

# NEW ECONOMY – NEW ANSWERS IN ECONOMICS

DR. ALADÁR NAGY

INSTITUTE OF ECONOMIC THEORY

## SUMMARY

*The ‘new economy’ thanks to the favourable coincidence of many factors took place in the USA first, and by the throughout the world accelerating globalizational processes it grew world wide in more respects.*

*The ‘new economy’ is such a complex economic system built on new technological bases, which can be characterised by an individual organisational structure and an operation on a global scale. Although the new system is very dynamic, the direct results of its operation are quite doubtful and its social effects are extremely exclusive. For example: the demands for labour forces are globalizing, but an intensive global demand appears only for special labour groups (professional elite). The national states are obliged to undertake the mission of global extension of the ‘new economy’.*

*The keyfactors of the operation of the ‘new economy’ based on the answers given to the challenges of the changed social-economic environment are the followings:*

- > information having high production costs and business value;*
- > the world wide webs giving the source of different information - that is the new infrastructure;*
- > continuous learning;*
- > increasing economic role of the state.*

*For the questions raised by these keyfactors today’s economics have not given radically new theoretical answers yet.*

The driving force behind the development of scientific theories is generally either the wish to resolve inconsistencies or the pressing impact of external circumstances undergoing changes. In the present case we wish to address the basic socio-economic changes which have evolved in the past 25 years and have forced economics to provide new answers.

The concept ‘new economy’ has become commonly known recently, although opinions as to its contents differ widely. We wish to join those who say that the ‘new economy’ (M. Castells, 2000)

- solidified primarily in the United States in the 1990s, on the basis of the widespread economic diffusion of the technological revolution starting in the early 1970s. Innovation appeared first of all in information technologies and in the financial sector, resulting in a dramatic growth in the productivity and competitiveness of the participants of the economy.

- The ‘new economy’ became established for the first time in the United States because it was there that the combination of technical/technological, economic, institutional and cultural factors developed which was required for the novelties to spread widely in the economy. Thus it was there that the great information technology breakthroughs took place in the production, distribution and management activities of a great number of companies. The USA held large domestic markets and dominant

positions in the global network of commodities and capital. The USA attracted capital and outstanding talents most intensively all over the world. The USA government was the first to deregulate economic activities, to break up monopolistic markets and liberalise the economy in general, which in turn facilitated a high level mobility of capital and a rapid dissipation of innovation processes. All these changes were added onto the favourable cultural features, entrepreneurship, active individualism, flexible economic behaviour and ethnical diversity.

We wish to emphasise that the ‘new economy’, while it solidified in the USA, became globalised in a number of respects world-wide between 1975 and 2000. Therefore it can be stated that it is an economic system based on new technology, which can be described by its own organisational structures (networks) and operation on a global scale. On the basis of the information and communication technologies, the productivity and competitiveness of the participants of the economy depend primarily on their capacity of how efficiently they can produce, process and apply various kinds of information. Both the main production, consumption and trade processes and their main components (capital, labour, raw materials, management, market, information and technology) are organised on a global scale according to the

diverse connections between the participants of the economy.

To sum it up, the 'new economy' as a historically new economic system is nothing else than a combination of the information technology revolution with the new knowledge basis of the economy in its basic economic activities in the framework of global network structures.

When the global feature of the 'new economy' is highlighted, we do not wish to fuse global economy with the concept of world economy. It is well-known that the world economy, i.e. the world-wide accumulation of capital, has existed since the 16<sup>th</sup> century, but it acquired a global character only at the end of 20<sup>th</sup> century. The current global character of the world economy is expressed by three basic factors:

- the particular infrastructure of the world economy, which has been created by the new information and communication technologies,
- the wide deregulation and liberalisation measures of the nation states,
- and finally the operation of efficient international financial institutions.

However, the global character of the 'new economy' does not mean that every move in today's economy is of a global character. Indeed, production and employment with a local or regional character and a large number of companies continue to be present everywhere and are there to stay. Essentially it only means that in the age of the 'new economy' the prosperity of a country depends on the performance of the globalised core of its national economy (financial sector, foreign trade, transnational production, modern technology and individual labour groups). Moreover, the strategic elements of the performance of the individual national economies have become mutually interdependent on a global scale. On the other hand, the same strategic elements possess technical, economic and institutional capacities that enable the participants of the economy to operate continuously in real time on a global scale.

It is a well-known fact that the financial sector operates continuously around the clock globally at present. This has been made possible by a combination of the following factors:

- new information and communication technology (high performance computers, interactive systems and telecommunications networks),
- the deregulation of financial markets,
- the introduction of highly mobile complex financial products (derivatives),
- increased financial speculation operations,
- companies applying global norms of accounting (qualifying foreign direct investment) (Standard and Poor, Moody's).

In the 1990s the process of globalisation accelerated not only in the financial sector but in production, trade and company management activities as well. This was mainly due to a dramatic increase in foreign direct investment (FDI), to multinational companies as decisive production factors coming to prevail and to the widespread establishment of international production networks.

These changes exerted a fundamental influence on the labour situation. It is well-known that in general the production increasing role of all technical/technological innovation depends basically on the quality of available labour and on the operation of the relevant institutions. This is the same in the 'new economy' as well. Moreover, the role of the quality of labour increases as a result of the new technologies being organised around knowledge-based information. Here we are talking about the acquisition of abilities to process symbols that are closely connected to qualifications and the social and cultural environment. The demand for new labour is, however, globalised selectively. Namely, intensive global demand arises only for labour groups that possess high value-added force. These groups include excellent financial experts, top managers, scientists and engineers with specialist expertise and qualifications, computer hardware and software developers, specialist advisers with substantial international experience. These labour groups as representatives of a global professional elite are able to generate extra income because they have become the crucial factor in the performance of global economic, telecommunications and political networks.

It is the global demand for such elite groups and the extra income they can generate that makes them mobile on a global scale. However, they only constitute a small fraction of the global labour supply. The absolute majority continues to remain local. At the same time, a virtually global layer appears here as well and it is interconnected through the global flows of production, money transfer, information and cultural values. In this way international networks of family, friendly, colleague and acquaintance connections arise while the individuals remain in the same place. Finally, the new information and communication technologies enable millions of people living and working in the 'space between countries' to appear as representatives of the digital culture.

As suggested earlier, the state was also necessary for creating the 'new economy'. The nation states' role was to direct the globalisation of the 'new economy'. They performed this role primarily through the deregulation of various economic activities, the liberalisation of foreign trade and investment and the widespread privatisation of previously state-owned companies. In the early 1980s some governments (those of the USA and Great Britain) promoted the new development through utterly conservative, free-market ideologies. They were concurrently nationalists and globalists, particularly in opening the financial markets.

The international institutions of globalisation (IMF, WB, WTO) grew stronger and stronger in the 1990s. They intended to impose their uniform programs composed on the basis of well-known theorems of neo-classical economics (a combination of increasing prosperity, prevailing democracy and decreasing poverty) upon possibly all the national economies of the world.

The essential involvement of the national governments and the above international institutions in the processes under examination highlights the fact that the 'new economy' of a global scale was created in a political way. More exactly, the new economic system was created not only by the markets in the classical way, but by the

interactions between markets, governments and international financial institutions while the latter acted in the name of market interests.

Accordingly, we can state that the driving force of the development of the 'new economy' is given by the new information and communication technologies and its structure is formed by the global production, trade and capital networks. The new system is very dynamic, but the direct results of its operation are highly uncertain and its social impacts are extremely exclusive. Positions acquired in the 'new economy' are constantly under attack, therefore maintaining competitiveness represents a constant challenge while the success of individual efforts is invariably uncertain.

Now the only question left is how economics reacted to the challenges of the changed socio-economic environment.

Naturally, we would think that the answers given by economics would be radically new.

Actually, this is not so. The first comprehensive work on the topic (Shapiro-Varian, 2000) starts from the basic assumption that essentially there was only a technological change, but the laws of economy themselves did not change. And those had already been described in details by mainstream modern economics.

The conservative answer holds that the new socio-economic conditions are essentially represented by the new technical foundations, the global networks intrinsically belonging to information and communication technologies, the changed market conditions and the new economic tasks of the state. And the operation of the new economy is based on three key factors: information (software), infrastructure (hardware) and human capital representing learning. The state plays a new role in creating the operational conditions.

**(1) Information** is the product of the economy based on new technical foundations. Information is anything that can be digitalised, i.e. can be encoded in successive information units (bits). The business value of information depends on the subjective evaluation of the prospective user. For the producer, information is a product described by its particular cost structure and competition.

The first production of information is expensive (high fixed costs), but its reproduction is very inexpensive (low marginal costs). As the basis of pricing is not the costs, but the subjective value-judgement of the prospective consumer, differentiated pricing has free scope as regards individuals, information types and consumer groups.

The high production costs of information are returned not on the basis of the maximum protection of intellectual property rights, but of maximising the value of intellectual property. Information is an 'experience commodity', which the consumer has first to acquire in order to fully appreciate its total value in use. Therefore the buyer is to be convinced to buy the information for the first time when he/she is not aware of its total usability.

**(2) The new infrastructure**, i.e. the world-wide networks serve as the sources of the different kinds of information. Its essential feature is that its individual elements can only be accessed and function as a system. This infrastructure means

a globally standardised context for the participants of the global economy who are either competitors or co-operating partners. Creating the world-wide networks involves substantial costs at individual, company and social level as well. It is also very expensive to shift from one particular network system to another. These high costs are compensated for by the effects of networks as externalities, which, after a long period of investment, reaching the critical mass of networks, result in an explosive growth in use relying on the positive feedback mechanism.

The information accessible in the global networks becomes mass products only gradually. Therefore initially, products tailored to meet individual consumer demands, and which have maximum use value, play a major role. The sellers are interested in setting prices that ensure that as large a part of the maximum individual use value as possible is financially acquired. The advantage of the first market appearance is present in benefiting from the well-known price differentiation over a relatively long lead-time. It has in its centre the various user units, the different varieties of the given information products or well-defined consumer groups. However, in price differentiation consideration is to be given simultaneously to the price sensitivity of the potential consumers, the externalities depending on the number of consumers, the extent of costs involved in getting used to a new product and the aspects of the rational division of various access sources.

Information accessible on-line and traditional information accessible off line compete with each other for the consumers. They represent two concept channels whose relation to each other may be exclusive, complementary or neutral in character. The outcome of the competition is determined by the ratios between the costs of producing the information in question and the benefits of convenience of use of the information.

The new digital technology changes the costs for the producers of the information content and the information providers. First of all copying and distribution costs show a dramatic decrease. New methods of the efficient management of intellectual property rights come to the foreground. Accordingly, the owner of new information will distribute patterns representing certain elements of the complete content free-of-charge widely, and then sell the complete content of the new information possibly at the maximum price. As for patterns, they are variety-forming strategies that ensure the commercial utilisation of the complete content through the simplified version accessible free-of-charge. But mention can also be made of the practice when the owner of the information is generous in surrendering the intellectual property rights to those for whom the information represents maximum value and are therefore willing to pay a high price for the different elements of the necessary information infrastructure.

A very peculiar element in the production, trade and consumption of information accessible through global networks is represented by lock-in. It is well-known that the replacement of any technology or product bought and used previously incurs substantial sunk costs. Experience shows that this is particularly true for information products. Therefore, in order to avoid the losses incurred by

replacement and shift, both the consumer and the supplier are bound to a particular information technology system.

The following kinds of lock-in are known according to the sunk costs of the various information products:

- Hardware
- Software
- Information and databases
- Search typical of mass markets
- Specialised suppliers
- And finally, loyalty programs (awarding long-time consumers).

The different kinds of lock-in represent basically non-remunerative costs both for consumers and suppliers. Therefore, when choosing an information product, one has to consider the prospective advantages of choosing a particular brand and the possible losses and costs incurred by replacing the brand later. This means that the essence of lock-in is evident in the fact that all our opportunities of choice in the future are limited by our investments today. To put it in a different way, the monetary extent of a lock-in today depends on the possible replacement costs in the future.

As has been mentioned earlier the **positive feedback mechanism** prevailing in the networking effects is a basic feature of the operation of typical 'new economy' networks. Moreover, the driving force of the dynamic operation of the new economy system is no longer the economy of scale characteristic of mass production, but the utilisation of the positive feedback mechanism.

Externalities whose development is regulated by the utilisation of the positive feedback mechanism appear both in the hardware and in the virtual (software) networks. Namely, the value of joining a given network depends on how many others have previously joined the same network. A larger network has value-increasing advantages over a smaller network whose exponential growth is determined by the number of consumers joining the network. Thus a self-generating process is started in the growth both of the number of people joining the network and of the network size.

While the positive feedback mechanism results in dynamic growth, it usually creates a monopoly position for some and leads to failure for others. In this way the dynamic operation of the network differentiates between the participants of the economy intensively, strengthening the position of those already in a strong position, and weakening the already weak, and finally excluding them. It is to be mentioned that the positive feedback mechanism appears in the 'new economy' also on the demand, i.e. consumer, side.

Works on the history of economy show that the global networks typical of the operation of the 'new mechanism' exert on the micro- and macro-economy influences whose internal dynamism is governed by the positive feedback mechanism. Accordingly, growth follows over time an easy-to-predict S-pattern, i.e. a period of slow initial growth is followed by an explosive exponential growth, which ends up in a state of saturation. The positive feedback mechanism

prefers large networks. On the other hand, consumer expectations regarding the future play a basic role in creating the critical mass (network size) required for the development of self-generating network externalities. They are, however, subjective and uncertain, and thus difficult to predict.

The great uncertainty characteristic of the 'new economy' is particularly conspicuous in the financial sector, which applies information and communication technologies on a large scale. Experience shows that the criteria of the market evaluation of economic activities have changed. Although the criterion of the traditional profit prospects has not disappeared from the scene, it is no longer the only aspect of evaluation. Recently new evaluation criteria of companies have gained in significance: goodwill, image, 'expected financial value'. The underlying concepts are no longer the fundamental real economy indices of the company but the trust placed in it and the expectations concerning its future. These are all subjective and difficult-to-measure criteria.

Companies that are able to combine traditional (profit, reputation) and new criteria (image, goodwill, financial value) are given the highest market evaluation.

At the same time the performance of companies, the development of supply and demand, the various interrelations between macroeconomic indices and different information sources are harder and harder to predict. The final market evaluation develops essentially according to random combinations of a multitude of different factors. Today the basis of economic calculations and investment decisions is no longer traditional profit expectations, but the increase in the 'expected financial value' of the company.

This is all about a new logic, which holds that creating economic value need not necessarily be embodied in material production. The most important thing is to acquire 'surplus expressed in money terms' by means of investment. Creating surplus, however, depends on the context. In today's context, in the 'new economy', creating value primarily results from the financial markets.

This means that in the framework of the 'new economy' information technology is directly present in the process of creating value based on our belief in the value we are going to create. Creating value is not, however, an individual, isolated activity, but the result of a system-type operation in networks.

(3) The constant learning represented by the **human capital** in the 'new economy' belongs to the core of any economic activity, since interactive learning in the networks, i.e. knowledge, is the sole long-term primary resource.

Éva Kocsis and Katalin Szabó (2000) therefore emphasise the fact that as compared to the school of thought of traditional economics, modern economic theory has to include the characteristics of this resource in its scope of study.

It has been found that learning is an evolution phenomenon, a dynamic process that can be interpreted only in time and cannot be described in terms of mechanical analogies.

Learning, being informed and the individual and group characteristics of decisions show a great variety and their long-term underlying regularities and patterns can only be explored depending on the prevailing socio-cultural context. These individual and group characteristics finally determine the added value creating capacity of labour. Therefore economic theory has to provide an answer to the relations between the value creating capacity and wages of labour under the new competition conditions.

(4) The answers given by the conservative economic theory emphasise the **role of the state** that is desired **in the 'new economy'**, first of all the importance of the appropriate state competition policy. The latter is based on three basic principles:

- Competition itself as a process is to be protected by the state;
- A monopoly position in a given period does not necessarily mean unfair competition;  
Everyday business practice cannot regularly clash with the legal regulation by the state.

In addition to determining the competition policy of the state, **direct governmental intervention** has a relatively wide scope. Within that, government measures that are justified in case of a collapse of the competition process and concern the management of the issues of prices, quality, the associations of various networks and getting into the market are to be treated as necessary evil. The role of the government in contributing to the networks reaching their critical mass for the positive feedback mechanism to start is to be considered as something entirely different. And finally, there is no doubt that government measures ensuring the introduction of services with a global character are generally beneficial. These can considerably contribute to widespread access to and the efficient operation of various networks.

To sum it up, modern economics has not yet provided radically new theoretical answers that give a realistic description of the socio-economic environment and the 'new economy' in the early 21<sup>st</sup> century. Therefore there are definite doubts concerning the explanatory and predictive force of the conservative answers. We still have to wait for the really new answers.

## LITERATURE

- [1] CASTELLS, M. (2000): The Information Age. Economy, Society and Culture. BLACKWELLS PUBLISHERS
- [2] SHAPIRO, C. – VARIAN, H.R. (2000): Az információ uralma. A digitális világ gazdaságtana. Geomédia Szakkönyvek. Bp. (in Hungarian)
- [3] KOCSIS, É. – SZABÓ, K.: A posztmodern vállalat. Tanulás és hálózatosodás az új gazdaságban. OM. Bp. 2000.

## Összefoglaló

Az „új gazdaság” számos tényező kedvező együtt hatásának köszönhetően először az USA-ban jött létre, a világszerte gyorsuló globalizációs folyamat révén pedig több vonatkozásban világméretűvé is vált.

Az „új gazdaság” olyan új műszaki alapokra építő komplex gazdasági rendszer, amelyet sajátos szervezeti struktúra és globális méretekben való működés jellemez. Bár az új rendszer igen dinamikus, működésének közvetlen eredményei meglehetősen bizonytalanok és társadalmi hatásai szélsőségesen kizárólagosak. Pl. Globalizálódnak a munkaerő iránti igények, de intenzív globális kereslet csak bizonyos munkaerőcsoportok (szakmai elit) iránt mutatkozik. A nemzeti államok kénytelenek az „új gazdaság” globális kiterjesztésének feladatát is átvállalni.

A megváltozott társadalmi-gazdasági környezet kihívásaira adott válasz szerint az 'új gazdaság' működésének kulctényezői a következők:

- > a magas előállítási költségű, üzleti értékkel bíró **információ;**
- > a különböző információk forrásául szolgáló világhálózatok, azaz az új **infrastruktúra;**
- > az **állandó tanulás;**
- > az **állam** növekvő **gazdasági szerepe.**

Ezen kulctényezők által felvetett kérdésekre a mai közgazdaságtan egyelőre nem adott radikálisan új elméleti válaszokat.

## Zusammenfassung

'Die neue Wirtschaft' ist durch die günstige Zusammenwirkung zahlreicher Faktoren zuerst in den USA entstanden, dann durch den weltweit beschleunigten Globalisierungsprozess in mehrfacher Hinsicht zu weltweiter Geltung gekommen.

'Die neue Wirtschaft' ist ein auf neue Technik aufbauendes komplexes Wirtschaftssystem, das von einer eigenartigen Organisationsstruktur und einer Funktionsweise in globalem Maßstab charakterisiert wird. Obwohl das neue System sehr dynamisch ist, sind seine direkten Ergebnisse ziemlich ungewiß und seine sozialen Auswirkungen extrem ausschließlich. Z.B. wird der Bedarf an Arbeitskräften globalisiert, es werden nur aber bestimmte Berufsgruppen (Facheliten) gefragt. Die Nationalstaaten sind gezwungen, auch die Aufgabe der globalen Erweiterung 'der neuen Wirtschaft' zu übernehmen.

In der veränderten sozial-wirtschaftlichen Umgebung sind die Schlüsselfaktoren 'der neuen Wirtschaft' wie folgt:

- > die kostenintensive und geschäftsrelevante Information;
- > die als Informationsquelle dienenden Weltnetze, dh. die neue Infrastruktur;
- > die Notwendigkeit des anhaltenden Lernens;
- > die wachsende wirtschaftliche Rolle des Staates.

Auf die durch diese Schlüsselfaktoren aufgeworfenen Fragen hat die jetzige Ökonomie vorläufig keine radikal neuen theoretischen Antworten gegeben.

## OROSZ