Globalization - challenges for economic policy

Prepared by

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Preface

"Economic Policy and Globalization" is an entry level course for bachelor students who are already acquainted with the basics of macro- and micro economics. Based on this knowledge about the main economic processes the course introduces the concept and main elements of regulation: institutions and policies. The main teaching material is Nicola Accocella's book "Economic Policy in the Age of Globalization". This paper serves as an amendment to this volume and describes new features in four different aspects that emerged since the last publication of the main textbook.

Lecturer: Prof. Dr Miklós Szanyi

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Course information

Course code: 60A406

Title: Economic Policy

Credits: 3

Type: Lecture

Contact hours/week: 2

Evaluation: exam mark (1-5)

Semester: 2nd or 3rd

Prerequisites: Macroeconomics (2 semesters), Microeconomics (2 semesters)

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Requirements

Written exam with 4 essay questions. The list of questions is provided in the first half of the course. Exam questions are random selected from the list.

Class attendance is not compulsory but recommended as well as continuous learning with the help of the textbook, handout, lecture material and the list of summary questions.

Grading:

0-50 % fail

51-60 % pass

61-70 % satisfactory

71-84 % good

85-100 % excellent

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Learning outcome of the course:

The objective of the course is to enable the students to form and defend their – well-founded – individual opinions on actual issues and debates of economic policy.

a, Regarding knowledge, the student must have a clear idea of the basic concepts of economic regulation and the role of its institutions, will have information on the process of economic policy making.

b, Regarding competences, the student is expected to identify the potential impacts of various economic policy tools on business conduct and nexus among stakeholders.

c, Regarding attitude, the student will have a general overview of the main macroeconomic processes and understand the broader social and economic background of various economic policy measures in concrete cases.

d, Regarding autonomy and responsibility, the student will have the background information to understand the rationale of policy measures and will be capable to actively react utilizing opportunities and defending threats.

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Table of contents

Introduction 7
Main trends of globalization 9
Financialization – corporate governance and capital markets 19
The Enron case 20
The 2007-8 financial system meltdown 23
Economic policy challenges of financialization 27
Digitalization – new business models 30
The case of transfer pricing 33
New round of tax optimization: the case of digital business 36
The current stage of economic policy challenges posed by digitalization 40
New developmental state – economic patriotism 42
The developmental state concept 43
Changing the role in global value chains – economic patriotism 46
The new toolkit of industrial policy 50
Sustainability - global policy coordination 54
Climate change 55
Social sustainability: the UN Millenium Development Project 57
The future of internationally coordinated policy actions 60
References 62

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Introduction

Economic policy concepts have undergone perpetual change over the modern history of capitalism. The advance of economics as science as well as the progress in the economy both influenced the principles of economic policy. Obviously, priority should be attached to general economic development. The concrete ways of doing business, various combinations of social labor division and their organizational frames, the advance of international trade, capital and labor flows, the introduction of new technologies, organizational and social innovations fundamentally shaped the ways how the state as regulator has treated the economy. The complex socio-economic development process always called adequate response, reconsideration of economic institutions and regulation: economic policy. These processes simultaneously influenced economic thinking. Economists wanted to understand and describe in the best possible models the functioning of economic systems. But their understanding has always been influenced by political and business interest groups. Therefore no such neutral and clear scientific approach could be developed as in natural sciences, although several of the competing schools of economic thought claimed this ambition.

The basic areas of economic policy as well as the main regulatory bodies and institutions have been developed gradually based on the best practices of developed market economies. This "mainstream concept" is described in most textbooks and delivered in higher education. However, just like in the case of economics there have been alternative economic systems. The most fundamental competitor of the mainstream capitalist model was the centrally planned economy of the socialist countries. But there have been many different concepts of the market economy itself. The "*Varieties of Capitalism*" literature describes rather important differences in the socio-economic environments in such influential countries like Japan, India, Russia or most importantly China as compared to the mainstream liberal market economy concept. Obviously, the functioning of these models cannot be influenced in the same way as it is usual in liberal market economies. Hence, the applicability of mainstream economic policy instruments may be limited in these cases, or they can even act

in fundamentally different ways as expected by policy makers. An important lesson can be highlighted already here: textbook cases of economic policy do not exist in their pure form in practice. Economic policy may rely on general knowledge about the economy but it can never dispense with the fine tuning of the applied toolkit.

The subject of alternative socio-economic models and even the topic varieties of capitalism is discussed in special volumes and university courses always in comparison with the "mainstream" base model of capitalism. Thus, even if we would like to make excursions in rather exotic systems, the starting point is always the base model. The aim of this study is to collect information about most current changes and challenges on four broader areas of the base model that are attributed to the process of *globalization*. For by no means should even the textbook model of economic policy be regarded as a fundamental wisdom that serves without amendments and changes forever. The main idea is that after a longer, rather unchanged and smooth period of economic policy practice (the era of the "*great moderation*") the process of globalization posed new challenges for policies. These challenges require a fundamental recalibration of policies in a variety of fields ranging from corporate governance, going through fiscal policy to industrial policy. The highlighted challenges call for adequate policy actions. These should be undertaken by governments rather than analysts. Therefore, no clear solutions are provided in this text for any of the tackled areas. Whenever there have been new initiatives to master the problems I will provide the necessary information.

The paper is organized as follows. After the introduction the *trends of globalization* are briefly introduced that altered the socio-economic framework of the capitalist system and generated serious tensions with the existing organizational, legal and policy structures. Then in four successive parts four main problem areas are discussed. First the impact of *financialization* is analyzed on two distinct fields: corporate governance and the regulation of financial markets. The second main trend is *digitalization*. Digital technologies fundamentally alter business models. These challenge a variety of policy areas. The legal frames of digital business conduct cannot be identical with the frames of arm's length transactions. An especially exposed area is tax policy. But the fundamental technology changes

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always provide opportunities of catching up of emerging economies. This is the case also today. Thus a third important policy challenge is the role of state in shaping economic processes. The old topic of industrial policy and more broadly the *developmental state concept* needs to be reconsidered. The fourth area is *sustainability*. This is a relatively new phenomenon especially in the field of economic policy. The issue of global public goods (bads) is fundamentally linked to the problem of international policy coordination.

Main trends of globalization

The *process of globalization* has been defined and described in many ways ranging from the hyper globalist view to skeptical internationalists (see Dicken, 2011, pp. 4-6). Following *Dicken*'s argumentation what is new and what is relevant from economic point of view in globalization we can construct a rather lax *definition* of the phenomenon. From the business and economic policy point of view globalization is a complex socio-economic process in which both the degree of functional integration of economic activities increases and their geographical spread boosts to global levels thus creating a complex web of interconnected actors (producers, consumers and intermediators), markets, institutions and regulations. The main highlight of this definition is the understanding that we deal with a process that increases *global interconnectedness* and integration of the world economy including all of its constituting elements. As we shall see the increased complexity does not merely mean quantitative increase of transactions but more typically also qualitative changes in the connections of these elements (e.g. new business models).

The most obvious change is growing interconnectedness of actors and of course also countries. While the main carriers of interconnection of the 20th century were *trade transactions*, they were later complemented by massive *capital flows* also in the form of foreign direct investments. But the main carrier of interconnectedness in the 21st century is *cyberspace.* As Dicken discusses, yes geography still matters. We still live in separate states and the world government is not likely be established in near future. Yet, states are losing control over a massively growing part of the world economy which is only loosely connected to geographic locations. It is not difficult to foresee that the existence of cyber business requires institutional innovations and innovative new policies that can establish adequate and secure working conditions for this new type of business conduct.

Yet, of course, the globalization process also means significantly changing trends in the size and content of global trade and capital flows. This also needs adequate policy response since in many cases even these transactions induce major qualitative changes. The growing interconnectedness of the world economy is illustrated by the fact that world trade has always been growing faster than world GDP. From the 1980s onwards FDI grew usually even faster than trade, though capital flows proved to be more volatile. The *composition of world trade* also changed fundamentally. Instead of finished products components and spare parts' trade boosted, and the role of intra-firm trade also grew very significantly in world trade. This is all the result of the establishment of *global value chains*, a segmentation and global circulation of various segments of multinational firms' value chains.

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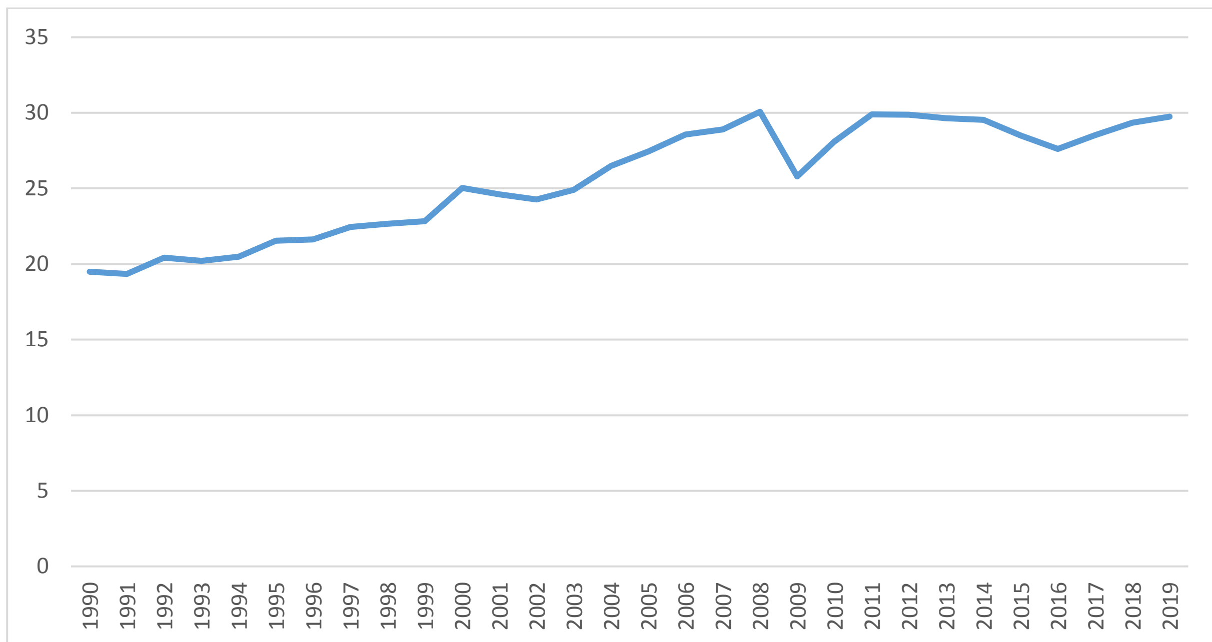
Figure 1. World average levels of imports of goods and services as % of GDP weighted by GDP



Source: World Bank (2020)

Taking a look at the figures of imports and investments we can observe a slowdown of the processes. The 2008 crisis broke the ever increasing trends of world trade and investments. *Witt* (2019) interpreted these changes as a major shift in the principles of international labor division: a first sign of *de-globalization*. He advocated a declining influence of the United States of America that would result in the weakening of the American style (liberal) globalization process. He also assumed that the rise of China as global power would reinforce the development of new types of power and labor division patterns. These could be characterized by other processes than increasing trade and investment flows. However, what we can see especially in case of the trade figures is not a marked decline of trade but a kind of levelling off. Also, I do not see a shrinkage of foreign owned assets in the world but a slowdown of new acquisitions. Hence, the already established global labor division patterns did not lose weight and importance, but their spread slowed down. I agree with Witt that the rise of another economic superpower may alter the international economic relationships creating two maybe even *more power centers*. Nevertheless I do not think that the

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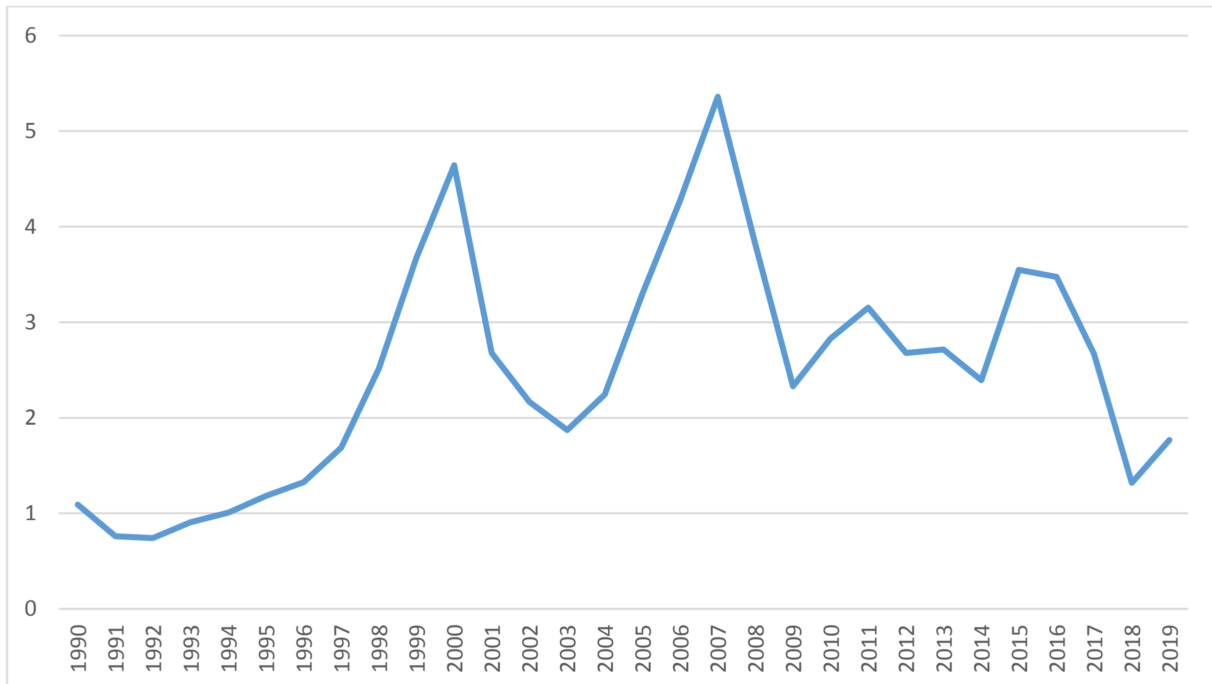
kind of deep labor division pattern which proved to be extremely efficient economically will fundamentally change. Interconnectedness may concentrate on regional hubs in the future rather than on global reach.

Figure 2. World average levels of inward FDI flows as % of GDP, weighted by GDP



Source: World Bank (2020)

Growing interconnectedness was complemented by the increasing role of services both in production and international trade. Technological development increased productivity of traditional sectors to very high levels. Developed countries' agricultural sectors are capable of supplying food in excessive amounts. The productivity gains in this branch have been achieved already in the first half of the 20th century. But the same happened to the manufacturing industry in the second half of the century. Production volumes reached excessively high levels with relatively little use of production inputs, most notably labor. Redundant labor and capital was used in the *tertiary sector* that saw exceptionally quick development during the late 20th century.

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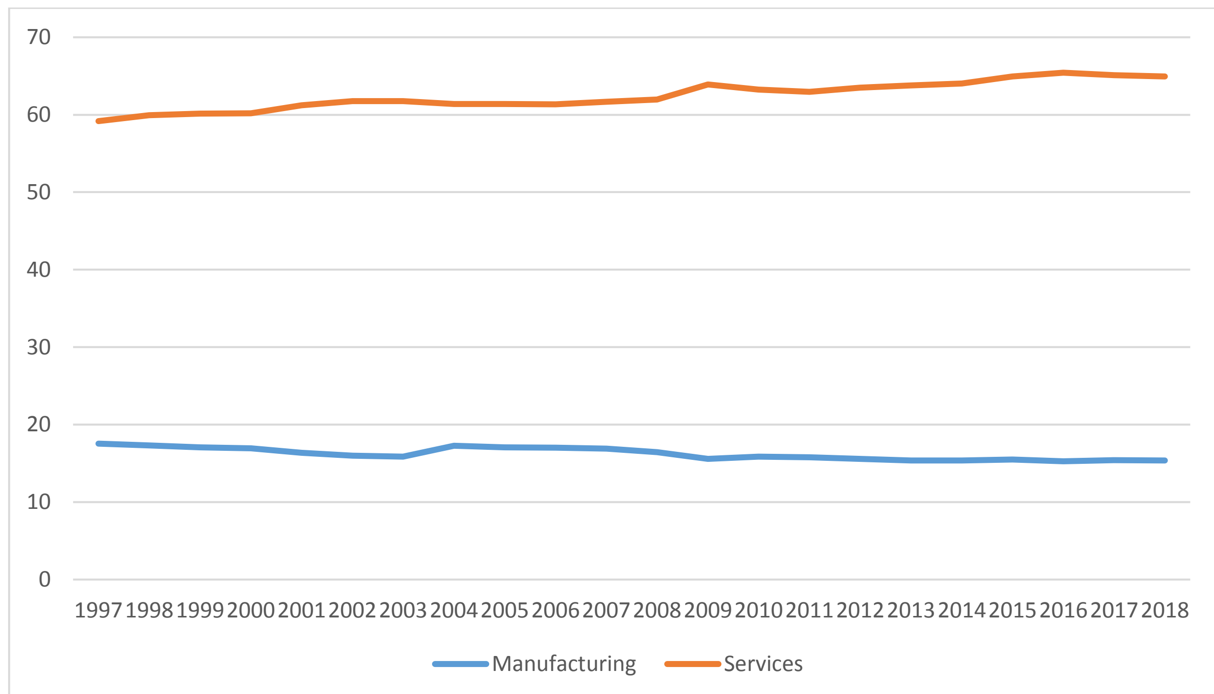
Figure 3. World manufacturing and services value added as % of total GDP



Source: World Bank (2020)

Trade and investment flows increased in size and changed their commodity structure. But also the *main directions of the flows* altered. Up till the 1960s the overwhelming majority of commodity flows was conducted between developed countries (specialized in manufactured goods) and developing countries and colonies (specialized in trade with basic commodities). This pattern changed not only because the historic version of the centrum-periphery relationship was disbanded and replaced by a new more indirect and economically determined dependence. Trade and capital flows in this relation have been outgrown by *flows among developed countries*. An important feature of globalization was the deepening specialization of developed economies. This process was launched by a number of important technological changes that made the global conduct of business more safe, reliable and accountable. The process was also fueled by increased liquidity of firms and capital markets that was accumulated due to reduced production costs. Later, after the millennium also new countries entered the process. Today *China* became one of the most significant investors of the world

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economy. But another dozen of successfully industrializing countries also increased its economic power. Since most of them are located in Asia, we can observe a gradual shift of economic power from the transatlantic region towards Asia.

The successful expansion of the *Asian tigers* (for example South Korea, Taiwan, Singapore) as well as China was based on the processes of globalization. They were able to invest massively in quickly expanding economic branches but also in the modernization of their business fundamentals. Productivity gains in agriculture produced excessive labor supply, smart professional state bureaucracy concentrated national resources to cleverly chosen development targets, national infrastructure (including human development) became high priority. Strong state influence in shaping economic structure was carried out in export oriented manner. National champions soon became strong competitors on boosting global markets of electronics and car industry. In this sense one important factor of their development success was their deep integration in the globalizing world economy. But of course, the traditional players also expanded their economies towards quickly grooving markets.

Be it competitive firms' own decisions or state bureaucrats' orders to national champions, global firms utilized a number of interlinked *technological and organizational innovations* that enhanced the global reach of markets and production resources. These innovations created the fundamentals of the fifth, digital *Kondratiev wave* that facilitated the globalization process. The pervasive use of microelectronic devices is at the base line of most innovations in the period. Most important was the development of the twin technologies of data processing and communication that merged in every days' gadgets in the 1980s. These devices enabled production designers to digitalize the whole production process from market orders through product and production planning up to sales and after sales services. The whole value chain is controlled electronically. This increases productivity because of cheaper management and more efficient production planning (lean production). But productivity gains are also achieved through automatization.

The *digitalization of the production process* triggered also qualitative changes. The application of electronic production tools allowed *modular design of products*. Complex goods like automobiles,

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computers and other electronic devices are composed of functional modules. These are designed to fit industrial standards and are therefore interchangeable. Every module can be produced in many versions, yet, they all can be fitted into the complex final product. A good example for this is the PC that consists of various functional cards that can be fixed in the computer box and linked together. The final product therefore can incorporate rather different cards that may correspond to specific consumer needs. Modular production combines therefore economies of scale and scope: while the production of the cards is efficient mass production, the variety of final products is large giving the opportunity of satisfying different consumer needs.

Modular production has further advantages relevant to the globalization process. If production can be segmented that is the various parts of a product are interchangeable and produced in specialized production platforms, then these platforms can be set up in spatially different locations. *Production segmentation* gives the opportunity to separate capital and skill intensive parts of the production process (or the whole value chain). These can be then allocated to places where the composition of production inputs is advantageous for the given specialized activity. Production segmentation and the component-level specialization of factories located at globally optimized spatial position provides enormous opportunities of cost reduction. Yet of course, the internationally segmented production process must be conducted smoothly.

Smooth global operation has been facilitated by various further innovations. *Container shipping* enabled firms to accelerate transport logistics on global scale. Efficient *communication networks* secure the effective control over the processes of the whole value chain. It means not only personal overview, but increasingly digital control. Just like in the case of factory automatization and the use of intelligent robots that can correct production malfunctions, electronic control of the sales process means a similar automatization of the material flows within the company. This type of control enabled the development of *just in time systems* in production but also the efficient warehouse supply of electronically interlinked retail outlets. Sales, inventory changes, delivery orders and depot management is all controlled and optimized by interlinked

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smart computers. Also in retail trade we can see enormous productivity gain potentials.

The segmented production and component-level specialization called for *organizational innovations.* The vertically integrated large conglomerates that were typical for the bulk of the 20th century were gradually dissolved. Concentration on *core competences* became the key to increased global competitiveness. Many segments of the value chains were outsourced and later also off-shored. The value chains were organized in a network-like fashion. The strategically significant activities and product components were either kept in house or transferred to the companies' affiliates (off-shoring when abroad). Less important components and activities were outsourced, bought from independent vendors either domestically or in foreign countries. The least important items are purchased in arm's-length transactions on the market. The purchase of more substantial and strategically significant products is carried out in the frames of long-term cooperation agreements or strategic alliances. Thus, multinational firms have organized a *double network of suppliers*: an internal and an external one.

Last but not least the legal frames of international transactions' smooth conduct must be granted. This policy-related condition was also provided with the widespread *liberalization process* in the world economy starting with the activity of GATT (World Trade Organization). The elimination of most trade barriers, the introduction of international standards as well as the liberalization of the capital markets of the developed countries were all necessary changes enhancing the internationalization of business. Here again we see more than mere quantitative change in the number of trade restrictions or the level of tariffs. These changes reduced administrative barriers of global business conduct and simultaneously also provided "standard home working conditions" for global business. Or at least they reduced the costs of "foreignness".

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Special attention has to be devoted to the *internet*: the "skeleton of cyberspace". This is due not only because the internet revolutionized the communications sector and made obsolete a huge swathe of conventional communication methods. It created a new resource base for the economy: globally available data. Many state that the primary resource of future businesses will be the "*big data*". It will lead us into the next economic paradigm based on intelligent data processing through artificial intelligence and global cyber business models. The use of internet and the *world wide web* has already altered several social functions in the area of communication. Since the first implementation of internet in 1977 that linked specialized academic computer networks the number of internet users reached 4660 million people or more than half of world population (Statista, 2020).

Most of business communication is now conducted via the internet and millions of persons use e-mails as preferred communication means. The merger of data transmission and communication systems provided new communication methods that are transmitted through the internet. Mobile communication solutions like Wiber or Whatsup facilitate portable video devices that transmit all kinds of digitalized data including motion pictures and sound. At the same time the internet provides access to a colossal amount of information through the world wide web. There is no doubt that the application of internet-based mobile access increases and more and more physical objects are connected to it. Real time information is used for all kinds of activities without spatial limitation. However, it also became obvious that the system can be used for good and bad. Limitless spreading data and information can be easily manipulated. It can be also stolen or falsified. Thus, without effective regulatory control global data flows became also primary sources of uncertainty sometimes even dangers.

Electronic mass media is another invention that fundamentally altered the way of living for many. The unlimited spread of information in the world empowered mass media not only because of their immediacy but also because they do not require the high level literacy of books and newspapers. The electronic media is particularly important in making people aware of various events around the world. This is again very important politically but also commercially. Global markets can be served through spreading sales information

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worldwide. The electronic mass media are powerful means of spreading information and also of persuasion. Since TV is the first mass medium everywhere in the world it can deliver among many types of messages and information also commercial ones. Commercial advertisement is an important feature of most media networks all around the world. It is especially strongly used by heavily advertised branded products of multinational companies.

Though new technologies in transportation and communication have transformed space-time relationships everywhere in the world, the outcomes are immensely uneven. Not all places are equally connected. Not all places benefit from growing interconnection. The spread of the networks prefer investments in places where the returns are likely to be high. Certain communication routes are reinforced at the global scale and simultaneously the significance of their nodes (cities and countries) also increases. For example, the use of internet is very uneven globally. Domain name registrations concentrate in just three countries (USA, Britain and Germany). The USA has alone one third of the world total (Dicken, 2011, p. 94). The uneven development provides a new dimension of centrum-periphery relationship: the digital divide. This also means that special aspects of development continue to matter even if the world wide web provides unlimited global access to information.

Questions:

Please define the process of globalization!

How can we measure growing interconnectedness in the globalization process?

Please analyze trade and FDI statistics of the 1990-2020 period!

How did the structure of world trade change in the 1990-2020 period?

What were the major innovations that enabled the segmentation of the value chains?

How did the appearance of the internet change communication systems?

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Financialization – corporate governance and capital markets

One of the most apparent trends in the global economy is the rapid development of financial capitalism after 1980. An important measure of the process is the steady increase of the share of financial services in the national income. This increased in the USA from 2 % of the 1940s to over 8 % by the early 2000s. The increasing share of financial intermediaries in the total stock of national assets provided them the opportunity of expanding *control over non-financial firms*. This expansion could take place in the form of excessive lending. The debt-to-equity ratios increased substantially in the global economy providing more *creditor control* over corporate activities. Another form of financial expansion was also linked to the increased level of financial assets. These were invested in corporate shares increasing the direct presence of financial institutions in the ownership pattern of non-financial organizations. This tendency is also called "*the shareholder revolution*", a process that increases the significance of financial indicators in corporate strategic decision making of firms at the expense of the aspects of commodity production. In 1978 US commercial banks held a stock of 53 trillion USD which was equivalent to 53 % of the GDP. By 2007 this level increased to 84 %. Investment banks (securities brokers) held 33 billion USD in assets (1,3 % of GDP) in 1978. They held 3,1 trillion (22 % of US GDP) in 2007. The type of assets (CDOs) that triggered the 2007-8 crisis were practically non-existent at the end of the 1970s. Their stock comprised 4,5 trillion USD by 2007 or 32 % of the US GDP (Johnson and Kwak, 2010, p.59.).

Another aspect of financialization is the increased intermediation role of financial assets in economic exchanges. Financialization may allow real goods, services and risks to be readily exchanged for currency. This increases the monetization of the economy that helps firms and people better rationalize their assets or incomes. Yet another aspect of financialization is the increasing and sometimes overly *exaggerated leverage of personal incomes*. Credit purchasing became the norm for a large variety of commodities first in the USA and then in most developed countries. *Excessive consumption* creates a number of problems in some non-economic fields like waste accumulation, pollution, changing

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demographic trends, etc. But it can also increase the financial vulnerability of families creating personal problems on a mass scale.

Instead of describing the various further aspects of financialization I will use the *broad definition* that was provided by *Gerald Epstein*: "Financialization refers to the increasing dominance of financial markets, financial motives, financial institutions, and financial elites in the operation of the economy and its governing institutions, both at the national and international levels" (Epstein, 2001). Increased financialization was induced by the *rise of neoliberalism* in the late 20th century. Various academic theoreticians of the period worked out theoretical rationalization and analytical approaches to facilitate increased deregulation of financial systems. The fundamental general problem with the process had been addressed by Reinert and Daastol (2011): "In the United States, probably more money has been made through the appreciation of real estate and other assets than in any other way. What are the long-term consequences if an increasing percentage of savings and wealth is used to inflate the prices of already existing assets, real estate and stocks, instead to create new production and innovation?" Damaging repercussions of the process are illustrated by two case studies. In the Enron case we can see how *corporate governance* institutions lost control over corporate management creating dangerous moral hazards that led to the collapse of a giant American company. In the case of the 2007-8 global financial crisis increasing default rates in a relatively tiny segment of the US housing market triggered devastating processes in the *global financial markets*.

The Enron case

The Enron scandal was perhaps the most outrageous firm level anomaly in connection with the increasing financialization of the world economy. It was a chain of events that resulted in the bankruptcy of one of the largest US energy services companies as well as the dissolution of *Arthur Andresen LLP*, one of the most influential auditing and accounting companies of the world. The *collapse of Enron* resulted in the virtual elimination of its assets worth of 60 billion USD (Bondarenko, 2016). As a consequence much debate was generated how to improve accounting standards and

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capital market controls. It also caused long-lasting repercussions in the financial world.

The company was founded in 1985 by Kenneth Lay in the merger of two large natural gas transmission companies. The firm started exceptionally quick growth when the US Congress *deregulated* the sale of natural gas in the early 1990s. From then pipeline owners had to share the usage of their infrastructures with competitors. Since the monopoly of transmission network was banned specialist intermediators could enter the market. These were companies which bought and sold various energy products very much like a *speculative stock exchange forward transaction*. Following the advice of Jeffrey Skilling Enron transformed in this period from gas supply company into a trader of energy derivative contracts. The firm acted as intermediary between natural gas producers and consumers. Enron took over the contractual risks of commodity price fluctuations from the producers. Fixed term contracts were conducted. Enron soon dominated the natural gas contract market and the company generated huge profits in the new role.

After becoming Chief Operating Officer Skilling also changed corporate culture to emphasize *aggressive trading*. He created competitive environment in the company, in which the focus of activities became closing as many revenue generating contracts as possible within the shortest time. The primary focus was on increasing the size of corporate turnover: an important indicator for the orientation of shareholders. ENRON capitalization increased fast. A fresh recruit Andrew Fastow soon became chief financial officer. He directed the financing of the company through investing into complex financial instruments while Skilling organized the firm’s vast trading operations. Chief executive *managers received bonuses in corporate shares* thus becoming significant owners of the company. The applied corporate policies created not negligible *moral hazards* since managers remuneration depended solely on share prices.

Booming natural gas market helped fueling Enron’s rapid growth. The company tapped all business opportunities and contracted everywhere where there was anything that anyone was ready to trade. Primary focus was steady increase of corporate turnover. Profitability of deals, management of high risk contracts were of secondary importance. Enron share prices

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continuously grew. The firm traded derivative contracts for a wide range of commodities, not just natural gas and energy products. Enron also invested in building a broadband telecom network to facilitate own high-speed trading. The firm became America's most innovative company in the 2001 Fortune award, and "energy company of the year" in Financial Times' 2000 list.

The boom was followed by a bust period in the energy trading business, and the company's profits shrank. Under the pressure from shareholders (see: *shareholder revolution*) chief executives started dubious accounting practices to hide troubles. For example the so called *mark-to-market accounting* technique allowed the company to incorporate in the current income statements unrealized future gains from trading contracts. This gave the illusion of higher company profits. Risk management was mastered also by accounting techniques. Troubled operations were transferred to so called *special purpose entities* (SPEs), that is limited partnerships with outside parties. Though the use of SPEs was a general practice of large firms, Enron misused the practice when using SPEs as dump sites of troubled assets. Troubled assets were thus effectively removed from Enron's primary books improving the financial result of the firm by moving loss-making and high risk assets into the consolidated income statement. The aim of these practices was maintaining a false positive image of the firm that kept share prices high. In the invention of the accounting tricks the consulting firm Arthur Andersen played a role. Yet, the same firm also served as Enron's auditor.

The real financial situation of the firm became more apparent by late 2001 when analysts began to dig into the details of Enron's public financial statements. The Securities and Exchange Commission (the supervisory organ of the US stock exchanges) was also investigating the transactions between Enron and its SPEs. Soon the fraudulent usage of the accounting devices was discovered. As a consequence share prices were falling back rapidly to a mere 1 % of the peak price by the end of 2001. Since Enron employees' pension savings were also held in Enron shares, they also went bust. CEOs of the company tried to sell their share packages just few days before the collapse of the firm.

Figure 4. Enron Share Price, Jan 2000-Dec 2000

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Source: BBC (http://news.bbc.co.uk/2/hi/americas/1758345.stm)

The three chief executives were indicted on various charges and were sentenced to prison. The consulting firm Arthur Andersen lost reputation and together with it the majority of its clients. It was forced to dissolve itself. Not only federal lawsuits but hundreds of civil suits were filed by shareholders against Enron and Arthur Andersen. As a consequence of the scandal a wave of new regulations were designed to increase the accuracy of financial reporting of traded companies. Most important was the *Sarbanes-Oxley Act of 2002* that imposed harsh penalties for falsifying or manipulating financial records. The act prohibited auditing firms from doing consulting business for the same company.

The 2007-8 financial system meltdown

While some defects of *corporate governance* institutions were lifted with the new regulation other hazardous aspects of financialization remained untouched. Some of them even worsened during the *deregulation wave* of the 1980s and 1990s. Following the 1929-33 Great Depression regulation of financial services were tightened in the US. The *risk of bank runs* had to be

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reduced. Speculative transactions were not much curtailed, though bank supervision authorities controlled the day to day activities of the financial institutions worldwide. In the US the main security device was the institutional separation of the collection of savings and financial investments (the *Glass-Steagall Act of 1932*). Banks had to specialize on either part of the main financial process (allocation of savings to profit making investments).

However, the *1999 Gramm-Leach-Bliley Act* repealed the affiliation restrictions. Up till then regulation created a sense of accountability among investors discouraging them from high risk transactions. Without formal protection investment companies felt at liberty to engage in unscrupulous investment tactics. Lax regulation allowed *predatory lending*. This change in regulation and bank behavior fundamentally contributed to the outbreak of the 2007-8 financial crisis. Excessive risk-taking by banks was combined with the bursting of the US real estate bubble. This caused the plummeting of US real estate based securities' value that damaged financial institutions globally.

Connectivity of national economies played an important role in the world-wide spread of the production and trade crisis during the Great Depression. At that time connectivity meant intensive trade relations and production specialization, especially among larger developed countries and their colonies or dominions. By the time of the *2007-8 financial crisis* connectivity reached out to many other areas including *global capital markets*. In capital markets the process of *securitization* spread out to various kinds of financial liabilities. Securities became the general purpose financing vehicle for all kinds of claims: corporate bonds, mortgages and others. Derivative securities transform instruments of hedging and risk management to freely transferable and widely traded assets that are also *exposed to futures speculation*. Through *securitization* the control link between lenders and borrowers was extended. Transactions became less controllable and transparent. This is a crucial new feature that helps understanding how financial market imbalances of just one country could spill over the entire global economy. To understand the mechanism we need to describe how some financial innovations of the 2000s work.

Collateralized debt obligations (CDOs) are structured asset-backed securities.

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They became vehicles for refinancing mortgage-backed securities especially in the USA. The CDO is a classic financial derivative. It promises to pay investors in a prescribed time sequence on ground of the *cash flow* that the CDO collects from the mortgage backed assets it owns. It is thus a vehicle that bridges the expiration distances of long-term mortgage claims and shorter term investment demand. The CDO credit risk is assessed by the probability of default stemming from the mortgage bonds. This risk is persistent, thus, designers of the CDO paid attention to create necessary *risk buffers*. The CDO is sliced into tranches. In case some loans default and CDO does not generate the planned amount of cash flow the security is not able to pay all of its investors. In case of losses premium tranches are paid first, junior tranches last, if at all. There is also a capital reserve tranche held by the issuer of the CDO. The size of this buffer equals to the projected amount of default claims. Coupon payments and interest rates vary by tranche. Lowest tranches receive the highest rates to compensate for the higher default risk.

CDOs are issued by specialized branches "*special purpose entities*" of the financial institutions. As the CDO market developed some institutions repackaged tranches into yet another iteration mixing up several types of claims (e.g. corporate bonds and mortgage loan bonds). Though default calculations remained stable and the corresponding design of the CDOs correct, the excessive liquidity of the capital markets during the early 2000s increased *risk hunger of investors*. Demand for high risk high yield CDOs increased. This meant that the CDO collateral backing became dominated by higher risk tranches recycled from the primary asset backed securities. The share of *subprime mortgage* based collateral increased in an increasing amount of CDOs. This increased the default risk of these securities. Moreover, since developed market economies fully liberalized their capital markets risk hungry investors from the banks of many countries lined up to buy high risk CDOs. The assets were accumulated in countries with well-developed financial markets. Besides US banks also many European banks accumulated much from the *"exotic" assets* as they were called at the time. With the collapse of the US mortgage market and increasing actual default of the derivate CDOs global panic broke out. Investors realized that their "exotic" assets turned to *"toxic assets"*, and tried to get rid of them. Herd behavior

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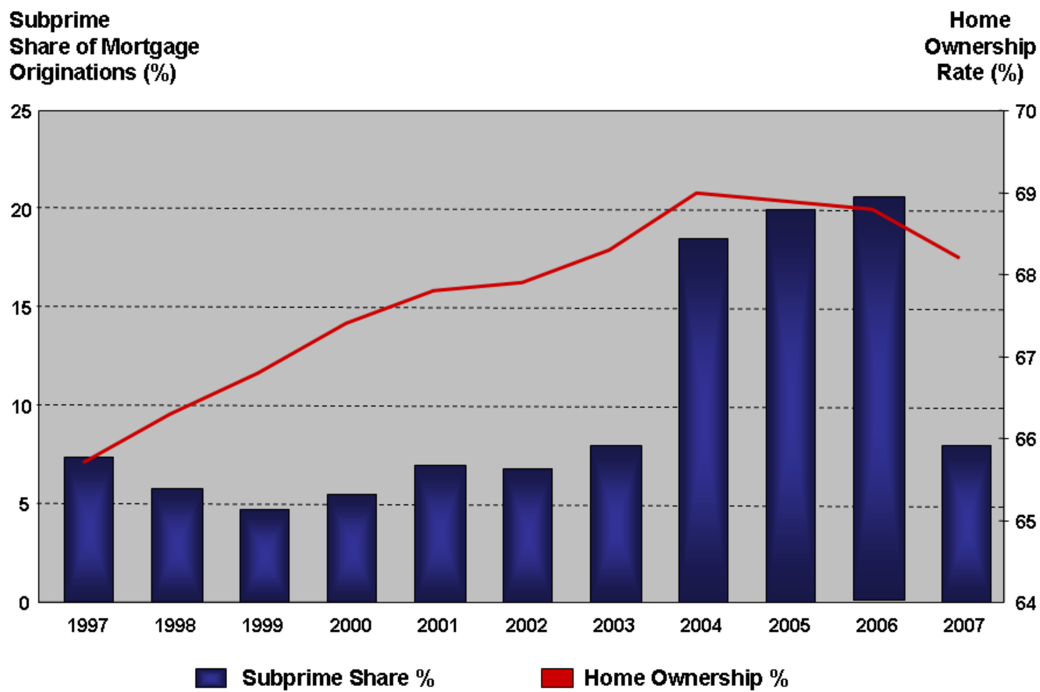
accelerated the downward spiral of securities' prices in general. Though the default part of the collaterals remained small, the resulting drop of US real estate prices damaged the collateral base of the CDO business as a whole. The mixed derivatives were all infected by the small amount of "toxic" US subprime mortgage claims.

Figure 5. U.S. Subprime Lending Expanded Significantly 2004-2006



Source: U.S.Census Bureau, Harvard University – State os the Nation's Housing Report 2008

The US Senate's investigation after the crisis concluded that the crisis was caused by "high risk, complex financial products (*securitization* – M.S.); undisclosed conflicts of interest (similar to the role of *A. Andersen* in the *Enron* case, M.S.); the failure of regulators, the credit rating agencies, and the market itself to rein in the excesses of Wall Street". We can add to the list the dramatic deterioration and failures of *corporate governance* and risk management institutions that invited CEOs for excessive speculative risk taking at the expense of long-term financial stability. This all lead to a systemic breakdown of accountability and ethics.

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After the *2007-8 financial meltdown* US legislators unsuccessfully tried to reinstate the restrictions of the Glass-Steagall Act as part of the *Dodd-Frank Wall Street Reform and Consumer Protection Act of 2009*. Though President Obama personally intervened in the legislation process to enact laws addressing the trouble making activities with restrictive regulation this initiative was watered down. The financial innovations can be designed without limitation further blurring transparency and risk management. The Act established three federal institutions to improve supervision of these activities as well as to increase consumer protection by spreading information about potential risks. Apparently, the US financial lobby successfully argued for continued lax regulation that should enhance its international competitiveness.

Economic policy challenges of financialization

A main problem is that the world economy is global but its politics are largely national. The world has become highly integrated economically but the mechanisms for managing the system in a stable, sustainable way have lagged behind. Cooperation between the most influential countries' policy makers is regular (*meetings of the G8 and G20*), however it is not without conflicts and most importantly, the consultation platforms' decisions are usually indicative and not binding. Take the example of the United States: the Trump administration has quitted various important international cooperation institutions. This move endangered the functioning of many institutions in the area of environmental cooperation, poverty reduction, improvements in world health conditions and many others. President Trump stepped back even from the negotiations of such international agreements that could have further smoothened the global business environment (the Transatlantic Trade and Investment Partnership). He declared trade war against *China* and some other countries thus explicitly favoring open conflicts against negotiations and compromises in global issues. Though he lost the 2019 presidential elections and the new President campaigned among others with the restoration of many international cooperation links, his negative influence on global policy coordination systems made its imprint undermining trust in global policy efforts.

Nevertheless, the post 2008 global policy cooperation system was widened with

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some new institutions. The previous cooperation system that was partially founded after the Second World War (the *Bretton Woods system*) was expanded. The most important extension was the creation of a wider consultation platform of the most influential countries. In addition to the *G7* (Germany, Italy, UK, France, US, Canada and Japan) on some occasions also Russia was invited *(G8).* After the crisis further countries were invited (Turkey, Saudi Arabia, Mexico, South Korea, China, Brazil, Argentina, South Africa, India, Indonesia and Australia) to form the group *G20*. However, the G20 still serves as consultation platform without biding power of its declarations. These global governance institutions reflect intricate bargaining relationships based on asymmetrical power relations. The exercise of soft power dominates the adjustment mechanisms. Such bargaining involves more than just countries. They host multi-actor consulting process among NGOs, states, firms and international organizations. The consultations cover various global processes: economy, environment social mobility, poverty reduction, health, education, labor issues and many others.

In the area of global financial regulation the main problem has been that the design of the *Bretton Woods system* concentrated on the stabilization and regulation of international financial transactions between nations. In this respect most important issue was the *stability of the currency systems* based on fixed currency exchange rates and the US dollar as monetary anchor. The process of globalization eroded the stabilizing institutions first (as it was evidenced by the multiple currency crises of various countries during the 1990s). Parallel with this the *globalization of financial markets* created new risks as it was evidenced by the *2007-8 financial crisis*. Thus, the inherited institutional system (with the prominent role of the *International Monetary Fund and World Bank*) had to be amended with such institutions that controlled global financial markets. Some initial steps have been made, but there is still no effective institution for this purpose. There are various areas of regulation performed by different bodies working on national level rather than globally.

From the viewpoint of the supervision of financial institutions the role of the *Bank of International Settlements (BIS*) stands out with its policy recommendations the *Basel accords*. The institution was established in 1975 when the traditional pillars of the

Bretton Woods system collapsed. The *Basel Accords (I-IV)* set out standards of banking supervision, but their implementation is done by national governments. Not all of them comply fully with these suggestions. The main areas of indication are the suggested levels of *capital adequacy ratios*, *risk reserves, prudential regulations* (including accounting rules, stress testing as well as reporting and disclosure obligations). In reaction to the 2007-8 crisis the *Basel III* guidelines were introduced in 2009. The capital adequacy ratio was increased from 2 % to 4.5 % common equity. In excess two more capital buffers were to be created by the banks thus further increasing the mandatory capital ratio. Further risk compensation measures were introduced requiring a minimum leverage ratio and liquidity ratio.

The introduction of the measures will probably increase the risk-bearing capacity of the banking sector. But as usual, it also has its costs. OECD estimated a GDP thwarting effect of 0.05 %-0.15 % per year mainly due to increased costs of banking and more expensive credits. But even more important criticism is raised concerning the unchanged fundamental approach to the basic problems. The Basel accords do not intervene in the control of the *design of financial products* (products of securitization) or the size and characteristics of capital flows in the global financial markets. Neither foresaw it changes in the actual process of supervision. It is still carried out through credit ratings through standardized methods carried out by only two private agencies (*Moody's* and *Standard and Poor's*). The conflicted and unreliable credit ratings of these agencies is widely criticized as a major contributor to the US subprime crisis of 2007. The lack of control on the process of *financialization* is seen by critics as a fundamental impediment of overall economic progress (Perez, 2009). For example, the financial support of costly innovation process is continuously diverted towards financial investments. The *shareholder revolution* has not been turned back either. The kinds of measures that could have deeper effect proved to be temporary after the 2007-8 crisis. For example, restrictions on the size of banks, sectoral tax on financial intermediaries (e.g. based on their liabilities), the renewed separation of capital collection and investment activity, taxing financial transactions or changes in the remuneration system of bankers were introduced in various countries but then they were usually withdrawn.

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Questions:

How can you define financialization, and what are its most important features?

What is "shareholder revolution"?

What was the primary strategy of ENRON?

What was the role of SPEs in cleansing ENRON's primary accounting books?

What was the main source of moral hazard connected to ENRON's chief executives?

What was the role of the auditor firm in the ENRON scandal?

How was the regulation of US financial institutions changed with the Gramm-Leach-Bliley Act?

What is securitization?

What is CDO? How is it constructed?

How did demand for American CDOs change in the aftermath of the 2007-8 global financial crisis?

Why did American "toxic" assets spread all over the world?

How did the US Congress react to the ENRON case and the 2007-8 crisis?

How did international policy coordination change after the 2007-8 crisis?

What are the Basel accords?

What areas of bank supervision are regulated by the Basel accords?

Digitalization – new business models

The process of globalization altered international corporate activity into *value chains* of interconnected corporate networks. The segmentation of the value chain turned international cooperation of *internal and external networks* rather the rule than exception in the production process of many globalized industries. This means that the activity of multinational companies underlies the jurisdiction of several states. Moreover, quite many of them are larger in size (measured by turnover) than most

countries, including some developed ones. Therefore, the state as regulator is usually in a handicapped position: economic policies' impact on most companies is weak and partial. There are lots of opportunities to overcome disadvantageous policies.

The nexus with the state is nevertheless uneven. Larger and more developed countries usually host the *headquarters* of the multinational firms, and also their strategically important activities. Foreign affiliates usually carry out less strategic and easily transferable tasks. The intensity and content of connections between headquarters and affiliates also varies. Some of them are strategic which cannot be replaced easily while others are like arm's length market transactions: sensitive to any change in the regulatory environment. A third important feature of the affiliates is their embeddedness into the host country's economy. They are less sensitive if more embedded. The scope of the activity of the affiliates as well as the deepness of their interconnectedness with other segments of the value chain and the host economy will determine how much state policies affect them.

But of course, the various aspects of economic policy create a complex multilayer relationship. It is both cooperative and competing, supportive and conflictual. Usually neither state nor big multinationals can clearly dominate the relationship. Thus, all countries that have assets to be offered for utilization by multinational firms will have some policy potential. The ultimate task of governments is therefore the optimal utilization of the room of maneuvering from the aspects of national wellbeing and development. States have the potential to determine two factors that are crucial for the multinational business. These are the *terms of access to markets and assets* (resources) and secondly *the rules of operation* with which the multinational companies must comply when operating within the specific national territory. These factors vary internationally thus creating discontinuities in the flow of economic activities.

At the same time global business' activity incorporates parts of national economies within the firm boundaries that may create important problems for states. There is a territorial asymmetry between continuous state territories and the discontinuous boundaries of firms. The problems' nature and magnitude vary according to the strategies pursued by the multinational

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firms. Most important is the extent to which companies pursue globally integrated strategies where the roles and functions of individual affiliates are related to that *overall global strategy*. With the advance of digital technologies the geographical segmentation and fragmentation of the global production networks has become increasingly common. States are becoming increasingly fearful about the autonomy and stability of multinational firms located within their national territory, especially as concerns the leakage of tax revenues or the unexpected relocation of facilities to other countries.

Global business conduct is smooth if regulatory frames do not differ much internationally. However, they can regard the existence of significant differences also as opportunities. They may take advantage of the *regulatory differences* by shifting activities between locations according to the differentials and thus engage in regulatory arbitrage. Multinational firms can stimulate national governments to *competitive bidding* for their mobile investments to retain or capture a particular firm activity. It has also become increasingly common for multinational firms to try to lever various kinds of state subsidies in order to convince them to keep a plant in a particular location. The competitive bidding allows multinational firms to play off one state against another to gain the highest return for their investments. The European Union has strong state aid rules to control the competitive subsidization. Nevertheless the processes are always highly sensitive and contested.

After the 1989 systemic change in Central and Eastern Europe prior the accession rounds of 2004-7 EU firms rushed into the newly emerging market economies attracted by very generous incentives. Subsidies, tax breaks, import quotas and many other commercial advantages were granted to those investors who were willing to invest and help creating new jobs. Subsequently, the need to comply with EU rules has meant an end to the highly lucrative arrangements. Nevertheless, the toolkit of fiscal policy has remained applicable offering significant differences in the national tax systems. For example, corporate income tax levels vary between 9 and 35 % in the EU countries. When applied normatively low taxes can continuously attract investments. Since there is no deep fiscal harmonization in the EU this is plausible.

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The case of transfer pricing

Multinational companies can take advantage of regulatory differentials not only at the moment of investment actions but also continuously. The spreading of corporate activities through international internal networks creates opportunities of *tax avoidance*. This is perhaps the most problematic and opaque issue in the relationships between multinational firms and states. The complex and complicated transactions within the internal network of the value chains may differ very much from simple arm's length market transactions that are more or less transparent. The main issue is how transactions and also profits are taxed by the states in which the multinational firms are present. The *international value chain* requires that firms move tangible materials and products, and also various kinds of corporate services across international borders to the various affiliates. In external networks prices are charged on an arm's length basis between independent vendors. In the internal network of the multinational firms transactions are conducted between related parties: units of the same organization. The rules of the external market do not apply. The firm itself sets the transfer prices of the goods and services travelling within its own organization. *Transfer pricing* may offer very comfortable flexibility to achieve various overall goals.

This opportunity means the ability to set own internal prices within the limits imposed by the tax authorities. This enables firms to adjust transfer prices upwards or downwards to influence the amount of tax and duties payable to national governments. This practice is often labelled *tax optimization*. In cases of more serious financial troubles like the 2007-8 one more substantial transfers of financial assets may also occur. Asset transfers usually are conducted with the inclusion of *special purpose entities* (already introduced in the previous section). Financial flows within the internal networks of companies are opaque and are frequently not combined with real material flows. In many cases international investments are financed by company loans flowing from the mother company to the affiliate. The conditions of these asset transfers can also serve the purpose of *income transfers*. In this case it is not just the price (e.g. interest) that can be shaped to serve special corporate purposes but also other conditions of the contracts. But the more simple transfer pricing practice

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serves the utilization of tax arbitrage. Incomes generated anywhere in the value chain are allocated through transfer pricing to locations with lowest tax rates. *Transfer pricing* is also a suitable tool to overcome government restrictions of the amount of repatriated profits. The very large highly centralized multinational firms have the greatest potential of manipulating internal prices.

Dicken (2011) collected some empirical literature evidence on the magnitude of transfer pricing's impact on tax payment in the US and UK. Several studies claimed that big multinationals paid virtually no taxes over a longer period of time in both countries. There were estimations of several billions US $ lost through transfer pricing. Also, the overwhelming majority of surveyed multinationals operating in Britain was involved in a transfer pricing dispute. The UK government argued that there should be international agreement on country-by-country disclosure so that firms would have to reveal the profits they make and the tax they pay in each country where they operate. These examples showed that authorities of developed countries have serious difficulties when going beyond transfer pricing. Less developed countries' tax offices are in even worse situation (Dicken, 2011 p. 231).

The issue of transfer pricing has reached the international cooperation institutions. Most notably it was the *Organization for Economic Co-operation and Development* (OECD) that developed practices and principles of some control on transfer pricing activity (OECD, 2017). OECD can recommend policies and practices for the member states (these are developed market economies). The organization developed tax policies and accounting practices that can be introduced by the national governments in order to streamline the international practice on this matter. In 19 of the 20 OECD member countries the guidelines were introduced. Most importantly, the *calculation methods of transfer prices* are described. Companies may choose among various options, but then they are expected to use them in transparent ways in their accounting system. The suggested methods try to incorporate in controllable ways arm's length market prices in the *transfer pricing practice* of firms. The preferred method is the "Comparable uncontrolled price (CUP)" that applies the prices achieved in transactions with independent vendors (Rudzikiene, 2017). Another option is the

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resale price method but obviously this method is restricted mainly to final products that reach consumers in several stages. Here the prices are adjusted by the average sales margins of trading companies. The traditional cost plus method is also on the list of recommended calculation methods, however, many cost items of complex goods especially intangible assets can only be estimated. Two more calculation methods are suggested that approach from the net margin or the transactional profit. Yet, the suggested methods can only limit the overall spread of arbitrary pricing. The pricing of services and intangible assets moreover conditions of financial transactions still provide substantial flexibility in the value chain to serve strategic goals with asset and income transfers.

To illustrate the technical difficulties of locating exact location and content of activities we can review the activity of any multinational company working on the markets of complex manufacturing goods. The most frequently surveyed branches are the automotive industry and electronics. Take the case of Audi Hungaria. The facility produces hundreds of thousands of engines, mainly from subassemblies produced in the main factory in Ingolstadt but also in other Audi facilities. The factory also assembles cars which are partially sold in Hungary, but the bulk is delivered back to Germany. No independent public market exists for many subassemblies since no other firm produces these products. Nor is it obvious what production costs occur for the items crossing the borders. This kind of estimate will depend mainly on how the *fixed costs* of the Győr facility are allocated among the many items produced there. This is an allocation that cannot fail to be arbitrary. Without an obvious selling price or an indisputable cost price the fierce battle over the transfer price is unavoidable. When the item crossing the border is intangible like a right bestowed by the patent on a foreign subsidiary to use the trade mark of the parent company or use its technological know-how, the fluid nature of a reasonable price becomes even more apparent. How much is the use of the Samsung trade name worth to its subsidiary in Hungary? How valuable is the access granted to a team of sales experts in a German affiliate to the databank generated by another affiliate in Hungary What if the Hungarian database is stored in the cyberspace?

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New round of tax optimization: the case of digital business

Technological innovations in the field of communication and data processing altered traditional markets' value chains and also created *new business opportunities* and business models. The speed, flexibility and reliability of business conduct increased due to the advance of digital technologies. The most recent research body calls this process the emergence of industry 4.0 solutions, the appearance of a new techno-economic paradigm. Changes in the production process of traditional industries also transformed the basic time-space infrastructure of logistics and distribution industries. They also shifted from mass production systems to more flexible and customized solutions. Lean production and lean systems of distribution evolved parallel with the purpose to minimize the time and cost involved in moving products between suppliers and customers.

Three key *innovations* of digitalized logistics must be mentioned. The first is the evolution of *electronic data interchange* that enables the rapid transmission of large quantities of data electronically. Information on product specifications, orders, payments status of transaction, delivery schedules and the like can be exchanged instantly. This requires a common software platform that enables participants in the value chain to read the data. The second innovation was the *bar code system* and remote sensor identification technology. Bar codes permit users to handle effectively the vast product differentiation by easily identifying each product. They help following products in the production process and beyond, in the sales process. This facilitates the reduction of inventories and the electronic programming of the production process and quality control but also serves the instantaneous collection of sales information. The third innovation was more organizational: corporate networks based their logistics infrastructure on *large automatized distribution centers*.

The logistics innovations that revolutionized traditional branches of manufacturing and retailing created opportunities for *new business models*. Computer-based electronic information systems were the backbone of the logistics and distribution revolution. The advance of internet usage, the emergence of the *world wide web* merged with these technologies and

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opened new business dimensions: the *internet-based business*. The first and in terms of sales volume still largest segment of this is *e-commerce*. The most important relations are the *business-to-business* (B2B) and *business-to-customers* (B2C) transactions. What seems today self-evident is a relatively new development: internet-based sales and the provision of other services started only at the late 1990s after the world wide web collected sufficient amount of subscriptions. Firms like eBay, Amazon and Alibaba are very young.

From regulatory point of view *e-commerce* entangles completely new types of firms and activities. The smooth functioning of the data exchange between stakeholders is facilitated by new vendors such as *internet equipment suppliers, PC manufacturers, PC and e-business software developers, web browsers, internet service providers, internet content providers*. From the point of view of regulation and taxation, the most important aspects are first the high level of intangible asset content of the products, secondly, their loose spatial connection. Service providers are linked via internet and electronic data interchange systems. They can be remotely located in different countries. Moreover, their activity is usually not bound to major tangible investments. They can change flexibly their location. Another important feature of *e-commerce* is the substantial diversity of the *business models* that incorporate different types of vendors and transactions. Schary and Skjott-Larsen (2001) differentiated six major e-commerce business models that ranged from simple digitalization of the sales process between producer and customer through the involvement of various transmitters to the mix of traditional and digital sales methods (brick and mortar solutions). E-commerce can be conducted also in *virtual market places*. In this case the main service provider (like e.g. eBay) acts as an intermediary interface between sellers (producers) and buyers (customers) at unlimited global scale. The service that such companies provide is not just smooth data interchange system, but also financial, legal and technical services, even business consulting. The range of activities of an e-commerce vendor may stretch out from retail to various types of financial and other business services.

Figure 6. A simplified digital B2B business mode

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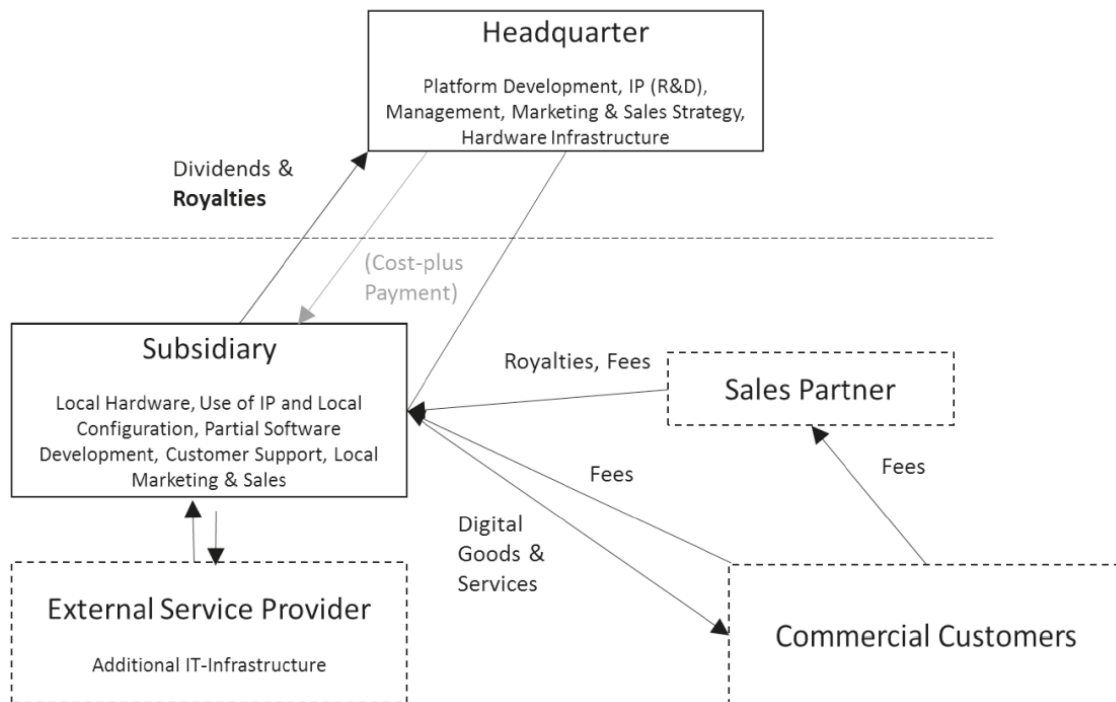

Source: Olbert and Spengel (2017) p.26

E-commerce is the largest chunk of digital business today. However, other types of internet-based services have also emerged that perhaps have bigger future growth potential. The soaring diffusion and development of info-communication technologies serves as enabling factor for the digitalization of business in various further areas. There are countless websites specialized on connecting people, delivering information content, collecting information about various products and services (e.g. service rating and price comparisons). But even more important is data generation about the participants, subscribers, customers entering the web. The billions of communications transmitted in the web provide unique opportunity to build huge *databases* with or without the consent of the stakeholders. The "*big data*" and those firms which create, store, analyze and supply data create a fundamentally new business branch called *cloud computing*. Firms can provide traditional informatics services over the internet, like computing power, data warehousing or software applications. The involved companies are only loosely connected to spatial locations, moreover, it is very

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difficult to determine which activity is generating new value? Is it the creation of the database? Is it the analysis or the sale of selected information? Is it the maintenance of the hardware or the content provision? To make things even more opaque, these activities can be exercised from very remote places: the *internet-based value chain* is not just segmented but rather fluid. In many cases new value is provided by the customers. This means that even the traditional roles of business transaction change mixing up production and consumption functions (e.g. in case of sharing economy). It is really tough to oversee and regulate such a diffuse business system. OECD (2014) is concerned mainly with the taxation aspects, but there are other problem areas including many security issues (in legal, personal even political terms).

From *tax policy* viewpoint OECD (2014) identified three main problem areas. Firstly, the *nexus for taxation* (who is the responsible national tax authority?), secondly the *place of value creation* in the various stages of service provision, thirdly, the *characterization of payments* made for digital products (royalties, fees or profits). The nexus of taxation is unclear because it is difficult to use the *permanent establishment principle* for companies which spread core functions across multiple jurisdictions often segregated from consumer markets. Taxable nexus problems emerge for example if contracts and customer relationships are prepared by local staff but the ultimate contract conclusion is reached remotely between customers and a foreign entity. Also, in case preparatory and auxiliary activities may constitute important parts of the digital business models hence triggering a permanent establishment status in taxation. Last, but not least, it is unclear how network effects and user participation in the market country should be treated by tax relations (Olbert and Spengel, 2017).

From the viewpoint of *value creation* which is at the heart of the current OECD tax policy vision it is rather problematic to evaluate the importance and share of various stages and segments of the *digital business value chain*. Customer data is at the core of cloud computing and a major source of value in the digital business. It is however rather unclear how the gathered data is making money and which activities are involved in the process? Whether the remote collection of data provides taxable nexus and if it should also depend on the analysis and functions performed or the assets used in the process? If the taxable

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nexus is assumed the old issue of *transfer pricing* remains a problem in the allocation of respective profits to the countries where data is collected processed and used. Take the example of advertising (a main value driver of digital business): the cost of using of *digital database* is reflected in the advertising revenue. The third problem area, the characterization of revenues can be formulated in more general frames. The current business models (not just the digital ones) treat a combination of hardware and software items plus related services as sales package. Thus, various types of activities are mixed up in marketable products. The service and knowledge content of the packages is substantial and is increasing. However, the sources of value reflected in the sales price are multifaceted and treated by tax measures differently. This feature also increases the opacity of business transactions.

The current stage of economic policy challenges posed by digitalization

OECD (2014) identified various opportunities for *tax base erosion and profit shifting* (BEPS) concerning the digital business vendors. These firms can eliminate or reduce tax obligations in the market country (where they sell) when they avoid their taxable presence or minimize the registered income (among others via *transfer pricing*). They can do so because for online cross-border transactions that do not require physical presence the domestic law usually does not define tax liability. If the residence country of the company does not assume its taxing right the respective income remains *untaxed*. Otherwise the taxable income can be minimized by allocating only minimal functions, assets and risks or by the maximization of deductions from the tax base in the market country. This means that the allocation of functions and assets is often tax motivated and are not factually exercised. Similar function and asset allocations to countries with low-tax regimes can be applied also against the country of residence to reduce tax obligations. This way the amount of sales turnover and the corresponding *withholding tax* (VAT) can also be limited in the market country. Another BEPS opportunity is the reduction of tax in the intermediate country via the use of special contractual payments and the imposition of *special purpose entities* (see the previous section).

OECD experts identified problem areas, however they were able to develop only

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limited innovative policy solutions. Of course, basic principles of tax policy and also international treaties limit the opportunities of effective policy response. The blurred contours of digital transactions could be overcome by the utilization of new *withholding taxes*. However, these cannot fully replace income taxes without a fundamental violation of the tax policy principles. Yet, some countries have introduced such taxes to complement the perceived decline in corporate income tax (Olbert and Spengel, 2017). The *OECD transfer pricing manuals* still try to apply the traditional approach focusing on arm's length transactions. In case of digital business however, new aspects were introduced. What is new is an increased emphasis on detecting the *value drivers* in the value chains of digital business. The focus is on *qualitative actions* in contrast with repetitive routines. For example, data analysis is regarded more substantial constituent of *cloud computing* than data generation and handling. Also, the storage and maintenance of hardware items is considered low value adding activity as compared with software and content generation. However, it is utmost difficult to implement these principles in concrete cases. *OECD* suggestions obviously target the tax minimization practice of firms in high-tax countries which are usually the host countries of the mother companies and carry out much of the strategically important value creating activities.

OECD suggests an adjustment of the *primary establishment concept* in the definition of the *taxable nexus*. In this context only those overall preparatory or auxiliary activities carried out in the primary establishment should be considered. For example logistics that traditionally was regarded auxiliary activity can now constitute in the primary establishment if it is essential (as it is) to the business model (see *e-commerce*). Another suggestion is the anti-fragmentation rule to encounter the opportunity of digital companies to spread their value chain across several entities in different jurisdictions. The new *OECD manual* also introduced a second *taxable nexus concept* based on the principle of significant economic presence. In the absence of taxable presence based on the current principles this new status definition could be based on different business factors comprising sales, frequency of digital transactions and the number of users (think for example on the role of virtual marketplaces). A combination of these factors could establish taxable presence. However, the

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determination of the attributable income to each nexus will be rather difficult.

Questions:

How does the international segmentation of the value chains affect state control over corporate activities?

What factors influence the balance of state-business nexus in context of multinational business conduct?

What is transfer pricing?

How are transfer prices calculated in the multinational firms?

How can transfer pricing be used for tax avoidance?

What calculation methods of transfer prices are suggested by the OECD manual?

What are the key innovations that facilitated the emergence of digital business?

What is e-commerce?

What are the main spatial characteristics of digital business?

What are the main problems of digital business conduct from the aspect of tax policy?

How does OECD try to create the taxable nexus with digital business?

What is the primary establishment concept of tax policy?

New developmental state – economic patriotism

The process of globalization was facilitated by widespread liberalization of trade and economic activities, privatization and deregulation. This policy stance started in the 1980s and dominated the scene well beyond the year 2000. Discussion and criticism of the postulates of the *neoliberal agenda* intensified especially after the 2008 crisis. Until then, however, the neoliberal agenda cleared the ways in front of the globalization process.

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Its main strive was reducing state intervention in the economy. Of course, this ambition did not mean that states as regulators withdrew. Instead, state policies' aims and directions changed. The main aim of government policies was improving the efficiency of market institutions. In case of developed countries this meant scaling back excessive regulations and state interference as compared with a desirable hypothetical optimum. In emerging market economies on the other hand it meant the active state involvement especially in the field of institution building. The basic assumption was that liberal market economies' institutions work similarly in different countries, since the human nature, the homo oeconomicus is identical throughout the world.

This ambition has been challenged by less developed countries and prior to their transition in 1989 also by the socialist countries and the Soviet Union. After the collapse of the Soviets the neoliberal agenda seemed to win the race of economic theories: the *Washington Consensus* codified its main policy recommendations. It took roughly two decades until the negative experiences of the theory's malfunction accumulated giving way to open critiques also in international organizations like the *World Trade Organization* or the *World Bank*. *Witt* (2019) interpreted this process in a political economy approach and stated that criticism strengthened also because the economic and military power of the world hegemon USA started to decline. While this observation is certainly true, it seems to be important that the negative experiences with neoliberal policies started to accumulate already during the 1990s in several areas, but most importantly in repeated financial and currency crises of various emerging market economies. The limits of applicability of the neoliberal toolkit in less developed countries became rather obvious. Search for alternative development methods has been started.

The developmental state concept

Witt (2019) is right: the rules of the game in the world economy have always been set by the hegemon power. The US rules were formulated with the neoliberal agenda. The British rules were set up hundred years before that by the classic liberal agenda. Both of them have been queried by emerging economies: Germany long ago, the *newly industrializing countries* (NICs) and then *China* and India more recently. The

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fundamental logic of these actions was similar. The system of the hegemon was designed to maintain its supremacy. Challengers wanted to cut it. They invented theoretical background in economics to serve this purpose: the concepts of *economic nationalism*, more currently *economic patriotism*. At the base line of these concepts is the temporary subsidization of the challenger economies in order to increase their *competitiveness* with the well-established firms of the hegemon. The justification of the argument for the temporary limitation of competition lies in the promise of more intensive future competition in the markets with the activity of newly entering competitors from the challenger countries.

Under the circumstances of the globalization process of the late 20th century it was the *East-Asian developmental state concept* that utilized the challenger strategy of emerging market economies. After the end of the Second World War the geopolitical situation urged the USA to quickly reorganize the destroyed Japanese economy to counterbalance Soviet and Chinese influence in the pacific region. The *reconstruction of Japan* had been started with American blueprints, however, the Japanese governments soon incorporated many local features into this masterplan. Japanese version of political democracy and quasi liberal market economy differed very much from the American or the West-European patterns. What worked most effectively in the American reconstruction package was money. Japanese manufacturing industry was built up by American financial and technology aid. Its organizational structure, industrial relations even the ownership patterns differed substantially reflecting mainly the Japanese tradition. After the initial kick-off investments the Japanese governments developed a rather unique system of *state permeated market economy*. This served later in the 1970s as a benchmark for the newly industrializing countries of the region. This practice should be described briefly because it blossomed as an alternative development avenue in the early phase of the globalization process until the 1990s.

According to *Ricz* (2019) the baseline concept of the *East-Asian developmental state* model consisted of ten important elements the combination of which varied among the *NIC*s. Nevertheless, their presence and the model's overarching logic as well as the cultural background featured in all countries that applied it successfully. First

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is *economic nationalism* and social mobilization: economic development and modernization is a national issue which is reinforced against the mainstream principles of the dominant world economic system. Modernization is carried out with the lead of a strong, centralized authoritarian state which is necessary for the effective implementation of the government's modernization steps. The focus is on *industrialization* via selective and discretionary measures. The implementation of state plans is carried out by large diversified business groups (high level of industrial concentration). The smooth and possibly not corrupt implementation is facilitated by a *meritocratic professional bureaucracy* with embedded autonomy. The modernization of agriculture is important element because it secures adequate food supply (elimination of poverty) and labor for developing manufacturing. The primary direction of development is *export-oriented manufacturing*. The development is planned and facilitated by the state with the application of market-conforming methods. The financial conditions for large scale investments are based on *financial repression* with closed capital markets, central role of state guarantees and allocation of high domestic savings towards targeted industries. The state also plays important role in securing macroeconomic stability. Last but not least the benefits of modernization and growth are shared and equitable in the society (p. 244).

It is important to see that the above toolkit of the *classic developmental state* had been applicable in a specific time slot. During the 1960s and 1970s the process of *globalization* has not yet been started in the form I described in the introduction of this paper. The process just got started when the first results of this modernization policy were achieved. Today's leading Japanese, Korean or Taiwanese multinationals had been evolved to their highly competitive status in the preceding 1-2 decades. Thus they became primary participants of the globalization process after the crucial period of modernization via the classic developmental state model was finished. In fact, their success ex post justified the measures of *economic nationalism*: the effort fulfilled the task, national champions became strong global competitors of existing businesses. Nevertheless, the *pre-globalization landscape* of the world economy when the classic developmental state concept was applied, was still very much different. It is not only the liberalization process that took place since then that prohibits the application of outright protectionism. The

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structure of the world economy also changed: industrialization would probably not bring as much added value today. The booming sectors of the world economy are not the automotive industry or electronics any more. Also, business conduct patterns changed. An isolation of a country would counterstrike since the organization of the world economy is based on *cooperation networks* and not on individual firms be it even the largest vertically integrated conglomerates. Hence, the uncontrolled application of the old developmental state toolkit does not seem to be an adequate way of national modernization.

Changing the role in global value chains – economic patriotism

Concepts of development and catching up must be phrased today according to the current circumstances of the world economy. The reshaping of the global economic landscape has been driven by the emergence of complex organizational and geographical *networks* of production, distribution and consumption. The precise form of the networks varies enormously in forms of multinational firms' internal and external networks and their spatial organization patterns. Thus, the complex production networks are grounded in specific places and the organizational networks connect the geographical networks. This is how the various places in global space are linked into the current form of international labor division. Production networks not only integrate firms into organizational structures but also places in ways that have outstanding implications for their *economic development*. A certain place's insertion into the global production network affects its development prospects. Every single place's role in the global network is determined by the position of their economic units in the global organization. The branches and affiliates of the multinational company are part of a specific corporate structure and are constrained in their autonomy by parent company policy. Even legally independent companies in the external network of multinationals are limited in their action scope and dependent on companies whose decision-making functions are very distant. The key issue is the extent to which a place's involvement in the multinational network creates net benefits for the inhabitants including also broadening personal and

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social choice opportunities (increasing welfare).

Stages in the value chain, each node in the global production network creates value through the combined application of production inputs. In this sense value is a surplus over the costs of actions carried out at that particular stage or node. The process is dynamic, the aim is continuously enhance value creation. But *value creation* does not necessarily overlap with *value capture*. The analysis of the value chain for the production of the Apple iPod showed how complicated the capture of value can be. Also that highest value capture tends to be at the high end of the value chain, meanwhile the value capturing potential of the assembly is far smaller. Thus even if the gadget is manufactured almost entirely in China, most of the value is captured by the US headquarters (Dedrick et al. 2009). It is therefore an utmost important desire of governments to *increase the value capture capacity* of the firms located in the country placed either in the internal or external networks of multinational companies.

Figure 8. Value capture in Video iPod and Video iPod 30G

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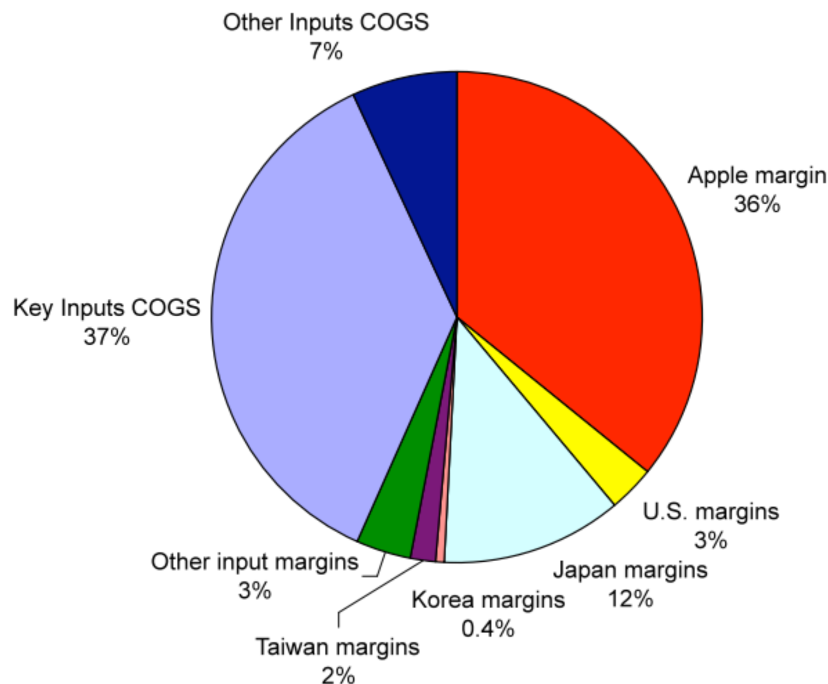

Source: Dedrick et al. (2009) p.20.

Using information from multinational affiliates located in East-Central Europe *Szalavetz* (2017) observed significant shifts in the levels of integration in the value chains. Alongside the simple assembly tasks many affiliates have spread activities upwards the value chain. Various engineering or marketing tasks were transferred to the affiliates. However, this *activity up-grading* did not result in increased value capture. As it was evidenced in the section on transfer pricing the level of *value capture* can be easily influenced by the multinational firms. This raises issues way beyond the confines of company competitiveness and profitability. The problem encompasses all stakeholders involved in the global value chain in different locations. The key issue is the configuration of power within the network which seems to be very asymmetrical and subject to complex bargaining process. Dicken (2011) discussed the pros and cons of multinational firms' activity in emerging market economies (pp. 433-452). He concluded that in the current world economic situation complex interdependence is unavoidable. However, if the dependence is very much asymmetric this could strongly distort the sharing of benefits. It can happen that emerging market economies are being

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trapped in *the low value capture trap* (Szalavetz, 2017). This than would impede their future development process in the sense as it was defined above as "broadening personal and social choice opportunities". Hence, active state involvement in enhancing a better integration with higher value capture potential of production locations of emerging economies is topical.

Ricz (2019) discussed how the concept of *developmental state* could be implemented in the current circumstances. The new concept of state development policy must comply with four main challenges of the old developmental state concept. The first is the different composition of the world economy. Today's dynamic sectors are located in the *"new economy"* in the knowledge and service sectors not in manufacturing. In this new setting beyond physical capital accumulation also *human capabilities* and the efficient management of information play outstanding role. Hence investment in education, health and digital infrastructure is required as part of enabling policies. The *promotion of innovation* is also key factor.

Secondly, the political environment changed. In light of the advance of authoritarian regimes for example in East-Central Europe it seems strange for the first sight to state that the type of authoritarian regimes that directed the traditional developmental state experiments are gone. If we compare them with today's populist regimes even with Donald Trump's activity several major differences are visible. The most important is the concept itself: the old model built wide social consensus around the development project. Moreover wide strata of the society benefited from it, inequality decreased room of social choice and mobility increased. Corruption was kept under control and the servants of the process the professional bureaucracy was largely free of it. This is all conceptually absent in these regimes.

If we observe that more current *authoritarian regimes* do not fit these requirements it also means that representatives of this new wave do not share the main convergence tasks of the model. It is exactly the difference of the drivers of the political process that will destroy chances of social convergence and leading to a development trap. I argued elsewhere on the example of East-Central European countries that the *rent-based economic development* (which is attached to the authoritarian political regimes) has no convergence potential with the

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competition state model (Szanyi, 2019). The increased appreciation of the "new economy" for knowledge and human capabilities requires corresponding political climate with less oppression and *more personal freedom*. The legitimacy of the new "would-be developmental states" can be established in democratic political context where community priorities are set up in the developmental agenda and a new alliance is set up between state and society.

The social and political sustainability of the development program depends on widespread *participation and civil control* of the process. This condition corroborates also with the new human capabilities concept of social development incorporating non-economic factors like social justice, inequality, social participation and perception. Also, development must be ecologically sustainable. The resource intensive development path of the 20th century must be replaced by a new more *green development*. In fact, the "new economy" however we define it is information and knowledge oriented. The new society which is evolving at accelerated speed under the circumstances of the COVID 19 pandemic is likewise more based on effective spread of electronic information. Home office for example reduced the physical movement of persons tremendously leading to a dramatic drop of air pollution worldwide. The development strategies must build on the new and evolving patterns of social exchange.

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The new toolkit of industrial policy

It is not yet clear if such a solid development model will have been created like the East-Asian developmental state concept. I argued that this model is not applicable any more. There are also alternative development regimes in the world that seem to be effective at least in the initial stage of the convergence process leading to the middle income status. China is the primary example, however, China is not a market economy although it wants to sell its political and economic regime as such. However, the toolkit of industrial policy has already been streamlined to the requirements I described. A new concept *"economic patriotism"* has also been put on the agenda. The concept intends to achieve the same types of goals with similar methods that economic nationalism and the developmental state also did, but the elements of the concept are fitted to the current requirements. The starting point is still the free market economy which builds basically on the competition of agents. The interception of the state means temporary support for selected economic agents to gain more competitiveness vis a vis other, more established (foreign) competitors. Competition is distorted only temporarily. *Ricz* (2019) summarized the necessary elements of the new developmental state model as follows: "a development-oriented public policy mix in the twenty-first century at minimum contains the following elements: cautious and sound fiscal and monetary policies supporting effective macroeconomic management and macroeconomic stability; transformative social policies intended to decrease poverty and inequality (including education and health policies aimed at the expansion of human capabilities); physical, institutional, and human infrastructural investments (in a mutually complementary manner, and in a balanced way); new industrial (*STI*: science, technology and innovation) policies that support technological learning and innovative activities; entrepreneurial public institutions; a strong technocratic and meritocratic central administration; and last but not least, innovative forms of financing development broadly defined" (p.269).

As is seen, some elements of the classic developmental state concept remained: social consensus and participation, technocratic and meritocratic central administration. However, the emphasis of the development targets must change not

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only in the sectoral characteristics but also in the supported functions. Instead of the investments in physical infrastructure more emphasis must be given to the support of human capabilities, technology learning and innovation. Also the functional routines of the central government must change from traditional planning to more market conform entrepreneurial behavior. *Industrial policy* (or better phrased active structural policy) must employ enabling tools with an increased emphasis on *STI* policies. Ricz (2019) does not mention protectionist measures of trade policy and other market regulations. However, it is evident that also these are effectively applied by many countries. It is most likely that governments will not miss them in their developmental policy strategy.

The toolkit of outright protectionism has been amended in order to conform with international agreements based on the neoliberal conviction. The term "*economic patriotism*" instead of economic nationalism frames the new measures. Clift and Woll (2012) described the new concept in the context of post-crisis policy reactions reconsidering the previous neo-liberal suit. The expansion of state policies in the economy did not employ the classic protectionist measures (massive devaluation of currencies or import restrictions) or paternalistic tools (permanent increase of state ownership or increased subsidization of troubled firms). If such crisis management measures were applied they were usually introduced temporarily. However, more covert forms of protectionism were invented and applied with regular frequency in many countries in order to gain more control over open markets.

The concept of economic patriotism is defined as "economic choices which seek to discriminate in favor of particular social groups, firms or sectors… as insiders because of their territorial status…. Unlike economic *nationalism* economic patriotism is agnostic about the precise nature of the unit claimed as *patrie*. It can also refer to supranational or subnational economic citizenship" (Clift and Woll, 2012, p. 308). This concept uses territorial references in the definition rather than policy content. Therefore it can handle a wide range of state intervention including also liberal economic policies that are applied selectively. Economic patriotism is new compared to old fashioned economic nationalism because it is a response to the reconfiguration of economic governance and market

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interdependence. Governments became creative in assuring *traditional economic policy objectives* with new means. Paradoxically even liberalization and deregulation can serve the creation of new types of discrimination since they presuppose new active reregulation that can be designed in ways favoring selected actors. Economic patriotism may represent a shift from measures of classic protectionism to more indirect measures like discriminative product and process standards or state subsidies. Policy may also prefer selective liberalization in strategic sectors or the introduction of competition rules that prohibit standards common abroad.

Questions:

Which countries and on what basis have challenged the neoliberal agenda in the last decades of the 1990s and in the early 2000s?

What are the main constituents of the East-Asian developmental state model?

Why are the tools of the East-Asian developmental state model not applicable today?

What is the difference between value creation and value capturing?

Considering the global value chain, what stages of the chain capture most value?

How can the developmental state concept be adjusted to the current circumstances of globalization?

What are the main constituting elements of industrial policy today?

What is the essence of the concept "economic patriotism"?

Sustainability - global policy coordination

The complex vision of the *global production networks* and the attached *stakeholder concept* requires the due treatment of the social and natural environment. Their smooth functioning is not possible without securing the sustainability of the process. *Sustainable development* presupposes social, political and ecological balance. In this section I discuss the later: the economic policy requirements of environmental sustainability. The production and consumption process of goods creates unintentional side effects, negative externalities. Three aspects of environmental damage are especially important. First is the over-use of non-renewable resources (exploitation of fossil fuels, clean water resources and the rainforests). The second is over-burdening of natural environment with waste and pollution. The third aspect is the destruction of ecosystems to create space for urban and industrial development.

From a stricter production viewpoint the main issue is that in all production processes the materials used are dispersed and transformed. They enter in a state of low entropy (useful materials) and leave in a state of high entropy (useless materials, like heat emissions or mixed municipal waste, etc.). Material recycling process cannot be 100 % efficient. Despite all efforts to recycle the unused energy and materials involved in the production there will still be residuals left over and *environmental damage*. The negative externalities are of various kinds and vary in their *geographical extent*. Some of them are spatially localized like emissions of factories or the noise of an airport. On the other hand, the smoke pollution from a factory or the impact of aircraft fuel combustion have more extensive geographical effects, particularly in the atmosphere. These negative externalities are realized far away from the location of the polluter often in different countries. Some environmental effects are indeed *global*. The environmental problems of all aspects of production, distribution and consumption raise important questions about the sustainability of the economy and society in its current form.

Despite of the size and long-lasting nature of the environmental damage that global production can cause no respective collective effort had been made for long, until the late 1980s to manage the problems. This is especially striking when

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compared with repeated and evolving efforts to regulate *global finance* and trade with the help of specialized international institutions. Today the environmental issues are overwhelming and obvious: *climatic change* has been proven by various analyses, waste dumping in the rivers and oceans can be experienced easily. Environmental sustainability provokes hot debates and violent civil actions because the long negligence of the issues by the most influential stakeholders: global companies and governments. Many of them continuously negate the mere existence of the problems (e.g. Brazil's President Bolsonaro on deforestation in Amazonia or the former US President Trump on climate change). Instead of thinking responsibly about the scientifically proven hard facts politicians tend to disparage worried actors or interpret the worries as political attacks of NGOs (e.g. Hungary's MP Orbán). Though these actions are only short episodes and environmental cautiousness is increasing, there are worries about the speed of environmental degradation and the effects of actions against it. If the process can be reversed at all?

Climate change

The *United Nations' Organization* has been at the center of global climate change initiatives from the late 1960s. Inspired by the 1972 Stockholm Conference on the Human Environment many countries set up national environmental agencies. In 1988 the UN established the *Intergovernmental Panel on Climate Change* a kind of scientific core of the organization's environmental program. It reviews research, publications from all over the world to combine existing knowledge relevant for the understanding of the risk of human-induced climatic change, impacts and options for adaptation and mitigation. The organization's findings formed the basis for the first comprehensive policy framework on climate change the 1992 Framework Convention on Climate Change (UNFCCC). The key objective of the agreement was the stabilization of greenhouse gas concentration in the atmosphere. The agreement was based on voluntary reduction of carbon dioxide levels: it encouraged industrialized countries to stabilize their emission levels.

The lack of major impact of the agreement led to the drafting of the *Kyoto Protocol* in 1997. This protocol incorporated biding

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MAGYARORSZÁG KORMÁNYA
Európai Unió
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emission targets over the period 2008-12 for 37 developed countries. The protocol came into force in 2005. A total of 184 countries signed with the not negligible exception of the USA. The details of the Protocol's implementation was worked out with the participation of the USA. In 2005 an agreement was reached in the implementation measures. Developed countries were expected to invest in sustainable development programs in developing countries in order to earn additional emission allowances. Developed countries were also allowed to invest in other developed countries (mainly in Eastern Europe's transition economies). In doing so they could earn further carbon allowances to be used to meet their own emission reduction commitments. By 2012 all 36 countries that fully participated in the first commitment period complied with the Protocol. 9 of them used the flexibility resort measures and funded emission reductions in other countries. The 2007-8 financial crisis eventually helped reduce the emissions. Even though the 36 countries reduced their emissions, the global emissions increased by 32 % between 1990 and 2010 (UN, 2012).

The second commitment period was agreed in 2012 in Doha. The composition of signatories changed, many of those who signed the first Protocol resigned or did not take on new targets in the second period. The new round entered into force as of 31 December 2020 following its acceptances by 144 states. Later on negotiations were held in the framework of the UNFCCC on measures to be taken after the expiration of the second commitment period. This resulted in the 2016 adoption of the *Paris Agreement*.

This Agreement sets goals to limit the Earth's long-term temperature increase. The goal is to keep the increase in global average temperature below 2 Celsius above pre-industrial levels. This should be done by reducing emissions in order to achieve a balance between emissions by sources and removals by sinks of greenhouse gases. The Agreement also envisages making financial flows consistent with low greenhouse gas emissions targets and climate resilient development. Signatories must determine, plan and report on the contribution to mitigate global warming. No specific mechanism forces countries to set a specific emission target, but each target should go beyond previously set targets. The Agreement was signed by 197 countries, 189 ratified it. The most important exceptions are the

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USA and Iran. This time China and India signed and ratified the Agreement which was a major desire of the USA.

The effective implementation of the Paris Agreement's goals are to be achieved through energy policy developments. The so called 20/20/20 targets mean a reduction of carbon dioxide emissions by 20 %, via the increase of renewable energy's market share to 20 % and a 20 % increase in energy efficiency. Each country should contribute to this goal through a so called *nationally determined contribution* (NDC). The contributions are not binding as they lack the specificity and normative character. There will be no mechanisms to force a country to set a target or enforce the meeting of a target set. There will be only a "name and shame" system. As the Agreement does not provide consequences if countries fail to meet requirements the consensus of this kind is rather fragile. The weak conditions of the Agreement reflected the relative failure of the second commitment period of the *Kyoto Protocol* with its substantially fewer ratifying nations.

The most intractable problem in climate agreements is the extent to which developing countries should be expected to adopt measures that could mitigate their future economic development. Most of the stock of carbon dioxide already in the atmosphere was produced historically by developed countries. It is argued therefore that developing countries should be given preferential treatment. Developed countries argue that most of the growth in emissions in future will come from developing countries, especially the three largest ones: China, India and Brazil. Without the commitments of these developing countries the USA and some other developed countries will not take binding commitments.

Social sustainability: the UN Millenium Development Project

The other most burning global sustainability problem is *poverty*. Effects of globalization destroyed or at least altered living conditions of poor rural population worldwide. Even without the extensive draught in Africa or the devastation of wars in the Middle East the mere population growth in the poorest regions of the world creates most serious nutrition and health problems. Developed countries' citizens tend to neglect the

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problem since they have their own ones. Take the examples of protest votes of disappointed US or British citizens. Or the miraculous political rise of the Party of Disappointed Citizens (ANO) in the Czech Republic. They certainly do not know what everything they could miss if they were born in a least developed country or if their daily income would be less than US$ 1.25: the statistical threshold level of extreme poverty. They probably started to surmise something when the news reported about the exodus of Syrian citizens or the terrible horrors of sunk overloaded refugee ships in the Mediterranean See. Surmise only, since most protest voters have never met foreigners let alone refugees. While populist governments try to fill this knowledge gap with great ambition with falsified information some responsibly thinking organizations especially around the United Nations Organization (UNDP) try to develop action plans to help reducing poverty in the world.

Poverty is a major problem in many parts of the world. During the last two decades development programs but even most importantly the robust economic development of *China* and India helped the reduction of mass poverty. Yet, even if we started to think about China as a middle income country with huge economic potential, we should not forget that 30 years ago half of its population lived below the threshold of extreme poverty, and even today hundreds of millions of Chinese people live around that threshold level. In countries with less favorable development conditions, especially in *Africa* poverty remained stickier. For many years aid programs have been devised to help alleviate poverty's major manifestations. Such aid has generally fallen far below the needs. Moreover such aid could not bring long lasting effects and improvement. The main areas of aid were improving health conditions (e.g. the supply of vaccines for combatting childhood diseases or the provision of mosquito nets against malaria) and elementary education. Unfortunately, these aid programs could not fundamentally change the income status of the recipients but provided certain services for free. Poverty remained in place. Combatting poverty requires the improvement of health conditions and the enabling of people to learn, but also an improvement of the economic situation of the countries
including mass scale job creation.

Figure 8. Extreme poverty in the world

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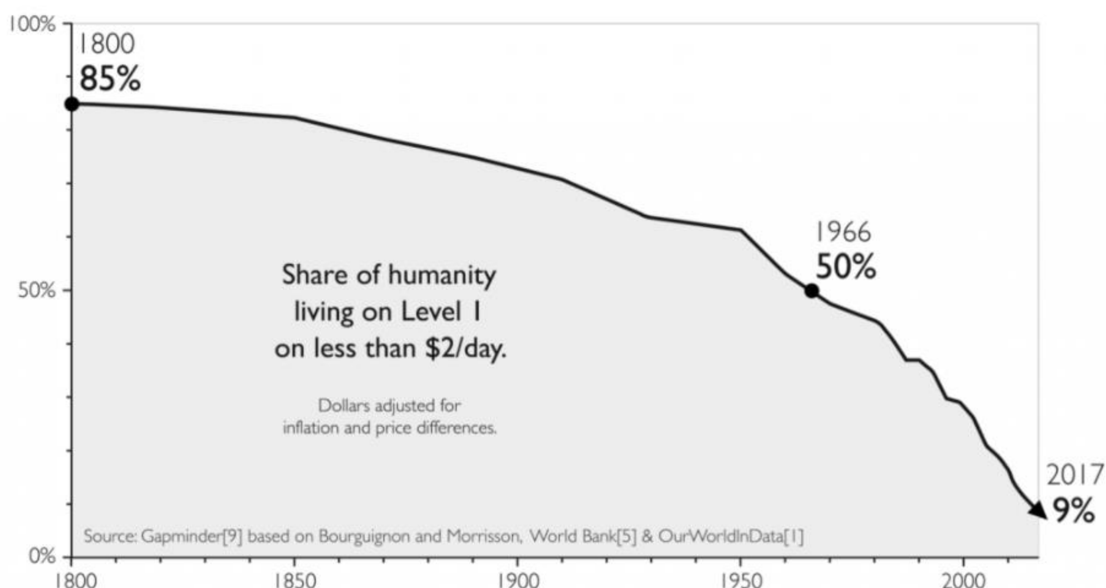

Source: https://www.gapminder.org/topics/extreme-poverty-trend/

In 2002 a meeting of heads of state in New York adopted the *UN Millenium Declaration*. The aim of this mindset was the eradication of extreme poverty until 2015 as part of a broad and comprehensive development program. The *Millenium Development Goals (MDG*) set time-bound targets to achieve progress in reducing income poverty, hunger, disease, lack of adequate shelter and exclusion while promoting gender equality, health, education and environmental sustainability. The G8 finance ministers agreed in 2005 to provide enough funds to the *World Bank* and the *International Monetary Fund* and the *African Development Bank* to cancel US $ 50 billion debt owed by members of the *heavily indebted poor countries (HIPC*). This would allow them to redirect resources to programs for improving health and education and for the alleviation of poverty.

Progress towards reaching the goals has been uneven across countries. *Brazil* achieved many goals while others were not on the track to realize any. The major successful countries included *China* (with a decline of poverty population from 452 million to 278 million) and India. The *World Bank* estimated that the poverty reduction target of the MDG (halving the number) was achieved in 2008 mainly due to the results of these two countries. Many countries

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made significant progress in certain MDG indicators of various areas (e.g. decrease of infant and maternal mortality). Between 1990 and 2010 the population living on less than US $ 1.25 a day in developing countries halved to 21 % or 1.2 billion people, meeting the MDG target. Sanitation and education targets were missed.

Much criticism was raised concerning the design and implementation of the MDG programs (Easterly, 2009). The general criticism included the perceived lack of analytical power and justification behind the chosen objectives (the 8 main areas), and the concrete programs. The MDGs lacked strong objectives and indicators for within-country equality, despite significant disparities in many developing countries. An important lesson of the programs was that many successful program was designed in iteration with local organizations and governments. The local needs and circumstances could be better objected, the effect of the efforts was stronger (less money was stolen) since local politicians could directly benefit politically from the programs. The environmental sustainability received relatively little emphasis in the programs despite of its importance in the program plans. Nevertheless, this program was the largest and most successful integrated aid program ever made by developed countries.

The future of internationally coordinated policy actions

The overview of the international climate programs and poverty reduction efforts leaves considerable worries about the future of international policy coordination. The programs were moderately successful and their continuation was not based on their success but rather the political decisions that governments should not abandon them. Most governments, led by the Trump administration in the USA tended to withdraw from international negotiations. The perceived threats of environmental and social unsustainability of the future development of mankind seemed to be pushed into the background by short-term local/national political games. Populism is on the rise again, and this is facilitated by the globalization process' effective mass media.

International policy coordination has no alternative. Developed countries' future wellbeing and dominance cannot be preserved with the policy of splendid isolation. It is the globalization process

that makes even the largest countries vulnerable if they do not make joint efforts to master the challenges. Environmental issues and poverty reduction are issues where the generosity of developed countries is unavoidable. They simply cannot afford stepping back only because some of the larger developing countries do not make the efforts they are expected to do. China was the primary scapegoat for long. In effect China does not fit well into the world system envisaged by the developed countries. China is not a democracy and it does not have a market economy. Nevertheless, China is an objective factor, large enough to exercise global effect, a country that cannot be neglected. Moreover, its development success made China also more flexible especially in international trade negotiations but also in the latest climate talks: the country can afford flexibility. It is not an excuse any more that the developed world but most notably the US would not make unilateral efforts.

At the time of preparing this manuscript the newly elected US President is about to take his office. One of his promises was to return to the Paris climate agreement on the very first day of his office. This is only a few days' time now. I will see how far the policy orientation of the USA will change. This will strongly influence other countries policies and even more importantly the work of the international organizations. If the USA will not take back the initiative in international politics further escalation of the conflicts in all cooperation areas would follow.

Questions:

How was the United Nations' Organization's climate policy shaped?

What is the Kyoto Protocol, and what were its main aims?

What is the essence of the Paris Agreement?

What is the fundamental reason of disagreement among developed and developing nations concerning global climate policy?

What was the UN's Millenium Development Project?

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What were the results of the Millenium Development Goals?

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