fully uniform and "globalized"¹³. Only one element of technology, namely, technoware may be uniform and globalized. But various people having various motivations and methods of learning always use even identical technical equipment and identical software and various levels of obtained knowledge helping them to understand the rules of handling such equipment within an institutional background. Such people always understand the aforementioned rules better or worse, closer or further to the constructor's

¹¹ / Kissinger Henry, 1996, *Dyplomacja*, Philip Wilson, Warsaw, p. 668

¹² / See e.g.: Kwiatkowski Stefan, 1990, *Uciekający Świat*, Wydawnictwo Spółdzielcze; Kwiatkowski Stefan, 1994, *Transition and Technological Gaps*. In *Search for Hope*, /in:/ Antoni Kukliński /ed./ "Science, Technology, Economy" Wydawnictwo KBN, Warsaw Wasilewski L., Kwiatkowski S., Kozłowski J., 1997, *Nauka i Technika dla Rozwoju*, Wydawnictwa Ośrodka Przetwarzania Informacji

¹³ / *An Overview of the Framework for Technology for Development*, 1988, United Nations, ESCAP, p. 59 and the next ones

intentions, and sometimes completely differently from the way it is understood in the country of origin.

The level of technology refers also to each of its elements separately and to their combinations. Practically, the four elements of technology are inseparable. Therefore, the same machine (technoware) with the same instruction (infoware) handled by various people (humanware) and within various organizational structures (orgaware) may have different efficiency with respect to processing of resources.

Practically, “global leadership” of USA and of a small group of countries regarded as leaders of technological progress means two things simultaneously:

- firstly, the majority of solutions involved in technoware and accompanying it infoware originates from the “leading” countries. “Following” countries bear not only financial costs of the purchase of equipment and information accompanying it (or, the other way round, information systems and equipment accompanying it). They also have to bear such costs of application of new technologies as the costs related to necessary changes in orgaware and humanware. Such changes are often expensive, time-consuming and are not fully efficient. Therefore, it is risky to assume that new technologies result in better prospects for quicker growth in the countries, which so far have been technologically and economically underdeveloped. Of course, there are some new and revolutionary opportunities which in the past were unimaginable and which enable the “followers” to apply new information technologies in such spheres as monitoring and warning on rapid weather changes or distance learning, but they mostly improve the quality of life and management, and only indirectly influence the competitiveness of underdeveloped countries;
- secondly, although one cannot exclude the possibility of development of new equipment and information solutions in the “follower” countries, in order to reach the global market they have to exist on the American market or markets of other leading countries. And in order to enter such markets, they have to have access to “complementary resources¹⁴”, an

¹⁴ / Kwiatkowski Stefan, 1990, Społeczeństwo Innowacyjne, PWN; Teece D.J., 1987, Capturing Value from Technological Innovation: Integration, Strategic Partnering, and Licensing Decisions, /in:/ Brooks H. and Guile B.R. /ed./ Technology and Global Industry, National Academy Press

issue that I mentioned more than ten years ago. Paradoxically enough, such resources require the world leadership. This question should be discussed in detail since it is significant and might significantly limit the application of beneficial solutions related to locally developed technology (strictly speaking technoware).

Complementary assets constitute various goods and services necessary to commercialize an innovation. They include channels of distribution, marketing and advertisement, supplementing technologies and products (e.g. computer peripheral hardware and software), post-sale service and other factors rarely existing in “following” countries seeking to introduce their innovations on the markets of “leading” countries. The more developed and rich in funds the company is, complementary assets necessary in a given time and on a given area are easier to obtain. Thus a trend towards control over complementary assets has become one of the basic prerequisites for diversification or vertical integration of large industrial and commercial companies.

The majority of complementary assets of large enterprises is always accessible and does not have to be specially adjusted to a given and strictly specified innovation. Teece calls such assets “general assets”. If Ford had produced a water-driven car, it would not have needed any new channels of distribution, promotion, and service on the American market since such channels had already existed for long. If such a car had been produced in Poland, its effective introduction on the American market would have depended more on accessibility of complementary assets than on technological aspects or vehicle’s price. Such suppositions are confirmed not only by everyday study into the problems faced by exporters of innovations on the markets of “leading” countries but also by more official analyses.

At the beginning of the eighties, the share of marketing costs in total costs of sale on world markets of similar products from Israel, Canada and USA was compared. In the case of Israeli chemical products, the share of marketing costs in total costs of sale amounted to 13%, in the case of American products - 7.4% and in the case of Canadian ones - only 5%. In the case of electronic goods, such differences were even more shocking. Namely, in the case of Israeli products, the share of marketing costs in total costs of sale amounted to as much as 25%, in the case of American products - 5.2% and in the case of Canadian ones - only 1%¹⁵. Such

¹⁵ / Kamin J.Y, Bijaoui I., Horesh R., 1982, Some determinants of costs distributions in the process of technological innovation “Research Policy”, vol. 11, no 2, pp. 92-93

differences can be easily explained. Namely, the companies from North America operate on their “own” markets and have access to complementary resources. Higher marketing costs of American companies in comparison with the Canadian ones simply result from higher competition on the American market. The Israeli companies, in turn, have to obtain complementary assets, which is very expensive and not always possible due to tight appropriability regimes.

Complementary assets do not have a generic character. Their character depends on development and diversification of a given enterprise or even whole national economy of a given country. Small companies and the most underdeveloped countries usually suffer from lack of complementary assets in the most painful way. Their innovations have low market value if they are not accompanied by complementary assets supplied by companies and countries with better developed technology and economy. But situation of those better-placed firms and countries is much better than that of external innovators. They may either block even the best technological solutions or benefit from the majority of advantages related to a given product or solution introduced on the market.

At the end of the seventies, eminent scientists working on this issue expressed a surprising and far-reaching conclusion, according to which “... market relationships may sometimes replace the ability to introduce product innovations on the world-wide scale”¹⁶. In the eighties and nineties, monopolistic practices of large supranational enterprises gave numerous examples of effective restraint of penetration of global markets by the manufactures and innovators from following countries. Such containment was usually connected with skilful policy of appropriability, development and protection of complementary resources. This is best illustrated by the following opinions of David Teece, the undisputed American authority in the area of creation and strategic utilization of company’s complementary resources:

“... ownership of difficult to replicate complementary assets can represent a second line of defense against imitators and an important source of competitive advantage”¹⁷

¹⁶ / Gerstenfeld A. and Wortzel L.H., 1977, Strategies for Innovation in Developing Countries “Sloan Management Review”, Fall, p. 61

¹⁷/ Teece David J., 2000, Managing Intellectual Capital, Oxford University Press, p. 25

“Resources can be the source of competitive advantage only if they are supported by a regime of strong appropriability or are non-tradable or ‘sticky’”¹⁸.

“...competitive advantage at the level of the firm can flow only from the ownership and successful deployment of non-tradable assets. If the asset or its services are traded or are tradable in a market or markets, the assets in question can be accessed by all...”¹⁹.

The aforementioned quotations demonstrate that Teece does not consider the limitations that could result from inaccessibility of financial resources. He makes this point explicitly:

“...once an asset is readily tradable in a competitive market it can no be a source of firm-level competitive advantage. Financial assets today are of that kind”²⁰.

Thus, we come back to the aforementioned specificity of global markets. These are the markets of global leadership of leading countries, the companies of which (whether all of them though is questionable) no longer have to regard financial resources as significant complementary resources. Since they are widely accessible, they are no longer specific, and competitive advantages cannot be based on their specificity.

However, let us focus more closely now on the market of a post-socialist country, e.g. the Polish market. Rapid market transformations destroy artificial barriers between the local and world markets. Almost at an instance, the Polish market is full of all products known in the modern technological civilization. All of them, practically without any limits, are accessible. The socialist monsters of alternative technology, namely other machine tools, tractors, planes, computers and integrated circuits are thrown out into the rubbish bin. Unemployed constructors, machine operators and analysts come to the streets since only few of them are still employed in their hitherto institutions and laboratories. Only few of them manage to adjust to the model of total shock therapy unknown to Schumpeter and leading from stagnation balance to unbalance of ability to survive. The search to find a modus of survival combines for very short time apparently distinct types of entrepreneurship, namely opportunity-based entrepreneurship and necessity-based entrepreneurship. For the first time in

¹⁸ / ibidem, p. 20

¹⁹ / ibidem, p. 11

²⁰ / ibidem, p. 20

the history, such a great mass of the most valuable individuals face the alternative of starving to death or finding an opportunity. And then, following some unavoidable losses, surprisingly, numerous people manage to find such an opportunity, using their professional expertise and knowledge of world markets and Polish market needs, and mobilizing the remaining funds, whether their own or borrowed. They get into deep water of new entrepreneurship and ... some of them survive, effectively learning the first lesson of survival swimming. After ten years, such a drowned person-to-be arrives at the hospital not as a patient but as supplier of modern medical equipment. He offers state-of-the-art and attested equipment for the purposes of intensive therapy in delivery and intensive therapy wards. Such equipment has been tested, has undergone all necessary trials and possesses all required certificates. Moreover, it is price-competitive and its producer is known as quality devotee who is almost immediately accessible in extremely difficult situations when the equipment is out of order. However, some representatives of foreign suppliers accompany the local supplier. Their equipment is equally reliable since it consists of identical sub-assemblies. Its price is slightly higher and the tests have been conducted not on the place, in the hospital, but in foreign health protection centers, and accordingly, it is more difficult to control small but significant technological details related to construction. Surprisingly enough, the hospital decides on the foreign supplier, not because of the price, quality, or service and repair conditions but because of ... credit granted by the supplier. Thus, company's financial resources and access to such resources may still play a crucial role of complementary resources contributing to the success or defeat of some market participants.

Technology alone is neither good, nor bad nor is it neutral. Just by itself it does not generate stimuli strong enough to create the new economy. Oskar Lange accused Schumpeter of excessive technological exposure and wrote on the issue the following: "... *According to Schumpeter, consecutive "industrial revolutions" should be differentiated on the basis of the use of new types of energy, not the changes in the social character of labor. Therefore, this approach is useless since it does not take into account the most significant aspect of social production process*"²¹. Lange's accusation would be completely right if Schumpeter interpreted the economic transformations in such a way. However, his approach was totally different. It is strange that Lange did not notice it. Another well known to him Marxist, Shigeto Tsuru, could see it quite clearly. According to Tsuru, Schumpeter rejects hypothesis

²¹ / Lange Oskar, 1966, *Ekonomia Polityczna*, vol. II, PWN, p.46

according to which “... *the economic system could act as a wave only due to its construction, and in absence any ‘special force’ striking it*”²².

Having conducted a detailed analysis of Schumpeter writings, Tsuru concludes that this ‘special force’ and decisive element of business cycle is credit creation constituting “*cash supplementation of innovation*”²³.

“... *due to credit creation, innovations change economic values characteristic for prosperity phase, [...] such changes will not take place if innovations are financed from savings or – in socialist conditions – by administrative means. Undoubtedly, credit creation is a decisive factor in tying up business cycles and capitalism*”²⁴.

For economy historians it may be interesting that Tsuru analyzed Schumpeter’s opinions while in the USA, in 1941. The year of the first publication of the quoted here article (1941!) may be the only excuse for the fact that the author places Schumpeter’s two significant opinions demonstrating that he may be considered as a messenger of a notion of venture capital only in footnotes and without any comments.

According to Tsuru, Schumpeter states that “... *capitalism is such a form of private property in which innovation is financed by means of borrowed money, which generally results – however not as a logical consequence – in credit creation*”²⁵. Furthermore Tsuru adds another, even more significant observation of Schumpeter, showing how perspicacious and accurate he was in interpreting capitalist system:

“*In institutional structure of capitalism, there is a mechanism constituting its basic factor enabling people to act as entrepreneurs without first holding necessary funds*”²⁶.

Such a reflection is very close to the observation that social roles of entrepreneur (innovator), capitalist, manager, and inventor, which are all basic for capitalism, do not have to be played

²² / Tsuru Shigeto, 1983, Szkiecy o ekonomii politycznej i o gospodarce Japonii, PWE, p. 139. Translated into Polish from English edition: „Towards a New Political Economy” Kodansha Ltd, 1976

²³ / *ibidem* p. 136/137

²⁴ / *ibidem* p. 137

²⁵ / *ibidem* p. 137

²⁶ / *ibidem* p. 137

by the same person. In the aforementioned book²⁷, I treated this Schumpeter's observation as a departure point for the analysis of his highly inconsistent stance related to the risk borne (or not borne) by the entrepreneur. However, since I focused on then prevailing Polish conditions, and did not have sufficient knowledge of global markets, especially the American one, I could not help omitting special kind of entrepreneurship, unknown yet to Schumpeter as well, and characteristic of the owners of financial resources ready to transform such resources into capital given at the disposal of people acting "*as entrepreneurs without first holding necessary funds*". Simply, I did not know or was not aware of the fact that the new economy appeared in the USA in 1946. Neither could I foresee that I was to witness its quick end, although according to Kondratiev, it should arrive sometimes in 2001, namely, fifty-five years from the beginning of the wave.

4. What happened in 1946?

R.D. Norton, mentions that venture capital (VC) is "*one of two or three*" basic elements of "the second economy" (namely, the newest wave of new economies). The other main elements of such new economy are large research centers and information technology firms²⁸. America, a country winning the Second World War, disposed by its end of only one of such two or three pillars of new economy, namely, large research centers focused mainly on military needs. In June 1946, a group of "practical dreamers" circled around Ralph Flanders, the president of Bank of Federal Reserves in Boston and General Georges Doriot, professor of Harvard Business School, established the American Research and Development Corporation which was to operate pursuant to completely new rules. It was incorporated as a stock company and was to invest in the equity of enterprises aiming to commercialize inventions and constructions created during the war mainly at MIT. Simultaneously, it was to offer professional management consultancy to firms in which it invested its capital²⁹. After many years, one of the leading VC researchers gave the shortest possible definition of "classic venture capital"³⁰:

²⁷ / Społeczeństwo Innowacyjne, op. cit.

²⁸ / Creating the New Economy, op.cit., p. 239

²⁹ / Węclawski Jerzy, 1997, Venture Capital, PWN; Abott Steven and Hay Michael, 1995, Investing for the Future, Financial Times Pitman Publishing; Bygrave William and Timmons Jeffrey, 1992, Venture Capital at the Crossroads, Harvard Business School Press

³⁰ / "Classic" i.e. aiming at investments in ventures and enterprises in early development phases, contrary to later "mega-funds" financing enterprises during their expansion phase.

“Classic venture capital is risk money invested by professionals in small, young companies with the potential to grow rapidly into enterprises that contribute significantly to local, regional and national economies”³¹.

The spectacular example of such companies is the Digital Equipment Corporation. When it was established, ARDC purchased 77% of its shares and paid USD 100.000. In 1972, the value of investment increased to USD 490 million. Other giants of American and global economy, which based their success on VC support, include Federal Express, Intel, Compaq, Xerox, Biogen, Lotus Development Corporation, Apple, Genentech, and Yahoo!

Classic VC constitutes one of the most interesting examples of break-through innovation in financial area. VC funds concentrate on the return from invested capital significantly higher than possible return from other investments. However, such a return is not achieved by means of speculation and higher risk. To the contrary, VC funds apply the whole range of measures minimizing the risk not only by a proper investment portfolio diversification but mainly by skilful “screening” of ventures which do not promise any success, and by constant monitoring of proper implementation of financed ventures. Both “screening” and monitoring of ventures is possible mainly due to excellent professionals employed by VC funds who may play the role of partners of financed entrepreneurs and of their close colleagues. Relationships between VC funds and by financed by them enterprises are completely different from the relationships between banks and credit taking firms. Unlike the banks, VC funds not only analyze financing requests but also independently search for potential candidates. In fact, the majority of financing deals is initiated by the funds. If they decide to finance a given company, they rarely agree to be majority shareholder, since in this way they would have to accept the role of an entrepreneur while the essence of classic VC is investing in some entrepreneurs and their teams. In other words, VC funds early identify possible winners of market game (at least much earlier than the other market participants), and help them to achieve success as quickly as possible. In some rare and exceptional cases, VC funds decide even on a special form of incubation of then financed by them innovations. This may be demonstrated by the example of Tandem Computers.

At the beginning of the seventies, Thomas Perkins, partner in Kleiner&Perkins, one of the largest and most effective VC institutions worldwide, spotted a young marketing manager,

^{31/} Bygrave William, 2000, Venture Capital Activity in the GEM 2000 Countries, /in:/ Global Entrepreneurship Monitor. 2000 Executive Report, p.48

James Trybig. He was an engineer electrician and a graduate of Stanford University Business School. When first met by Perkins, he was employed at Hewlett-Packard for five years. In 1973, Perkins employed Trybig in his company where he analyzed electronics-related business plans. After a year, much to his surprise, Trybig was asked by Perkins to write his own business plan related to any area. Trybig came up with an idea of double protection against data faults in computers. And this was the origin of company's name established by him. Company Tandem Computers obtained the majority of initial capital from Kleiner&Perkins and was incorporated in 1974. Ten years later, its sales value was above USD 1 billion.

As emphasized in numerous publications, including quoted Global Entrepreneurship Monitor for 2000, financing entrepreneurship by VC funds has not only direct but also crucial indirect results. First of all, due to close contacts between funds and financed by them enterprises, the best experience is transferred. Besides, spectacular market success of some ventures increases social popularity of entrepreneurship and of particular entrepreneurs. According to William Bygrave, *"...countries with the highest level of perceived entrepreneurial opportunity, capacity and motivation have the greatest level of venture capital investment per GDP"*³².

In 2001, research within Global Entrepreneurship Monitor program included 29 countries. Data related to VC financing was obtained for 2000 for 25 countries, including two post-socialist countries; Hungary and Poland. Those two countries and Japan took the last positions regarding the level of VC investments per gross domestic product. In both post-socialist countries, the value of national VC investments does not reach even 0,1 % of GDP. In Israel, it amounts to 1.2%, in the USA, slightly above 1%, and in Canada and South Korea slightly above and slightly below 0.6% of GNP, respectively. The number of companies financed in 2000 by VC exceeded 5000 in the USA, and in Germany, France and Japan - 2000 (which proves that the level of individual investments in Japan is extremely low). In Israel, the number of such companies amounted to 500, and in South Korea – almost two thousand. In Poland, Hungary and New Zealand, the number of such companies was very low³³.

³² / ibidem, p. 50

³³ / Bygrave William, 2001, Informal Finance and Venture Capital: A Closer Look, /in:/ Global Entrepreneurship Monitor, 2001 Executive Report, pp. 24-27. The statistics are presented only on the charts, therefore the above text is not accurate.

Now we can see what happened in the USA in 1946 - the second pillar of new economy - VC was created, large research centers being the first such pillar. Next, large research centers and VC facilitated creation of the third pillar of new economy in the form of information technology firms. Such firms would not be created without research conducted in large laboratories and mostly financed from public funds. But they would not be conceived either without availability of VC financing, the source of which is mostly private funds. The aforementioned facts clearly demonstrate that the discussed here wave of new economy begins in 1946, not in 1939. If we assume that this wave ended on ^{September} 11 of 2001, the analysis of prospects it offers for slow or quick development of post-socialist countries seems inappropriate. In fact, this very wave of total economic (and consequently cultural and political) globalization was probably responsible for collapse of communist economy, offering the affected countries tremendous challenge of possible future growth, even if immediate bust.

However, the aforementioned time-borders of individual waves (or phases?) of global economic development are highly relative. There is, and there probably should not be a common agreement regarding exact dates. And even if there was such consent, mere specification of certain periods will not suffice when analyzing future. Majority of people or all of them associate development and economic growth with concrete things and events. Still, while considering prospects, it is worth reflecting upon the past. The following lengthy quotation from the aforementioned work of William Bygrave facilitates such reflection, presenting some already achieved results of the ended wave of new economy, and suggesting some signs we should consider during further way ahead.

“Though venture capital-backed financings are rare, their impact is significant. According to the recent study by the Wharton Econometric Forecasting Associates which was supported by the National Venture Capital Association, venture capital- backed companies created 4.3 million new jobs in the United States. These same companies generated 736 billions in revenues in 2000. Put another way, the relatively small number of venture capital-backed companies account for 3.3 percent of the total jobs in the United States and 7.4 percent of GDP.

In 2000, the total amount of classic venture capital invested by domestic firms in the 24 GEM countries where such data were available was \$ 123.9 billion, or 0.5% of the total GDP of

those countries. Of the total, \$ 100.6 billion (81 percent) was invested in the United States and 23.3 billion (19 percent) in the other 23 countries. The proportion of classic venture capital that was invested in the United States increased from 76 percent of the total for all GEM countries in 1999.

... the year-to-year gains in the amount of venture capital invested were substantial. All but two of the countries for which data were available had an increase in the amount of classic venture capital invested in 2000. The single largest percentage increase was in Israel at 179% percent. Sweden had the lowest increase at 18% percent over 1999 levels. The two countries where the amount of classic venture capital invested in 2000 was less than that invested in 1999 were Belgium (18 percent decrease) and India (23 percent decrease)''³⁴.

5. What next?

In order to answer this short and complex question some perspectives have to be specified. Globally, there are three different development scenarios, but only two of them offer room for analysis of development prospects for post-socialist countries.

The scenario which cannot be excluded and which the mankind has to avoid everywhere and by all means, including the political, military, technical and social means, is the triumph of total and global destruction, disappearance of currently existing basic social bonds, and undermining of material base of human existence. Here, we come back to the Stone Age and our (human) history begins again.

Nevertheless, let us assume that the mankind has solved the problems of worldwide terrorism, or, even more probably, “learned how to live with it”, and how to contain its excessive spreading out, and its violent dissemination to too many regions simultaneously. Let us assume that the mankind found some effective method of containing world terrorism, a special mutation of former ways and means of restraining communism. Then, there are two possible development scenarios of post-socialist countries.

The first scenario, which probably does not respond to the capabilities of Russia or China and, perhaps, of some small and quickly developing countries (such as Slovenia and Estonia), will

³⁴ / *ibidem*, p. 24

consist in unending pursuit of the levels achieved at the leading countries by constant “making up” for something which really cannot be made up for. In such scenario the post-socialist countries will be apparently similar to more developed Western countries but in fact more susceptible to world populism, nihilism, and even terrorism. If such a highly probable scenario comes true, it will result from exceptional shortsightedness of politicians, intellectuals and mainly economists constantly discussing the new economy, and its consequences, and still not understanding its essence. Surprisingly enough, quoted above Norton, does not understand the gist of the problem either, while mentioning large research centers, information technology companies and venture capital as “two or three basic elements of new economy”.

After the Second World War, the United States did not possess VC nor information and communication technology firms. However, it disposed of numerous large research centers working for industrial corporations and for the military. Venture Capital constituted both a financial and managerial means of wide dissemination of inventions and solutions developed in large research centers far beyond their parent organizations. Thus, indirectly, industrial laboratories of large companies (and researchers themselves) were attracted to be more innovative and to attach more attention to practical consequences of research results. In short, establishment of VC set in motion the mechanisms of competition with respect to technological and market solutions developed within large industrial and military laboratories, which in the past were effectively separated from the market. State-of-the-art (according to modern standards) information and communication technologies came much later, and not without involvement of VC which facilitated new information technology firm foundation and development.

Let us repeat once more that the sequence was the following: first, large laboratories and technological knowledge accumulated in them; next, VC accumulating both financial capital and managerial knowledge, and only then, by the end, (and together with other results), information and communication technology companies eventually flooding the markets with ICT products and solutions. Historically, the social and economic solution setting in motion the next wave of creative destruction was not the information and communication technology companies, which at that time did not exist yet, nor large research and development laboratories, which existed only for a few dozens of years (and for a limited scope of R&D results applications) but Venture Capital, which played the role of a demiurge of

unprecedented market transformations changing exceptionally entrepreneurial American society into society entrepreneurship.

Somehow, faster or more slowly, post-socialist societies are learning how to adjust to new market conditions and accordingly, they are becoming more or less entrepreneurial. The majority of them host large international companies bringing with them most modern information technologies. Access to the Internet and, through the Internet, to the information gathered by the mankind, is less and less limited. Sluggishness of venture capital developed in these countries and its limited involvement in financing ventures in early phases of invention and enterprise development simply results from the deficit in technological solutions promising success on the global market. Hence, VC funds, although present in these countries, exert limited influence on their economies, and have more speculative and less “classic” character. Consequently, post-socialist countries “flooded with the waves” of the next new economy do not exert sizeable influence on the formation and consequences of such waves. No wonder, this development scenario is exceptionally painful and provokes many conflicts both within a given country borders, and beyond them.

There is, however, still another scenario, which is more faint and difficult to describe and requires simultaneous co-operation of numerous entities. It offers an opportunity of accelerated growth, and even promises leadership in worldwide or at least European developmental transformation. It is based on search for potential prerequisites of building components of entrepreneurial society in our countries not according to what seems to be right and proper to some questionable experts but on the basis of an in-depth analysis of real achievements during several previous years, that still stand a good chance for further development in future. Such a sphere of exceptional and surprising success is e.g. higher education in European post-socialist countries. Since there are clear relationships between higher education and intellectual capital and intellectual entrepreneurship, this sphere plays growingly important role in both social and economic development of modern societies. Perhaps, concrete actions which accelerated fast development in this sphere of economy may qualify at least some post-socialist countries as leaders of change in global, or at least European scale. We could as well mention here exceptional success of European post-socialist countries on the highly competitive markets of light planes, professional recreational equipment (e.g. sea yachts), commercial vessels, medical equipment, foodstuffs, or gardening.

Proper dissemination of positive experience could probably change the orientation of VC already present in such countries and instigate non-formal (individual³⁵) investors.

In order to make the above mentioned development scenario real; we have to make sizeable intellectual, organizational, political and social efforts. But it is the only scenario leading European post-socialist countries to the truly new economy. Of course, it will create new problems rather than the old ones. The geo-political situation seems to be favorable for such scenario, since the developed world cannot afford new inflammation focuses. Lack of development immediately ignites anxiety, frustration and aggression. Therefore, all actions promising development will be met with interest and support. Especially significant is involvement of VC. It not only supplies money and managerial knowledge but its role is also crucial from the psychological point of view, since its presence gives a clear signal that investments in a given country will be successful.

³⁵ / Informal investors constitute a sizeable and constantly increasing source of financing of new market ventures. In the countries covered by GEM research, each dollar invested by VC funds in 2000 corresponded to 1.6 dollars invested by informal investors. See: Global Entrepreneurship Monitor, op. cit., p. 24

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