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***Mövzu: Digital iqtisadiyyatın Skandinaviya modeli: inkişaf etməkdə olan iqtisadiyyatlara tətbiq***

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# ABSTRACT

Currently, more than half of the world's population is using internet, one third in a social network, 53% mobile and there is now something new that is changing everything we are used to, covering all ages, races and geographies on the planet now: Digital Economy.

It is called the next economic revolution. This new economic revolution and of course is not just about the classical economy, the devices, or the big data, but about humans.

The digitizing economy is expected to expand and change the way we are used to work, our lives and our global society. The things we do now are accelerating this change and we will continue to do so in the future.

Not too far away if we just look for 10 years before there was just one company (Microsoft) in world's largest companies by market capitalization from IT sector and the rest was energy and finance companies, now 5 and the most powerful ones are from IT sector.

In this paper I will explain how the structure of Scandinavian digital economy is? how it works. After information about Scandinavian countries I will explain current situation of some emerging markets to give general idea about digitalization level of them and then I will give recommendations to make their economy more digital.

# INTRODUCTION

In the era of the industrial economy, production growth is characterized by an increase in the physical size of the enterprise - an increase in the number of equipment, its capacity, the expansion of staff, etc. Growth would not be possible without significant financial costs, which were capable for only old players or newcomers who have more resources.

In the second half of XX century humanity has passed to its next stage of development - the information society. This was facilitated by the rapid development of telecommunications technologies, the mass distribution of personal computers and the development of a global internet network.

At present, the world enters the era of the digital economy, which radically changes the situation:

- The main resource is information, and this source does not run out of use;
- Retail space on the internet is unlimited;
- The company does not need to be big enough to compete successfully;
- The same physical resource can be used an infinite number of times to provide various services;
- The scope of operational activities is limited only by the size of the Internet;
- The client becomes a "deity".

Let's see how today's economy works with examples from 5 most digitalized companies.

UBER: The biggest taxi company on the world-has no cars.

Airbnb: The largest supplier of accommodation - owns no rooms or real estate.

Facebook: The most popular and biggest media-sharing network- does not produce content on its own.

Netflix: Netflix is the world's largest provider of streaming media delivering TV shows- lays no cables.

Alibaba: The biggest online store based on China- has no inventory.

How can these brands, which do not comply with classical “produce-market-sell” order that we are accustomed to, can get ahead of the entire market?

The common point of these five giants is "crowdsourcing". In other words, they should create a common platform for presenting services to customers that they are ready to offer. They do not have to do anything besides being involved in the process itself, but also creating a digital platform to provide service and collect in millions. All stages of the purchasing process are easily performed by the customers themselves.

But what does exactly digital economy mean and why did I choose Scandinavian countries as an example?

The digital economy is a system of economic, social and cultural relations based on the use of digital technologies. Sometimes, it is called the internet economy, a new economy or a web economy.

The improvement of the digital economy began to appear in the late 1950s with the digital revolution which we call the transition from mechanical and analog electronic technology to digital or manual electronics. But it isn't just making your business online, it's also making government services, education, healthcare, banking system, agriculture digitalized.

The term also points to radical changes in the second half of the 20th century caused by digital computing and communications technologies. Like the agrarian and industrial revolutions, the digital pointed to the beginning of a new, but already informative, era.

And now the reason that I choose these countries as an example for digital economy: According to European Commission's digital index of 2017 Denmark, Finland and Sweden are Europe's best performing countries in digitalization. Norway and Iceland

aren't included to ranking because of not being European Union member, but their country reports show that their scores are equally high as much as its neighbors. The index combines more than 31 indicators from each country and rank each country based on its digital performance ("Programme | Digital4EU 2016"). Their performance is ranked due to 5 principles:

- Connectivity- Fixed broadband, mobile broadband, broadband speed and prices
- Human capital- Basic skills and internet use, advanced skills and development
- Use of internet- Citizens' use of content, communication and online transactions
- Integration of digital technology-Business digitalization and e-commerce
- Digital public services – eGovernment

Denmark, Finland and Sweden are ranked first, second and third in the index, and the Netherlands ranks in fourth. Luxembourg, Belgium, Great Britain, Ireland, and Estonia also belong to a group of high performing countries.

Because of that much good performance at these index Scandinavian countries are my main example for digital economy.

# **DIGITAL ECONOMY & SCANDINAVIAN MODEL OF DIGITAL ECONOMY CHARACTERISTICS**

World is moving towards the digital economy. Information technology is making dramatic changes in our lives. The structure of the economy is changing. The person himself changes, his way of life, way of life, preferences and goals. Accordingly, society is changing, way of life. Today we are experiencing the greatest information and communication revolution in the history of mankind.

Under the influence of digital transformation, the traditional branches of the national economy, finance, transport, healthcare, education, commerce, public administration, etc., are fundamentally changing.

New models of business, logistics, production, communications between people are being created. A new paradigm for the development of the state, the economy and the whole society is being formed.

The universal digitalization, which has swept the whole world today, is compared to electrification, which at one time radically changed the life of a person.

According to the international research company McKinsey in the next 20 years, 50% of all work operations in the world will be automated, which is comparable in scale to the industrial revolution of the 18th - 19th centuries, which allowed individual countries to break into world economic leaders. Also, the digital revolution will make it possible for those countries who can make good usage of digital technology trends in their economy and society.

## **New fabric of the economy**

The digital economy is not a separate industry, but an economical way in which information data is an independent economic entity. In other words, it is the data



economy, their creation, transmission in a huge volume, storage, protection, processing, analysis and decision-making on their basis.

In fact, this is a new basis for the development of public administration, economy, business, social sphere, the whole society.

There is a gradual transition to the total and ubiquitous use of data-based decision-making techniques. The performance of any qualified specialist can be improved many times today thanks to the technologies for working with structured digital information. As the Minister of Communications and Mass Communications of Russia N. Nikiforov said, "the new oil economy is becoming the data."

The digital economy has become a new driver of socio-economic development. So, for example, the introduction of the principles of digital economy allowed Estonia, Israel, Ireland, Sweden to make a breakthrough, which is measured in 12-20% of the GDP of these countries.

In the digital economy, new opportunities for entrepreneurial activity and self-employment are rapidly expanding. In China, for example, the rapid growth in the e-commerce sector has led to the creation of 10 million jobs in online stores and related services, representing about 1.3 percent of all jobs in the country. In Kenya, the M-Pesa digital payment system provides additional revenue for more than 80,000 of its agents. In Uganda, the eKeebo service allows self-employed chefs and amateur to cook and sell homemade dishes without obtaining a restaurant license. In Morocco, rural artisans (some of them illiterate) sell their products around the world through the Anou platform.

In recent years, the most successful innovations were technological, in the field of business models. For example, the company Uber, which created a mobile application for the search, calling and payment of taxis and private drivers,

revolutionized the transport of passengers not through a digital platform, but a new business model. The capitalization of the company created in 2009 exceeds \$ 51 billion and is comparable to the capitalization of Gazprom, it operates in 76 countries around 600 cities.

Another example - in the US in the tourism business over the past 15 years, the revenue of online hotel booking services has grown 10 times, while the number of travel agents has halved.

There will also be a lot of losers in the digital economy. A new way destroys many traditional sectors. According to forecasts of analysts, in the course of 10 years, 6.5 million jobs will disappear only in Russia, and for 25 million jobs the requirements for people's skills and skills will be significantly changed. Artificial intelligence displaces a person from areas considered to be intellectual. Accountants, proofreaders, tour operators, realtors will almost disappear, lawyers will be reduced several times, etc.

## **CHARACTERISTICS OF NEW ECONOMY**

It is important for the new economy to respond immediately to changing conditions and adapt to them. In the widespread use of information technology in the new economy, the internet network, which is rapidly spreading worldwide, plays a very important role. Now I will talk about general characteristics of new economy:

### **Information**

The new economy is an information economy. The creation of knowledge in the information economy belongs both to information workers and to information consumers, that is to people. The end result of consumer preferences and the reflection of the production of information, the demand for intelligent products in every part of the society has begun to multiply. The only certainty in today's business

world is "nothing is certain". In a business environment full of uncertainty, the only advantage of providing competitive advantage is knowledge.

### **Being molecular**

The new economy is a molecular economy. The former large corporate structure was broken up and replaced by individual groups and units that formed the basis of dynamic molecules and, consequently, economic activity. Instead of a massive approach, a molecular approach is beginning to dominate at every stage of economic and social life. Accordingly, the traditional organizational structure needs to be changed in accordance with the new structure.

The information worker (molecule human) working in new economies operates as a business unit on its own. Motivated, self-taught entrepreneurial employees are empowered to use their knowledge and creativity to create value freely through new tools.

### **Integration - Communication with the Internet**

The new economy is a network economy. The use of digital communication networks instead of analogue lines and the trend towards web-based systems from classical hosts have caused significant changes in the business world. Increasing bandwidth of communication networks facilitates access to various multimedia sources such as data, text, sound, image, and leads to the formation of some new institutional structures.

New technology communication networks enable small-scale enterprises to have advantages and access to basic resources such as large-scale enterprises have. They also gain flexibility, autonomy, and the ability to move quickly, as large businesses become more divided and functioning to turn into molecular clusters.

### **Disintermediation**

The new economy is not needed by intermediaries between producers and consumers due to digital communication networks. Many institutions in the private and public sector are largely removing intermediaries from the middle by directly communicating with consumers through networks.

### **Sectoral Change**

While the automotive sector is the key sector in the industrial economy, the dominant sector in the new economy is the new media sector formed by the merging of the computer, communication and entertainment industries that make the way to the prosperity of all other sectors.

The new media sector completely transforms people's ways of doing business, working, enjoying and thinking, lifestyles and therefore supply-demand.

### **Innovation**

The new economy is an economy shaped on the basis of innovation. Innovation means that science and technology will be renewed in a way that will provide economic and social benefits. Innovation covers all processes of science and technology effectiveness. The expectation from innovation is that this benefit is combined with a marketable, concrete outcome, which is to be transformed into an intellectual theory, action and result in science and technology efficiency, and perhaps very important in terms of meaning.

The basic principle of the new economy is expressed as "outdate the fashion of your own product". If a new and successful product has been developed and put into the market, the target is to reveal more of this product and thus the necessity of outdating the first product's fashion. If you do not keep your own product outdated, someone else will do it.

### **Manufacturer and Consumer Integration**

The distance between producers and consumers in the new economy is becoming increasingly blurred: With mass production taking place in large quantities according

to customer demands, producers have had to produce special goods and services according to the pleasure and preferences of individual consumers. Due to the increase in information and information-based products and services in the new economy, consumers are not only using information and technology but becoming information and technology producers.

### **Speed (Immediate)**

The fact that information in a digital economy is something that needed urgent, demonstrates that it has become a fundamental factor in economic activity or business success. Today, the requests of the customers are taken from the electronic road, evaluated simultaneously and the related documents are sent back via electronic media and the databases are updated continuously.

### **Conflict**

It seems that a new economic policy is bringing with several problems such as power, autonomy, access to knowledge, quality of capital, business quality, and democratic process.

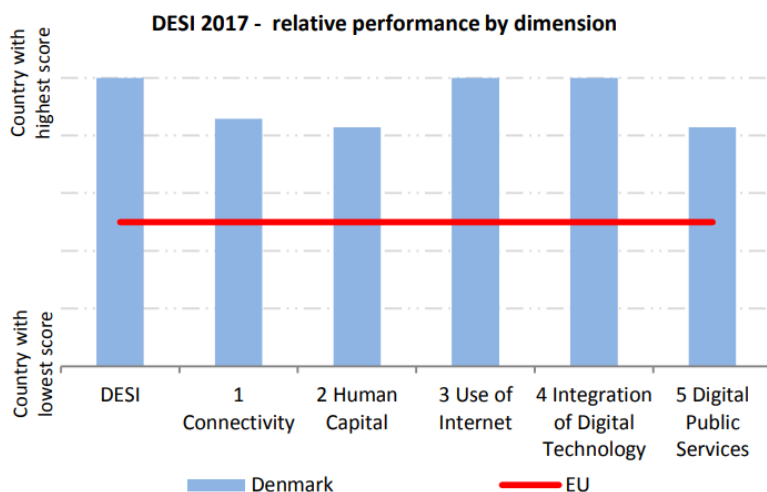
Major changes in many aspects of human existence have conflicted with the old culture. Therefore, it is inevitable that today there are serious conflicts between structures, institutions and organizations. The new economy raises the question that the concept of conflicting forces must be re-discussed.

At the macroeconomic level of analyze, all Nordic countries have similar outlook for social policy and couple of common problems. In the region, there is a huge demand for more efficient use of ICT in the public sector, as well as the provision of fast and efficient public services to businesses, other government agencies and citizens. The first hypothesis of this report is that the Scandinavian region is highly productive and mature in terms of digitalization in the public sector and that the potential benefits for

citizens, businesses and the government themselves are related to the expansion of digital cooperation between governments.

## Denmark

### Valuation of country.



In Denmark, the provision of digital broadcast services and user perception is reflected at high rates in international ratings. Legal tools are used as a basic tool to facilitate the political support and commitment to the modernization of public

services through digitization of public services. Other areas of information society are estimated to be relatively lower than Denmark's northern neighbors, such as e-government services, infrastructure and openness.

Denmark has a rule that basic data is available for all businesses, individual and all public authorities and it's considered like common digital resource. This data can be used for both commercial and non-commercial purposes. Danish government also plays huge role in digitalization strategies such as Danish Agency for Digitalization goes beyond than just coordinating, they regularly monitor the processes of digitalization and reports progress of public projects. In general, we can say that Denmark with Finland has the strongest coordination due to addressing digital issues through Danish Agency for Digitalization.

The Danes have banned cash in clothing stores, gas stations and restaurants in the first phase of a plan whose medium-term goal is to make the country the world's first without coins or bills. In fact, the Central Bank of Denmark no longer manufactures

them. One in three citizens of that country use Mobile-Pay, an application created in 2013 that allows you to transfer money to other phones or accounts.

### **Performance in international rankings**

Denmark has one of the most advanced population due to internet usage, more than 92% of Danes using internet regularly according to European Commission's report. Average of EU was 75% in a same time. In their business activities almost 25% of Denmark businesses works with online orders.

Country perform very well in most of categories but according to OECD's OURdata index which measures data availability, promotion and accessibility Denmark does not has central open government data strategy to meet need for data. Also, Denmark has lower scores at Network Readiness Index according to The World Economic Forum's publishes when it's compared to its Nordic countries and its ongoing issue in their politics.

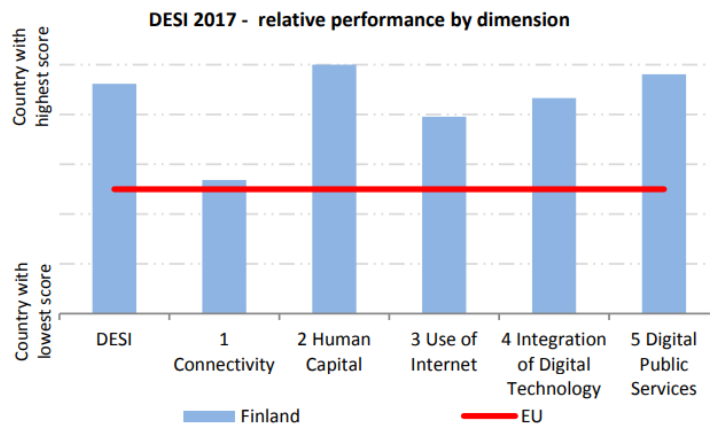
### **Availability of data**

As I mentioned below Denmark has a rule that basic data is available for all businesses, individual and all public authorities, it's considered like common digital resource and this data can be used for both commercial and non-commercial purposes. Also, Danish Agency for Digitization has The Open Data Innovation Strategy to which aims to develop a concept for business and citizens that explains how they can access government data.

But currently there is not any national data portal, Denmark government believes that Common Public-Sector Data Distributor will fix it soon.

### **Governance**

Government's ICT policy controlled through Ministry of Finance and their agency for it is Danish Agency for Digitization. Danish Agency for Digitization is regulating most service related ICT and infrastructure and negotiations for budget of ICT during year up to them.



## Finland

### Valuation of country

Finland also has same high results as Denmark, also they have most exciting job at ICT development in the public sector, with the “Palveluväylä” they can exchange data through government

organizations and they have strongly open data community and policy to access data freely. Also, Palveluväylä makes available to make international co-operation between countries, for example Tax Administration is working with Estonian Customs Board, because of this policy Finland considered most openly country to make collaboration at data between Nordic countries.

### Performance in international rankings

At Digital Economy and Society Index Finland ranks in 2<sup>nd</sup> place between EU member countries which means they have quite good performance. Their the biggest straight at this index is human capital on the other hand Finnish are above than Nordic average at downloading entertainment, creating websites or blogs.

Connectivity score of Finland is 0.64 and they randed 12<sup>th</sup> place in EU which is lower than average of Nordic countries. Fixed broadband is available for 97% of citizens and only 35% them chose to have fast broadband which is still below than Nordic and EU average of 37%. The biggest reason for these low performances is their excellent performance at mobile broadband. They have first place at mobile



broadband and even they are almost 2 times more powerful than EU average which was 147 in June 2016 when it's 84 for EU.

### **Availability of data**

In Finland there is an available data from landscape to climate, finance culture etc. Freely data resources are also part of government fiscal plan and every year Ministry of Finance asks for plans from administrative branches to make them opened. In September 2014 data portal opendata.fi or aviondata.fi (both are same) launched to provide data for businesses and individuals.

### **Governance**

The Ministry of Finance is main financer of digitalization policy of Finland but there isn't any clear institution to define goals and direction for IT development and national priorities. Currently there is 3 institutions to define directions:

- The Prime Minister's Office
- The Government CIO office at ministry of Finance
- Ministry of Economy and Employment

## **Iceland**

### **Valuation of country**

When we go into details in some areas Iceland is considerable powerful than some of its neighbors but in others they are relatively wear. Country don't have centralized system for ICT, but they have less actors than their neighbors such as Norway and Denmark. But it's not fair to compare Iceland with other Nordic countries because of its smaller population and economy.

### **Performance in international rankings**

Fixed broadband is available to 98% of homes in Iceland (higher than EU) and networks are capable to provide at least 30Mbps for more than 90% of homes which is still more than average of EU, 68%. Icelanders are active in social network (84%) s, also reading online news (95%) and magazines. More than 83% of population have

enough skills to benefit from opportunities offered by digital economy and society. For the most of indicators Iceland is above than EU average.

### Availability of data

According to eGovernment strategy of Iceland until 2025 population, businesses and stakeholders will have access to non-personal data and basis for state policy will be openly accessible data in a single portal for databases. In 2013 digital maps and spatial data of Iceland become available free of charge. Iceland have just one open data portal opingogn.is which is only 44 databases available.

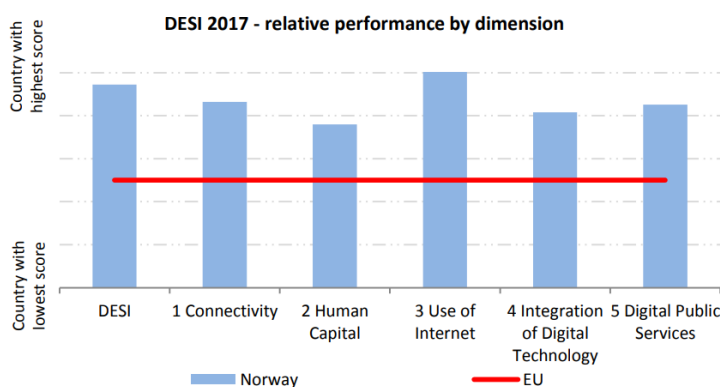
### Governance

Digitalization in Iceland controlled by Ministry of Interior and policy operated by special management team “Information Society Taskforce” under the control of ministry. The Chairman of team supposed to increase usage of information technologies, improve digital services and increase effectiveness of government services.

## Norway

### Valuation of country

Norway has the second most advanced digital economy in Europe and only country which was able to beat Norway was Denmark. Because of Norway isn't an EU



member there isn't any Digital Progress report by EU, but they are member of EU digital single market through EEA Agreement. Norwegians are quickly adoptable to technology and they use it their daily life such as eGovernment and online payment

services. They also have developed system to make digitalization easy to population and SME's.

## **Performance in international rankings**

Country isn't ranked with EU countries but we can give an idea with scores.

Connectivity score of Norway is 0.77 which is better than Denmark 0.76(4<sup>th</sup> place in EU). Also, its higher than average of EU 0.63. Norway has full coverage of 4G.

When we compare human capital with Denmark we can see lower score but it still higher than average. More than 96% of population use internet and 94% of Norwegians pay bills online when it's compared to Europe (59%) it's relatively high. Also 94% of population read news online and they are above than average at business digitization, e-invoicing and cloud computing.

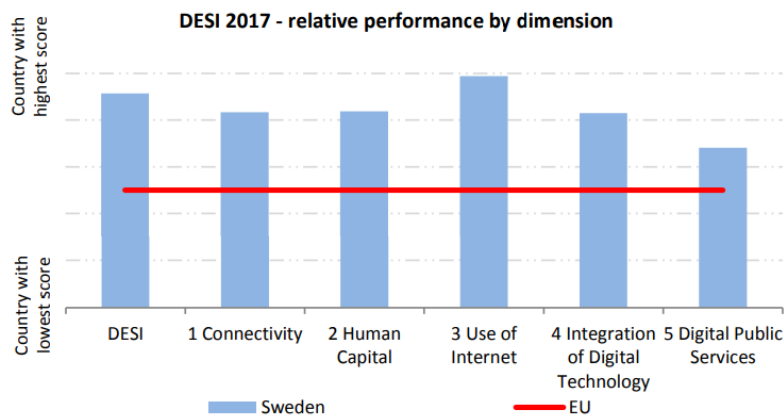
Somehow country surprisingly has low score at Integration of Digital Technology Index compared to its Nordic neighbors, but when we consider that Denmark is first due to this index and country's score is 50% higher than average of EU we can say that country still does well. Country does well in public services also, but re-use of information is lower than previous year.

### **Availability of data**

Openly available data is an important area of digitalization for Norwegian government and it's organized and controlled by Agency for Public Management and eGovernment and shared in data.norge.no portal which has more than 450 datasets available for agencies and businesses. Ministry of Environment published open maps and real estate data which presents land and sea map, real estate data and detailed map data.

### **Governance**

Policy for digitalization regulated by Ministry of Local Government and Modernization. Their responsibilities are making digitalization strategy and providing, coordinating eGovernment services to businesses.



## Sweden

### Valuation of country

Today Sweden boasts a successful, diversified and exceptionally competitive economy - according to the latest indicators, according to

the World Economic Forum, it is in the ninth place in the world. The same high bar, according to the World Bank, Sweden and in the ranking of the most convenient trading partners. This is not surprising: openness and a liberal approach to international trade are the defining features of the national economy. For the welfare of a small country with a huge economy, the emphasis on exports is vitally important. Swedish enterprises sell a wide range of goods abroad. From year to year, the country maintains a positive trade balance.

Along with the prosperity of traditional industries, Sweden has made a breakthrough in the modern sectors of the economy - digital technologies and telecommunications - in recent decades. The loudest examples of success - the developer of IP-telephony Skype or music streaming service Spotify.

On the reached Swedes do not stop. For ten years in the total economic pie, the share of information technology has grown to 16%, and already 5% of the working-age population is employed in the IT industry. Its distinctive feature in Sweden is the huge number of young small businesses. Not without reason, Stockholm is recognized as one of the best cities in Europe for launching startups in the field of digital technologies.

### Performance in international rankings

Sweden ranked in 3<sup>rd</sup> place between EU members due to Digital Economy and Society Index in 2017. Due to connectivity country highly above than EU average (99%) and there is 4G coverage for 100% of country, fixed broadband is available for

99% of households and their long-term goal is coverage of households and businesses with 100 Mbps until 2020.

According to their human capital Sweden places in 4<sup>th</sup> place and they have second highest number of ICT specialists between EU countries, but number of graduates are declining since 2015. Swedish National Agency for Education says that number of computer and tablets used in schools increasing, but students don't feel that their skills improved.

In the use of internet country is second best in EU, in 2016 more than 87% of Swedish read news online, 51% make video calls 75%, more than 89% of banking services done online.

Between business digitization activities Sweden ranks 4<sup>th</sup> place, they all try to become more digital friendly but there are only 33% of enterprises using e-Invoicing.

### **Availability of data**

There isn't any centralized national open data page for data sets. All of open data resources connected to Sweden's Innovation Agency and currently 50 datasets available.

In 2014 digitalasverige.se webpage launched and let to publish data and information for anyone to search, compare and share.

### **Governance**

The structure of Swedish governance is a bit different from its Nordic neighbors with its power. E-Government policy done by Minister for Housing and Urban Development which is followed by Ministry of Enterprise and Innovation. Municipalities and regional authorities are independent of the state.

As we can see from information about countries we can say that in all of these countries' digitalization, digital services are high level and it provides high-quality government services. In details they are identical but when we look general they all have high level of digitalization.

In general European Commission's Digital Economy and Society Index 2018 shows that Nordic countries lead the whole Europe in terms of their availability, governments incorporation with local and global businesses to develop more advanced economy with the help of tools of digitalization and Sweden leads these list with its high level advancement of population at usage of internet, mobile devices and digital services.

One of the main reasons behind high level of digitalization is government's role. In all of those countries governments almost forces population to digitalize and it brings faster development and adaptation to process, another policy of governments are supporting policies such as scholarships for IT students, development of IT universities, support for both foreign and local IT startups as well as green tech such as electric cars. Norway and Sweden drivers do not pay road tax or parking and charging fee if they use electric cars like Tesla or Smart.

# CURRENT SITUATION OF EMERGING ECONOMIES

To date, the number of mobile connections exceeds the population of the Earth. And the number of people on the planet who have access to a mobile phone exceeds the number of people who have access to a normal restroom. Number of interstate digital information flows increased several times, which provided more than a third of world GDP in 2014.

Obviously, Asia is the most interesting region in terms of developing the digital economy. China and Malaysia are striking proof of this. We can expect increased interest of investors and entrepreneurs in this region. However, it is important that political institutions in these countries are stable and support the technology sector. After talking about general information about digitalization and analyzing each of Scandinavian countries identically, lets provide information about situation at some emerging markets. It's not possible to write about all of emerging countries in 30 pages but I will generalize condition and give recommendations through analyze of 4 countries. Examples are all will from EAGLEs (emerging and growth-leading economies).

## **India**

Once the connection of the population to the Internet was considered a luxury for the state. Today, countries that want to develop their economies need Wi-Fi networks, training and equipment. India is one of the leaders in the field of IT, and yet there is a deep digital division in the country, mainly due to the lack of Internet access in rural areas.

In 2014, the Internet used less than 20% of India's population, which is about 1.2 billion people. The main barrier to access to the Internet is cost. In this regard, in July 2015, the Indian government launched the national program "Digital India". It is designed to provide electronic access of the population to public services by

developing the Internet and improving the communication infrastructure. The implementation of the plan to connect rural areas to high-speed networks and increase digital literacy is one of the main priorities of Prime Minister of India Narendra Modi

"Digital India" provides for the creation of broadband highways, which by December 2016 will cover 250 thousand local administrations and will allow delivering electronic services to the most remote corners of the country. The government pays much attention to the development of mobile communications: by 2018, mobile technologies should become available to residents of more than 40,000 villages.

### **Project "Digital India"**

Incentives for a new billion consumers in India:

- broadband access in each house;
- the rapid spread of mobile technology;
- public services;
- young workforce;
- application economics;
- social media;
- training and education;
- digital entertainment.

The digital economy and digital identity will help make economic activities more transparent and open new opportunities in such areas as:

- public infrastructure;
- "Smart" cities;
- e-government and government services;
- national broadband;
- digitalization of cable networks;



- mobile technologies (4G / LTE);
- Level 3 operators in cities and towns;
- public safety and Internet of things;
- deployment of Wi-Fi networks in schools.

The government program Digital India provides for the provision of infrastructure as a public service, which will significantly expand the digital opportunities of the country's residents.

According to industry experts, by 2020, more than 140 million Indians who do not use banks today will have access to mobile financial services, and 75 million children will be able to benefit from online training.

India is making considerable efforts at the legislative level to increase its level of digitalization. These include the Digital India program and initiatives aimed at increasing the use of electronic payments. Nevertheless, India should remember its low rate of development of the digital economy, since it can impede any such undertakings. To accelerate the digital development in such an environment, more extensive and systemic changes are needed.

The Indian economy is the most growing in the world. GDP growth in 2017 was 7.5%, and in 2018 is expected at the level of 7.8%. At the same time, global GDP grew by 3.8% in 2017. The emphasis on the technology sector and the demographic situation will keep India the fastest growing economy in the next decade.

In 2010, India initiated the digital revolution - the biometric identification program "Aadhaar" was launched, according to that every Indian citizen is assigned a 12-digit code, verified and verified by a fingerprint. This program became the foundation for another program focused on the banking sector - Jan Dhan. The goal of the program is to provide every resident of India with a bank account and easy access to it. Before the launch of the program, 35% of Indian families did not have bank accounts, and from 59% to 75% of transactions were made in cash. But this trend is changing rapidly.

In India, 800 million mobile users, and 430 million of them have access to the Internet.

***“We believe that the number of Internet users will double in the next 10 years and assume that by 2026, 915 million Indians will be connected to the Internet”***

Ridham Desai, Morgan Stanley. Head of India Research.

In addition, the government is even pushing the country to non-cash payments, limiting cash transactions and stimulating digital payments - its goal is to increase digital transactions six times in the coming years.

Another incentive for digitization is demography. In India, the number of young people entering the labor age and forming personal capital is growing.

In 2017, the share of digital payments in the personal consumption of Indians was 8%. This is lower than in other developing countries, such as Brazil (30%), South Africa (27%) and Russia (16%). Given the changes, analysts at Morgan Stanley believe that the value of this indicator for India will grow by 4.5 times - up to 36% by 2027.

The transition of Indians from cash to digital payments is a catalyst for economic growth. Electronic payments simplify control over tax evasion, increase business transparency, promote e-commerce and make capital markets more accessible to both companies and ordinary people in India.

In addition, India has a growing middle class. According to the PwC study, by 2025 the share of the middle class will be 46% of India's economically active population. It will be people who have money and are ready to spend it.

## **Russia**

Following the results of the meeting of the Presidential Council for Strategic Development and Priority Projects (July 5, 2017), the direction "Digital Economy" is included in the list of the main directions of the strategic development of the Russian Federation until 2018 and until 2025. At the same meeting, the program for the development of the digital economy was considered, which was later approved by the Government of the Russian Federation.

The goal of the Program is to create an ecosystem of the digital economy of Russia, in which the data in digital form are the key factors of production in all spheres of socio-economic activity.

The main end-to-end digital technologies are: distributed registry systems (block), large data, neurotechnology and artificial intelligence, industrial Internet, virtual and augmented reality technologies, robotics and sensor components, wireless technologies, quantum technologies, new production technologies.

The task is to create a fundamentally new, flexible regulatory framework for the introduction of digital technologies in all spheres of life. Already by 2019 laws should be adopted that regulate the use of Internet technologies of things, distributed storage of information (the blockage), mechanisms for collecting and using large data sets (Big Data), new information disclosure standards in the form of open data in the activities of government bodies etc.

With the participation of the government and private business, the basic infrastructure of the digital economy will be created, including broadband Internet to all settlements where more than 250 people live, secure communication lines and data processing centers. As a result, the share of households with broadband Internet access in the total number of households will be 97 percent by 2024.

It is supposed to multiply increase the output of specialists in the field of the digital economy, to solve the task of the national level - to achieve universal digital literacy. The proportion of people with digital skills should be about 40 percent.

By 2024, the number of graduates of higher and secondary vocational education, possessing competences in the field of information technology at the world average level, will reach 800 thousand people per year.

By the end of 2018, all hospitals and polyclinics will be connected to the high-speed Internet, which will allow using modern telemedicine technologies and remote doctors' consultations, a digital healthcare ecosystem will be formed, an infrastructure for the functioning of digital medical services will be created, etc.

By 2020, 80% educational institutions should have broadband Internet access (at least 100 Mbps), and by 2024 - all 100 percent. The same tasks are to connect government bodies, local self-government bodies, socially significant facilities.

The main idea of the Digital Economy program is to create in Russia a certain set of conditions for launching and accelerating the digitization of the habitual life and economic order. In general, the implementation of the program should lead to the creation of a sector comparable in its role with the oil and gas industry by 2024.

Russia will also have its own domestic crypto currency, which will be developed by the Central Bank. Cryptorubl is a full-fledged national currency, which will increase the non-cash turnover in the country. The state guarantees citizens and companies security for all risks associated with its turnover, just as in the case of ordinary, paper, ruble.

Now let's give some statistics about current situation of digital economy of Russia.

- The Russian telecom market is the largest in Europe, supported by a population of about 143.5 million.
- Internet users in % to population -73.4% in 2015

Estimated number of Internet users as a percentage of the total population. This indicator includes users accessing the Internet from all possible gadgets (including mobile phones) during the last 12 months.

- Share of households with Internet - 75% in 2016
- Users of mobile broadband Internet - 65.8% in 2016

The number of mobile cellular subscribers with data access (e.g., the Internet) over a broadband transmission rate in the forward channel (here defined as greater than or equal to 256 Kbps). Please note that this applies to potential mobile broadband subscribers and non-active subscribers.

- Users of fixed broadband Internet - 17.5% in 2016

Number of connections to high-speed broadband Internet

- Fixed telephone lines – 25% in 2015

A fixed telephone line (previously called main telephone line in operation) is an active\* line connecting the subscriber's terminal equipment to the public switched telephone network (PSTN)

- Number of stationary Internet subscribers - 26,881,463 (number) in 2015

The number of people with wired Internet access includes people with dial-up Internet access and people with fixed broadband Internet access. Only active users of the network who have accessed the Internet during the last three months are considered.

According to experts, Russia ranks first in Europe and sixth in the world in terms of the number of Internet users. According to the availability of cellular communication services, the country takes the second place in the world, on the availability of broadband Internet - the tenth. Over the past three years, the number of smartphones from Russians has doubled - more than in Brazil, India and Eastern Europe.

Tariffs for fixed Internet for Russian users are lower than in Western Europe by 44%, for mobile Internet - by 18%. The average access speed is quite high - 12 Mbit / s.

## **Indonesia**

The condition of digital economy in Indonesia is very apprehensive. In IMD World Digital Ranking 2017, Indonesia is ranked 59 out of 63 countries worldwide. There are three components of assessment in the rankings, namely knowledge, technology, and readiness to face the future. Of the three components, the saddest component is the component of readiness to face the future which is ranked 62nd.

That's why, Indonesia is considered as the most unprepared country to face the digital future. The condition is increasingly worrisome if the component of readiness to face the future is further explored, namely subcomponents of adaptive attitudes that ranked 63<sup>th</sup> in the world. That is, Indonesia's ability to adapt to digital developments is the worst in the world, including being under crisis-stricken Venezuela.

In the Asian Digital Transformation Index which discussed about digital infrastructure, human resources, and industry connectivity, from 11 countries in Asia given the assessment, Indonesia is in the last position in 2016. In addition, Indonesia got a score of 16 from the average score of 45,8. Thus, Indonesia is judged far behind other countries in terms of digital transformation.

In the ICT Development Index issued by the International Telecommunication Union in 2016, Indonesia ranked only 115 in the world. Indonesia's position in both indexes fell below neighboring countries such as Singapore, Malaysia, Thailand and the Philippines.

Though the potential development of digital economy in Indonesia is very large. Internet users in the country in 2016, according to the Association of Internet Service Providers Indonesia, amounted to 132.7 million people. That is, 1 out of 2 Indonesians are connected to the Internet network. With that number, Indonesia is one of the world's largest Internet users.

In addition, according to We Are Social and Hootsuite research in 2017, the growth of Internet users in Indonesia is the largest in the world with a 51% achievement rate in one year. The growth rate of Internet users is far above the world average of 10%. Not to mention the view of mobile phone ownership, the use of social media, the growth of the middle class, most of the young population, the urban population, the growth of e-commerce, and economic growth of the information and communications services sector in Indonesia is very large and will continue to increase.

In 2016, there were 76 million Indonesians with a Facebook account, the fourth highest in the world. Jakarta has been named the world's 'most active city on Twitter', while other platforms such as Instagram, WhatsApp, LINE, Path, and Telegram are all being used in unique and dynamic ways in a country with a voracious demand for online communication.

But connectivity to mobile broadband is very low in the country and even Indonesians who use their phones just for Facebook and WhatsApp they are connecting to internet with 2G satellite technology.

The Ministry of Communications and Information Technology have launched the e-Commerce Roadmap, targeting to have 1,000 new technopreneurs with a business valuation of US\$10 billion till 2020. Also, they are aiming to become largest digital economy in Southern Asia and achieve an online business value of US\$130 billion. The rapid growth of internet user's population becomes one of the reasons why Indonesia is in the spotlight. Indonesia has an enhancement in the internet user population about 19% per year. There is possibility that the internet user in Indonesia will reach 215 million people before 2020. To meet these targets country has 6 issues: funding, tax, consumer protection, communication infrastructure, logistics, as well as education and human resources.

## **Turkey**

A number of attributes are behind the trust that growth investors have in the country. First, Turkey's favorable demographics and good education system, with 50 percent of its population aged under 30, have created strong momentum for the economy. Second, the government has implemented crucial structural economic reforms in recent years.'

In April of 2016, the rate of computer users in the 16-74 years old group was 54.9% and internet usage rate was 61.2%. For the people are using computer or internet daily and even once in their life rates are 64.1 percent and 70.5 percent for males and 45.9 percent and 51.9 percent for females. Turkey computer usage and Internet usage rate was 54.8 percent and 55.9 percent respectively in 2015.

Fixed broadband internet access rate in Turkey increased from 37.4 to 39.5 in 2016, mobile broadband internet access rate increased to 65.2% from 58.7% The proportion of those who never used a computer in his life in Turkey, 45.1 percent; 38.8 percent of people who have never entered the internet in their life.

The justification of households not using the Internet at home in Turkey is: "I do not need to use the Internet" 59 %, " I use internet at business, school, elsewhere, such as Internet cafes" 29.4 %, "I think Internet connection fees are high " 28.6%.

In Turkey, most individuals referenced in the following 2 aims to use the Internet: Facebook and Twitter to create profiles on other social media platforms, send messages, photos etc. content sharing 82.4 %, watch videos from YouTube and similar sites 74.5% of users.

In last one year more than 40% of sales through internet was sportswear or clothes, 27% of them was traveling tours, car rental, etc.

In the last one year, 24.9 percent of the individuals who placed orders over the internet had problems. The most common problems in e-commerce were 'delivery is slower than specified' with 44.9 percent and "wrong or damaged product delivering the or service' with 42.1 percent.

Nationwide average download speed is 6.2mbps (Akamai State of the Internet Q3 2015).

According to Turkey's web traffic; visits by computer dropped by 29% to 36%, and mobile traffic increased by 33% to 61%. This illustrates once again into what is significant in that mobile web traffic in Turkey. According to Turkey's web traffic; visits by computer dropped to 29% from 36%, and mobile traffic increased from 33% to 61%. This illustrates once again into what is significant in that mobile web traffic in Turkey.

95% of device users in Turkey, according to the report have mobile phones and 75% of them use a smartphone. While the use of laptops and desktops is 51% and TV is still an important part of their lives with 98%.

Country also has some problems with freedom for access to internet such as access to Twitter, Facebook, and YouTube was repeatedly disrupted in the aftermath of terrorist attacks, while Wikipedia was permanently blocked over articles on Turkey's involvement in the Syrian civil war.



Even within last weeks they started to regulate contents on YouTube, for example Turkish Radio and Television Supreme Council started to charge film companies due to content with swearing in YouTube-Turkey.

# RECOMMENDATIONS

Digital technologies are rapidly changing the usual forms and methods of economic life throughout the world. Not only business of individual companies is changing - sectors, regions and whole states are changing. Digitalization begins to go far beyond the changes in the technology itself and even in business - they become a factor of macroeconomic and political. Not only engineers, scientists and entrepreneurs, but also politicians, philosophers and public figures are trying to comprehend the changes. Some see it as an instrument of fundamental changes in public life, others, on the contrary, hope that digitalization will become an alternative to painful reforms.

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As you can see from the information below about countries we can say that most of them have similar issues. Now I will give general recommendations to those

countries based on things we highlight at Scandinavian countries and issues we have seen on these countries.

#### 1) IT sector growth and digitalization recommendations

- Development of new technological solutions. It is necessary both to maintain a high level of funding for R & D from the state budget, and to create the right tools for attracting non-state funds to search research, to stimulate the development of corporate science
- Patent applications should be encouraged in the ICT sector. Patents are crucial part of development because scientist or programmer's motivation is highly dependent on protection of its intellectual property and in case of losing it they will be less eager to develop new program or devices.
- Entrepreneurship ecosystem should be developed in the ICT sector. There should be sufficient economic environment to sell developed products to encourage developer, so they can increase number of inventions.
- It must be aimed to increase the exports of technology products and services in the ICT sector. So, share of ICT in GDP will increase, dependency from foreign developed apps will decrease and potential security issues will be prevented and through use of local apps in foreign countries local producers will gain more revenues through bigger economies. Short and long-term plans for domestic software and domestic content should be made. Domestic software and technology investments towards cyber security risks should be encouraged.
- Studies that enterprise companies can access and accelerate their development with new generation technologies should be encouraged. So, they can move to new era of economy faster & painless and to make it possible government's data centers should be created, and companies must be informed how to use them efficiently.
- The scope of e-government services should be expanded rapidly and particularly encouraged to be used by citizens as well as changing same

services to “only digital”. It will force population to be more intense with technology and adapt faster. Increasing those services will increase efficiency, speed of transactions as well as finding relevant information faster and decrease paperwork.

- E-Banking and payment must develop. To fasten the process banks should be encouraged for digitalization so citizens can pay online for penalties or their utility fee without any problem. Banks can increase their number of operations and revenue as well.
- Countries should have covered by mobile broadband. The most crucial part of digital economy is ability to connect internet. Without internet digitalization is no more than dream and when we consider that in recent years number of mobile devices sold left behind number of computers sold we can assume that importance of mobile broadband is increasing. In order to further strengthen the communication infrastructure, the investments in the telecom sector should be continued and the sustainability of the investments should be supported.

## 2) Suggestions for increasing digital transformation matching of individuals

- Digital economy compatible human resource development should be accelerated. Elderly people as well as young generation should be informed about usage of new systems as well as devices. Especially people above 40 years should be trained because transaction process for them is harder and painful rather than new generation because they were actually born in this era.
- Early stage education system should teach more; curiosity, interrogation and algorithmic thinking skills. Current education is more about learning thing by hearth rather than solving actual problems, having diversity in different fields. Programming requires analytical thinking to actually understand the problem, algorithms to understand ways for solution as well as languages to turn those solutions to digital. So, technology skills, such as writing code, should enter the early stage education system.

## 3) Recommendations to increase the private sector digital transformation

- Infrastructure investments in digital (Cloud Computing, Industry 4.0, Internet of Objects and Artificial Intelligence) should be encouraged in industry, services and agriculture sectors. So, companies can use them to fasten their production or services and gain more revenues through automatization of processes rather than usage of manual entries, and business investments in new generation business models and technologies should increase.
- Measures should be taken to increase the use of ICT in SMEs. The role of SMEs in economy is indispensable and they have the fastest growth because their business is not mature yet and they are easier to adapt new technologies due to their size of operations and number of machineries they use. Private sector and individual investors' investment in new business models and technologies should be facilitated.
- E-commerce, mobile trade investments should increase. As internet gets popular e-commerce sites should be more popular to increase competition between companies as well as increasing quality. SMEs can get more customers and develop faster through e-commerce.
- Information security investments should increase. As information becomes the power of economy protecting it becomes the main thing as well because losing personal information of users or citizens might harm trust of them and you can lose significant number of users. For ensuring cybersecurity, it is necessary to develop legal norms to combat cybercrime, have skilled cyber police officers, develop technological solutions and standards, and ensure cross-border interaction.
- Tax deduction should apply for digital companies. Taxes have significant role in COGS of ICT sector, deduction or tax-free application to ICT sector might encourage developers because of high revenues.
- Access and sharing of data should be facilitated. Governments should create shared database for information, so companies or startups can use them to address their customers easier or make market research without high costs.

#### 4) Regulatory and market development role proposals of the public sector

- Restrictions on freedom of access should be harmonized with the EU. Internet should be as free as freedom of speech and any kind of government organization/ politician could not be able to restrict websites unless they break the rules of country such as crime, drug or gun selling.
- Encouraging competition, creating conditions for equal competition. The digital economy cannot be built with the efforts of a limited number of companies endowed with special powers and resources. Therefore, a central role in this economy will be played by private business with a strong entrepreneurial start. So, Business models that compete with the private sector should be prevented from adopting non-competitive business models.
- Promotion to foreign markets. The state can support the growth of IT product exports by providing marketing information, supporting participation in international exhibitions and conferences, providing subsidies and guarantees for export credits, offsetting the costs of patenting, forming investment funds aimed at conducting M & A deals abroad.
- Changes in legal regulation. The revision of the legislation is required considering new types of relations at the same time, the state should not “run ahead”, trying to rigidly regulate the processes that are in progress. The adoption of regulations in the field of digital economy should take place in a mode of dialogue with users, developers, service providers. Users which involved in production and development of product are more enthusiastic about using them.
- Ensuring cybersecurity. It is necessary to develop legal norms to combat cybercrime, have skilled cyber police officers, develop technological solutions and standards, and ensure cross-border interaction. So, user’s security can be ensured, and they can use those system without any security doubt.

### **Ways to develop digitalization in different sectors.**

We discussed basic recommendations about how to develop skills and readiness in economy for new trends and now it's time for new trends, things that can be applied and their positive impact to improve processes etc.

## **Health**

**Genomics** – Genome's are complete set of structure, mapping, evolution etc. of set of DNAs. Through implementation of digitalization and computer analysis, we can analyze whole human DNA and learn true identity of illnesses, exact results for tests and improve diagnoses to almost 100% accurate level.

**Tech-wear** – We are all using smartwatches, fitness trackers or even our smartphones have sensors to track your heart impulses, sleep time and etc. Through those data we can detect our habits and get professional advices from doctors.

**Medical mega data**- as we genomics helps us to analyze full DNA and wears help us to gather daily health information more detailed comparison of patient's health condition change so doctors can real time observe impact of different treatments or as they do have DNA they can look for potential donors for patients.

**Temporary chip organs** – Through the advancement in DNA analyze doctors can built miniature organs which is truly identical to patient's one and chip sensors can measure changes at cellular level.

**Choosing best hospitals**- Social media platform are inseparable part of our life and we can use them for choosing the best option or healthcare providing companies can use them to identify problems and improve the quality of services.

**Genetic engineering** – Changing and upgrading human DNA is still a huge moral debate but in a same time using genetically modified viruses to fight against diseases is getting more popular day by day. For example, mosquitos with different DNA codes are used to fight against malaria virus.

**Mobile health** – There are more than 7 billion mobile subscriptions over the world by the usage of mobile phones we can reduce the need to go to healthcare professional till some level and get quick feedback in case of emergency.

**Health robots** – With the replacement of robots we can get more precise surgery which will lead faster recovery. Also, doctors can treat patients thousands of miles away without any need to travel.

## **Agriculture**

- Transition to digital agriculture, exact management, active use of digital technologies for increasing labor productivity so, number of seeds used can be controlled as well as used water can be decreased to minimal level for least environmental impact and maximum level of productivity.
- Integration of objective data streams will lead more productivity through efficient information sharing between farmers or government and individuals so, they can be more advanced at particular product or can solve any farming issue.
- Formation of mechanisms and support measures for the introduction of digital in agriculture
- Ensuring traceability of agricultural products (tags, chips, identifiers, technologies, devices, systems)
- Stimulation of domestic development and provision of access to various digital open platforms (digital field, flock, equipment management, greenhouses, etc.)
- Providing a package of personal (matrix) technology solutions for market participants
- Introduction of online trading platforms and systems for promoting agricultural products
- Formation of proposals for the adjustment of legal acts and regulatory and technical requirements for the transition to the figure
- Formation of educational and methodical complexes (standards, methods of study) will lead more export of produced goods due to compatibility of processes and standards with foreign countries legislation

## **Education**



**Digital literacy** - It would seem that literacy is a concept familiar to all. According to the most general definition, this is the degree of mastery of basic cognitive skills: reading, writing and counting in the native language. But with the development of technology and the increasing complexity of the information space in which we exist, the idea of literacy is expanding. Digital literacy is the ability to create and use content using digital technologies, including computer programming skills, searching and sharing information, and communicating with other people.

To live in a digital economy happily ever after, a person must have a culture of information consumption and be able to make a choice between data.

**Individualization of the educational trajectory** - If we consider that the development of digital technologies displaces the production of “routine” workers from production, the mass education pipeline, which trains specialists in one program, becomes irrelevant. In addition, experts are confident that the digital economy requires a person to develop self-organization skills, planning, self-motivation - and this is facilitated by the individualization of education.

Digital technologies, coming to the education system, allow individualizing the learning process both at the stage of mastering a new material, and at the stage of monitoring individual results. Opportunities for this are created by such projects as “Mobile e-school” - a system for educational and methodological support of the educational process, which is a social network for teachers, students and parents, with educational content, assessment systems and feedback.

Digital technologies provide tools for developing blended learning, overcoming the limitations of a class-lesson system with the same curriculum for all and the same time to master it.

**Continuing education** - The digital economy is fundamentally changing the labor market: where a computer can replace a person, it will replace it. Self-employment will be a way out for people who have lost their jobs, especially since digital technologies provide new opportunities for organizing and developing business. In addition, in the near future, a regular change of profession will become the norm, and

being in one professional sphere will increasingly demand readiness for training. The concept of continuing education assumes that a person's life is not strictly divided into a period of study (before graduation) and work, and learning is an ongoing process throughout life.

In order for lifelong education to become the life norm, the structure of online education must evolve and the attitude of society towards learning must change. And if the first task is directly related to the development of online platforms, software, content digitization, the second task is the development of a person's inner motivation to learn.

## **Banks**

1) Digitalizing back-office operations can reduce costs and reduce the cost of products, speed up their launch and modification, as well as improve customer experience and facilitate compliance with legal requirements.

German Commerzbank launched the Global Payment Plus online application, which helps corporate clients manage all their bank accounts in accordance with local regulations from a single application, receiving account information, centrally processing and managing international transactions.

2) Automation of operational processes helps to quickly identify “anomalies”, reduce damage from fraudulent operations and save. By automating repetitive tasks with significant involvement of large data sets, it is already possible to actually save up to 25%. The program, which converts the data of the loan agreement and checks in seconds, launched JPMorgan. COIN (contract intelligence) allows the bank to reduce the number of errors that could appear as a result of a manual process.

3) Significant changes in technology are forcing banks to invest in the digitalization of the corporate payment system. The main focus is on the standardization of corporate payments, their “cleverer” processing, full-featured service payment hubs, allowing for flexible and real-time payment processing. A similar corporate real-time payment project in pilot mode is implemented by BNP Paribas, as well as DBS,

which launched a mobile payment solution (Ideal) for customers, which turns the phone into a virtual token used for authorization.

4) The use of predictive analytics allows credit scoring to more accurately and efficiently manage risk, reducing costs and increasing lending profitability. ING and Santander have attracted the company Kabbage, which conducts an analysis of large amounts of data from open and closed sources to assess the risks and creditworthiness of potential borrowers on loans.

5) Using chat bots and virtual assistants will allow you to maintain a conversation with customers on almost any topic, starting with information about their accounts and ending with a cost history, to provide personalized recommendations and suggestions. According to experts, European financial institutions can achieve cost savings of up to 90% by automating workflows with solutions like chat bots.

6) Use of robot consultants: using artificial intelligence technologies, banks can create intelligent mechanisms that will be able to offer advice on almost all issues, starting with investment opportunities and ending with personalized savings approaches. This is achieved through the use of an open integrated architecture, which allows for a unified presentation of all customer banking information.

7) Video integration will simplify the procedure for reporting damage due to an accident to an insurance company or optimize the process of user interaction with an ATM at minimal cost. About 80% of financial service providers see video banking as a tool to improve customer experience and reduce costs.

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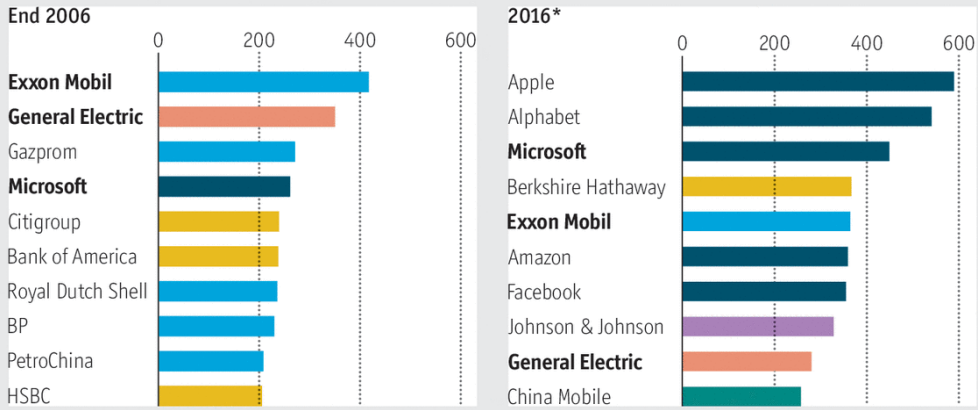
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# APPENDIXES

## A virtually new world

World, largest listed companies by market capitalisation, \$bn

Sector: Energy Financials Health care Industrials IT Telecoms

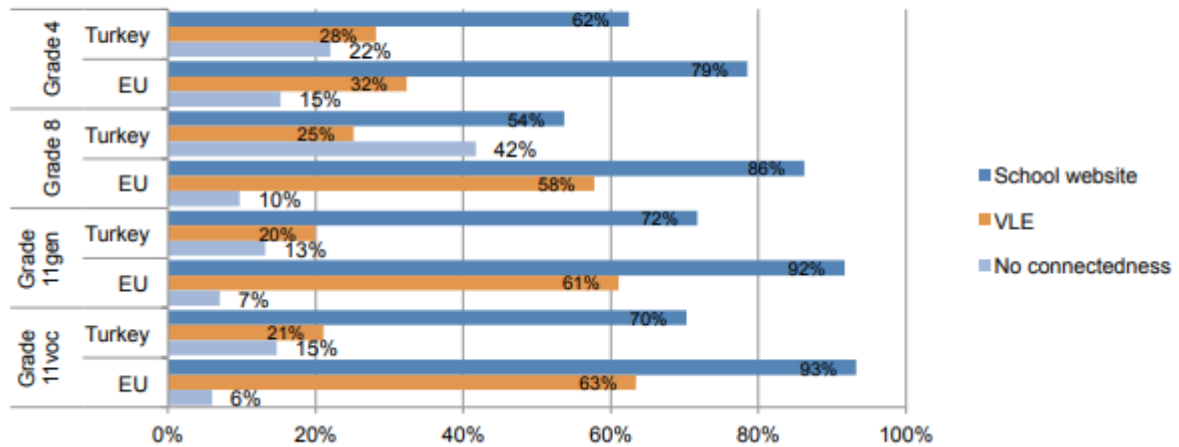


Source: Bloomberg

\*At August 24th 2016

Economist.com

**Fig. 2.5: Percentage of students in connected schools - website, virtual learning environment, no connectedness (Turkey and EU, 2011-12)**



# CONCLUSION

Stone age hasn't ended because of the lack of stones, it's ended because of rise of the new technologies. It is called the next economic revolution. This new economic revolution and of course is not just about the classical economy, the devices, or the big data, but about humans. With new digital economy people get more connected, so they trade more and it increase economic activity.

Denmark, Finland, Sweden, Norway and Iceland are leader countries at concept of digital economy and digitalization. For example, most of these countries have at least 98% mobile broadband coverage, they all have e-Government services, open data sources for individuals and businesses, instead of cash they started to use e-payment systems even Denmark doesn't use cash in clothing, gas stations and restaurants. They are all active social media and e-commerce users. Because of their exemplary system I choose them as an example to explain which problems should emerging countries solve and which strategies should be taken.

As example of emerging economies India, Russia, Turkey and Indonesia chosen to explain general condition of digitalization in emerging markets. They all have almost similar problems such as most of them don't have mobile broadcast which covers all country or there's no belief to e-commerce. Society don't have a trust to e-commerce and they aren't ready to digitalization. Still some of countries don't have free access to some content. But most of these countries are biggest economies on the world and with digitalization they have a chance to get bigger, if they don't do that they will lose this economic precedence to countries adapted to new digital economy. Because the only powerful and adaptable ones survive.

For increase digitalization of country firstly, those countries should make basic infrastructure for digitalization such as mobile and fixed broadband which covers country and basic devices, then companies and individuals need knowledge for these devices and infrastructure to learn how to apply them to daily life and business model. Also banking system must be ready and should courage people and businesses

to use e-banking services. Governments must have digital system to both provide data to companies and individuals, also they should increase services provided by e-government to accelerate them. For example, in Denmark you need just minutes to open business, while its days or even months at those countries. Recommendations mentioned above about possible applications for different sectors should be applied for further development.