POSTINDUSTRIALIZATION IN THE DYNAMICS OF SOCIOECONOMIC TRANSFORMATIONS

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The article operates the evolutionary approaches to study the fundamental reasons for instability phases in social order and further present the theoretical prospects of postindustrial progress. These prospects can be considered as a development of horizontal - vertical partner relationships between economic agents and inter-countries and inter-territorial integration. The authors' present main factors of instability and irregularity of economy development, also offer the potentially efficient instruments of economic stabilization which could be applied by both national governments and also owners/managers of transnational capital.

Keywords: posindustrialization; cluster-network models, transition from phase to phase; virtualization of the economy; Intranet; transnational corporations

Post-Industriality = Post-Instability

The industrial phase of economic system has been described by extremely uneven levels of development preconditioned by feedback relations in local economies. This unevenness has caused the drastic stratification of countries worldwide, and thus, the world today consists of super states, developed countries of the West and countries of the colonial type (at least, according to one classification among too many).

For example, in some countries an innovation policy is still implemented based on the model of industrial clusters', which are characterized by high dependence of cluster-network system activity on the center (nucleus) of formed cluster (Lara Cervantes & Dubrovskaya, 2016).

Contrary to the common view, vertical mobility at the industrial phase has been quite low: any social system, once reaching the privileged level, remains there for good. However, any industrial boom inevitably ends in a crisis, sooner or later, and this is often accompanied

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by hegemony transition to another economy. Still, accumulated during the prosperity times resources allow former leader to “remain in the game” for some. Speaking theoretically, under certain favourable conditions a colonial or semicolonial state would be able to go up and get the status of the “European class state”, but in fact, throughout the whole modern history only Japan has managed to do this transition, and its costs were rather high (Delyagin, 2003).

As a result of the postindustrial phase coming to its end, the world today is split into “black” and “golden” billions, and the gap in consumption between the citizens of these two large groups is only getting bigger and bigger (Eslamian & Biabanaki, 2008).

The postindustrial phase in development was supposed to lead to some sort of the world’s economic equalization, thus making it a one huge social system with rather vague distribution of labour and nearly full absence of cross-country differences. However, as it turned out now, postindustrialization has become the mechanism to enlarge the economic and social gap between the Global North and Global South. At the same time it also reduced the dependence of economies’ from resources’ consumption, thus providing more opportunities for those states which do not have large natural reserves (Grilli, Russo & Sfrecola, 2011). Today the infrastructure for efficient production becomes more and more virtual, while postindustrialization is shaping a new borderline within global population – between incorporated and non-incorporated population groups, and this borderline essentially has nothing in common with geographical borders between states.

Economy’s virtualization has radically changed our rather industrial imaginations concerning production, its costs, trade, other external economic activities and the role of state in them.

Industrial conditions of clustering also transformed - in the new economy the value of geographic location greatly devalued, possibilities of formation of cluster-network models with access to geographically remote natural resources, that are actively exploiting innovation and human potential of different territories, accumulating competitive advantages of many states, industries, regions and so on significantly increased. In addition, the innovative potential of the territory is a basis for formation of post-industrial cluster-network models, that involving horizontal and vertical partnerships of economic agents, and inter-territorial integration (Dubrovskaya, 2016).

Despite all these significant transformations, still quite visible are the borders in postindustrial society functioning.

Unlike the industrial development phase at its peak (manifested through the emergence of corporations and global industrial production networks), today’s postindustrialism has no limits when it comes to resources. Mostly because intellect along with its all global information capacities are endless and cannot be consumed to the very end. However, this is only an illusion. In reality, the dependence of economic growth and prosperity on natural resources consumption and on commodities being produced from these resources is still stably strong, since the basis for postindustrial development as such was shaped at the climax of industrial development – this is the society of consumption, the appetites of which simply must grow for further progress of information and other technologies.

Under conditions of the postindustrial system industries or agriculture are not really pushed out by the information economy, they are only being relocated to the peripheral countries with further reorganized import of readymade goods for continuous consumption. The citizens of postindustrial countries are actively consuming goods produced somewhere

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in China or Mexico, starting from food and ending with airplanes, and in exchange they produce goods with high intellectual properties.

Postindustrialism = Neo-Instability

Rearranging labor distribution, postindustrialism has also caused significant re-evaluation of costs and prices of high-tech products and basic, raw products, to the disfavor of the latter. New added value produced in the countries which are intellectual global leaders is manifold, thousand times higher the value added created in the primary and secondary sectors of peripheral countries. Therefore, postindustriality as such has become the privilege of the leading countries, their entry ticket to the world of tomorrow's prosperity. Two-polar world shaped as a result of industrialization has not changed dramatically due to postindustrial revolution, it became only slightly corrected (as it is already mentioned above, now the borderline between the rich and the poor has nothing to do with geographical attributes, now it goes between corporations on one side and everything else on the other).

However, this situation is obviously not stable. The core is actively using the services of the periphery. It is very much interested in peripheral exports of everyday commodities which are extremely cheap but at the same time comply to the global quality standards. Periphery which has lost nearly all opportunities for vertical mobility, for transition to higher levels in this global pyramid of labour distribution, is also heavily dependent on the core, because this is its only buyer and client. This mutual dependence is quite rigid, but at the same time it is rather unstable, mainly due to constant development of globalization and total spread of information technologies worldwide.

Stabilizing opportunities of the industrialism were based on the constant control over capital which was purposefully concentrated in only three world financial centers, thus maintaining and guaranteeing the leadership of industrially developed countries. Other countries being at the stage of catching-up development did not have opportunities to accumulate own capital because transnational networks had very efficient instruments for capital's repatriation. Therefore, the periphery never had enough resources or stimuli for the economic growth on its own. Is it still the same at the age of postindustriality? Clearly, not.

Control over education quality and information distribution has become the key prerequisite for global domination in information networks and for leadership as such. It can also be treated as a means to avoid potential restructuring and instability. Opportunities and means of absolute control are reducing with every new year, and this is applicable to both public authorities and top management of transnational corporations.

Intermittent growth of education quality in the countries of catching-up economic development is happening on the background of lowering education levels in the countries which once were the initiators of technological progress. Many Western economists find this to be alarming (Moiseev, 2005). Back in 2010 nearly half of all full-time professors in the USA were ethnical Chinese, and 15% more were from India. Some people in the American society find this to be disturbing, to say the least. Encouraging this "brain drain" (which is actually "brain gain" for the welcoming country, strictly speaking) as a tool to maintain current and guarantee future intellectual leadership potentially has a wide range of hidden social problems for the receiving country. Some countries already realized that, thus limiting the migration of labour force, even highly qualified one (Privarova, Privara, 2016). For them, this might be the first step on the way to losing the title of high-tech and R&D centers. At the

same time countries-followers are still encouraging and welcoming this migration. Potentially, this one day may lead to nearly total “chinazation” or “indiazation” of technological sectors in many countries.

For the last 20 years, maybe more, China has been actively “pushing out” its most talented students for various internships in the USA, even encouraging them to stay for further longer-term contracts in American labs and research centers. This can be treated as Chinese counter measure on the economic expansion of the US, known as “brain expansion”. As a result, the “chinazed” science in the US very soon may be serving the interests of People’s Republic of China, rather than US themselves (Naisbitt, 2001).

In a very similar way are already behaving India, Russia and some countries of the Middle East, all of which are starting to “invade intellectually” using their excellently prepared specialists in many fields, from programming to film-making.

The West, still propagating global intellectualization and education technologies’ export, is basically depriving itself of the monopoly for preparation of highly specialized professionals. The major cause of this situation lays in the specific of information as a production resource, its inability to be fully consumed. Thus, intellectual leadership of the West became threatened because the West is already unable to stop these processes, neither even to hinder them. Permanently growing intellectualization demands stable supply of “fresh brains”, and this in turn promotes competition in the field of education, to which peripheral countries are also part of already.

Postindustrialism cannot remain stable also due to copyright issues, namely, the impossibility to keep the copyright for any intellectual product as such. As many scientists state today (Inozemtsev, 2000), intellectual property and intellectual rights do not promote development and growth, on the opposite, they hinder the progress. Today’s copying technologies and constant updates of the existing programs and devices as well as new opportunities for really cheap global distribution of all novelties online have finished the era of Western dominance in the field of technologies’ development. Copyright today, in a matter of minutes, can be shared with the millions of global citizens.

This makes all corporations pay extra for the protection of their copyright. Corporations are also forced to launch and promote their new products much quickly and globally from the start, and more importantly, all corporate R&D centers today are concentrated to the constant search for always new directions in further modernization. For the first time, since the Age of Discovery, the West is not establishing the rules of this game, on the contrary – today it is forced to adapt to the rules obtruded by the global periphery.

Finally, in the postindustrial age, obviously, only a postindustrial man can survive, and upbringing of this new type is a long and complex process, and in it, to everybody’s surprise, the casting vote belongs not to the initiators of postindustrialism, but to its followers.

Postindustrialism = Anthropocentrism

Today it is already clear that the society of consumption is unable to bring up the next generations, the postindustrial ones, because the latter are more flexible in their thinking, much more mobile in all sense, more ready for internal restructuring and are more able to re-evaluate the reality comprehensively and strategically.

The Western system of education as well as Western system of values have played their rather dramatic role for the many by destroying their “moral backbones” due to

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propaganda of today's pleasures as the top priority in life. Obviously, this could not have favourable preconditions for postindustrialism residents.

Actively propagated ideas about the supremacy of technocracy (Naisbitt, 1985) or netocracy (Kolin, 2001) as the only means to achieve and maintain global leadership are in fact only a weak attempt to cover the oncoming HR crisis on the West (Patlasov, 2016).

Of course, optimization of internal corporate interaction, liberalization of job responsibilities and all related regulations (including teamwork introduction and the like), flat structure of labour organization – all this indeed contribute to higher efficiency of corporate performance. However, even with this higher efficiency corporations today are unable to streamline their achievements and successes for the better of the society, more and more often they tend to work against the society, and even against themselves. Notorious corporate scandals in the USA and in Europe has indeed proved that technostructures are efficient, so efficient that dozens of auditors, policemen and intelligent officers have to spend months of their working time to investigate who is really responsible for fraud and losses worth millions.

A person with knowledge, information and skills accumulated as a result of long-term investments in oneself is the kingpin of the postindustrial era. Even the most efficiently built organization structure uniting feeding on mediocrity would not be able to substitute weeks or years of individual work by one really highly qualified professional (who can spend it, for example, on software or other innovation development). Thus, the key task of any postindustrial (or striving to be one) state is to provide conditions for bringing up postindustrialized members of the society, and the West, clearly, is gradually losing its capacity to perform this vital function.

Since the 1970s, economic growth as such became either accidental, or speculative in nature. The investment overheating of the knowledge industries caused the slowdown in many Western industries, therefore, a large share of industrial production has moved to China, India, Thailand etc. This, in turn, provoked a range of structural shift in the education sector development. Western education, previously oriented on the modernization of industries and agriculture, started stagnating (it simply made little sense for an American graduate who had spent five or seven years studying genetics, to go to China or Mexico for his/her field experiments and further work. Thus, American and Western overall students became choosing more appropriate for the familiar context majors, like Finance or Law). Simultaneously, peripheral countries got enormously huge practice grounds for testing new technologies which today are already global and well known. Enormous funds, once invested in the system of Western education, paradoxically lead to rapidly decreasing quality of this education, down to the level which was no longer able to support the local industrial productions (Pereslegin, 2006).

Further, this phenomenon has lead to critical staff shortages: highly intelligent production chains operating now in the US, Japan and some of the EU countries are constantly consuming more and more of arriving HR resources, while the education systems of these countries are not able to provide human resource even for traditional industrial sectors, let alone high-tech.

Obviously, this crisis is being solved by means of HR import. And this logically leads to the final serious problem which actually manifests in itself the threshold of postindustrialism and intellectual economy as such: civilizational identity of the West is getting weaker and its transition phase is accompanied by the engendering global cross-

civilizational conflict. And whatever would be the final outcomes of this conflict, it would eventually mean the fall of globalization as a strategy as well as the bankruptcy of the ideas of postindustrialism and intellectual expansion.

In the conflict (which may become partially or fully military) most probably the West will lose. As of today it is still trying to maintain its industrial leadership, for example, through dollar expansion or through excessive money supply provision, or by means of minimizing the refinancing rate to the absolute possible limit. But year after year it is getting more and more clear that it is losing the postindustrial supremacy, first of all, because it has already lost the quality of its education systems, attributing, in exchange, strong dependence on consumption imports.

The real sector of the economy, for example, in the USA has already proved to be rather inefficient when during the falls of USD rate in relation to EUR and other world currencies, American export did not only grow, but on the opposite, it continued to fall (Valensky & Kalyuzhniy, 2006). The society of consumption, already traditional for the West, was indeed able to create the postindustrial economy; however, it is not now able to maintain its own technological leadership within this postindustrialism.

Postindustrialism = Soft Skills Of Leadership

There are many potential tools and means to maintain the stability of today's postindustrial world and global economy. Among them, there are soft tools, for example, the policy of deepening intellectual expansion. And also hard ones, which could mostly serve to prevent the potential clash of civilizations, such as, limiting the freedom of information and technologies' transfer, reducing the role of states in the world economy and policies to its very minimum.

Deepening intellectual expansion is very much related to the notion of artificial intelligence which eventually would be able to perform the thinking function same as human ones, operating though not the individual knowledge base but the huge information resource base of the whole human civilization. In the longer term, cybermachines might be able to form this information resource independently, excluding humans from the very process of information production.

This wide range of interrelated inventions would reduce the demand of intellectual economy in highly qualified human personnel, since instead of dozens directions in modernization works only one would be left – related to the improvement of artificial intelligence. This would help the technologically advances states to solve the most important problems of postindustrial transition – the dependence on qualified labour imports along with the related social tensions in their societies due to migration.

However, an important question remains open here: where exactly will all these inventions be located? Will it still be the West, or Russia, India, China? There is a high probability that a major share of the related inventions would happen on the territory of the US, however, with active participation and engagement of Chinese developers. Therefore, there is also a probability that they would dedicate their discoveries to the Middle Kingdom, thus making it the technological superpower.

It is obvious already now that artificial intelligence is doomed to become the revolution in the world economy, policy and social life. And its further consequences are hard to predict, but it is already clear that the discovery of this size is quite comparable to the

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emergence of Hollywood or to the invention of Internet. It is indeed a guarantee of global leadership.

Artificial intelligence will become the tool for both virtual, but also real life expansion, since it is able to open hundreds and thousands of new directions and subsectors for its application. And of course, it will have millions of supporters as well as millions of opponents straight from the very beginning. Already now, actually, there are opponents among those people who think that artificial intelligence goes against all traditional values (of Islam, or Christianity, or democracy).

Globalization in this regard can be treated as the mechanism and an attempt to prolong the industrial phase in economic development, but as a result, it still ended in postindustrialism. Same can happen to artificial intelligence in the future: now it is often viewed as a merely a tool of postindustrialism, but later on it can provoke the transition to a new stage, with its declarations of cyberspace independence and Bills of robots' rights, for example (Barlow, 1996).

... and Other Tools of Indefinite Redistribution

Today we can clearly observe that the attempts to maintain the stability of postindustrial era are getting more and more harsh. For example, more and more instruments and tools are introduced and formally approved to limit the distribution of information. Regarding information a final solution is required for the dilemma: what is intellectual property actually? The engine or the deterrent of the world technological progress? High chances are, this dilemma would be solved in favour of the former.

World dissemination of information can be possible already today, due to availability of Intranets – the networks which have all the needed features of global web, but at the same time also having the absolute control of some sort of Moderator. This moderator is monitoring what sort of information is disseminated, its quality and also membership within a given network. We can imagine as highly possible the situation in which the traditional Internet would gradually become some sort of “information dump” (casinos, porn videos etc.), while truly valuable information resources would be redirected to corporate networks, intranets. Of course, these intranets would do their best to protect their intellectual potential and intellectual capital because for them, materials available within these networks are precious production resources and the security deposit for their global or regional leadership. The non-incorporated part of the humanity, in this case, would lose its right for quality information, therefore, any potential economic and/or social success would greatly depend on corporations as the owners of precious information resources.

Unlike today's worldwide web, the Intranet would be much less attractive from the viewpoint of commercial cost of cyberspace, due to reduced traffic, rather limited numbers of users and problems with free access. At the same time, Intranet impacts would be more targeted, more capable to establish stable and successful communication with rather limited numbers of users, but specifically those users which are needed and appropriate.

Obviously, Intranet as a phenomenon is interesting only for the companies which are 100% sure in their technological capacities and economic leadership. Moving nearly all their activities to such an Intranet (from the worldwide web), these companies are closing the door to their developments for many users, and at the same time they are also depriving

themselves from new knowledge on what is going on in the rest of the world, thus, there is a risk to lose valuable information.

Localization (in this context – leaving the Internet field) leads to the loss of access to always new information and updates, thus, the company is not able to secure its own competitive advantages anymore, is not able to guarantee long-term future technological leadership for itself. Taking into account the fact, that already today a larger share of software products are not of Western origin anymore, it is quite easy to imagine who would be the future winner in a potential “battle” between, say, Indian IT intranet and an American IT intranet.

Many years ago the West got the opportunity for global leadership due to Internet access which has served as a gateway to the needed intelligent labour force worldwide. But would it agree to abandon its hyper-presence online on the background of improving quality of the labour force in so many peripheral countries?

Of course, Internet abandonment in favour of multisystem information field would have both positive and negative consequences for economic leaders and also for the peripheral countries. And if under globalization the winner was often known long in advance, the collapse of information globalization and its transition to a new phase – that of information flows’ glocalization, clearly, does not assume any winner at all. Most probably, Intranet networks would be gradually created with a great deal of carefulness: just separate information resources, still within the Internet, would strengthen their borders and complicate their access, while still a larger chunk of information would remain easily accessible.

In any case, even the corporations’ attempts to introduce their own intranets would be a strong evidence that, first of all, globalization is bankrupt as a notion, including information globalization, and secondly, that we experience the beginning of the new rearrangement of the world, a transition to a brand new stage in civilizational development. And as the result of this transition, the humanity would be again divided, but not on the Global North and South, as it used to be, an and not on “golden” and “black” billions – totally new two global social systems would arise – the incorporated population and the one not incorporated. And the income gap between them would be not 7-9 times (as back in the 1960s), and even not 70-90 times (as in 2000), it would truly manifold. This new phase in the humanity’s development, of course, would have its own social, political and administrative crises, but their volumes and the time of their origin would depend on so many factors: starting from the appetites of global architects and ending with flexibility of the transformed societies and their social institutes, including the state.

Conclusion

Summarizing all of the above, we can state that the analysis of prospects in economic relations’ intellectualization on a global scale demonstrates there are several significant “failures” in today’s intellectual economic and in postindustriality overall. And these “failures” can really change the future structure of world production, world trade, and the principles of socioeconomic functioning of the world as such.

The formation of post-industrial innovative clusters models based on collaboration and reciprocal relationships of horizontal nature, will contribute to generation, reproduction, and active using of intellectual, scientific and technical resources, and will also serve as a

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prerequisite to accelerate the pace of socio-economic development and to improve living standards.

Despite the fact, that intellectualization of production relations is indeed the instrument of growth and higher efficiency which truly helps overcoming the dependence on finite natural resources, in a longer term it could also have quite negative, if not to say destabilizing consequences for the global economy. And these consequences are related, first of all, to the specificity of intellectual potential as a production factor, to the instruments of leadership maintenance under constant intellectualization, and finally, to the unpredictability of human behaviour, actually, since human is still the only owner, exponent and user of intellectual potential today.

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<i>Paper submitted</i>	<i>14 August 2018</i>
<i>Paper accepted for publishing</i>	<i>26 October 2018</i>
<i>Paper published online</i>	<i>30 November 2018</i>