The emerging business models in the digital economy

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Abstract: The article highlights various business models in the modern economy under the circumstances of the digital economy. In particular, the impact of digitalization in sectors of retail, healthcare, manufacturing, education and others are discussed.

Key words: digital technologies, business model, cost, integration, start-up.

1. Introduction

The rapid development over the last ten years of digital technologies fundamentally changes the nature of the productive forces and market relations in the world, offers completely different forms and ways of development based on combining digital opportunities and human resources.

All sectors of the economy have adopted ICT to enhance productivity, enlarge market reach, and reduce operational costs. Together, these technologies have expanded market reach and lowered costs, and have enabled the development of new products and services. These technologies have also changed the ways in which such products and services are produced and delivered, as well as the business models used in companies ranging from multinational enterprises (MNEs) to start-ups. They also support activity by individuals and consumers, and have led to the creation of new payment mechanisms including new forms of digital currencies. The advent of the Internet brought major changes first to the entertainment, news, advertising, and retail industries. In those industries, the first major digital players initially started from traditional business models, adapting them to better end-user equipment (both inside and outside organizations) and more extensive interconnection through the Internet.

Various online retailers initially adapted the business model of brick-and-mortar stores by selling traditional physical goods (for example, books) digitally. Online intermediaries that allowed the discovery, sale, and purchase of goods and services such as vehicles, homes, and jobs were another early category. Other digital players specialized in the online selling of traditional services (for example, online insurance brokers). Retailers then began selling digital products and services, like downloadable and streaming music and movies, executable code, games, and services based on data processing, increasingly blurring the line between goods and services as businesses continued to develop. Online advertising similarly started from traditional advertising business models, becoming more sophisticated as the potential of digital technology became fully integrated into the industry. New online services enabling a sharing and service economy have also appeared, allowing people to rent out their homes, vehicles and skills to third parties.

As technology has advanced and costs of ICT have continued to fall, ICT has proven to be general-purpose technology that has become embedded in and central to the business models of firms operating across the economy. Businesses across all sectors have taken advantage of advances in communications and data processing capacity to lower transaction costs and extend their reach into global markets. Businesses across all sectors have also changed the way their business is conducted by taking advantage of global value chains in which production processes can be geographically dispersed in locations.

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1 OECD. The digital economy, new business models and key features. Chapter 4. P 70
around the world to take advantage of the features of local markets. For example, in sectors relying heavily on technology and research and development, design and production can be managed centrally, while the assembly can be fragmented in different countries to take advantage of skilled labour and local resources.

2. Literature review.

The emergence of modern communication tools and digital platforms-aggregators, access to which can be provided from the smartphone, have united people, assets and information, and created new ways of consuming goods. Thus, contacts in a virtual network are established almost free of charge. The new business model was called the economy of joint use, sharing economy, as it is not based on the possession of assets, but on temporary access to them, rent, barter [1]. For the consumer it is often more profitable to pay for temporary access to the product than to own it.

Media Strategy Specialist Tom Goodwin notes: “The world’s largest taxi company, Uber, is not the owner of vehicles. The most popular media owner in the world Facebook does not create content. The most expensive retailer Alibaba does not have a stock of goods. The world’s largest provider of temporary residence services Airbnb is not the owner of real estate” [2].

The sharing economy is also known as a cooperative economy or peer-to-peer economy. One of the pioneers in the sharing economy, Ms. Robin Chase, Founder and CEO of Buzzcar, co-founder and former CEO of Zipcar has the formula for the sharing economy: Idle resources + platform + public participation = the sharing economy. [3].

Uzbekistan is also paying attention to digitalize its economy. According to the Ministry of Information Technologies and Communications, the draft resolution of the Cabinet of Ministers sets the following directions for the development of digital economy in the Republic of Uzbekistan:

- identification of state and economic bodies, local self-government bodies on the basis of necessary information systems and resources, implementation of software and electronic services;
- creation of favorable conditions for attracting foreign investments in the country by organizing the technology market and technology parks on the basis of the digital economy, information technologies market, including public-private partnerships;
- coordination of modern telecommunication infrastructure, development of communication technologies and networks, introduction of modern telecommunication services;
- increase of the digital economy through the introduction of electronic services in the field of public administration and economics, development of the e-commerce and software market;
- development of proposals for the development of the national segment of the Internet, organizational, material and technical and economic support for digital media content;
- development of "intellectual systems" for the management of urban and regional infrastructure, in particular housing and communal services, transport logistics, safe and "smart cities";
- improvement of the system of training qualified personnel.

The functions of the Commission are as follows:
- in 2 months, the state of the information and communication technologies in state agencies, including the inventory of information systems and the provision of personnel;
- submit proposals to the Cabinet of Ministers to improve this direction until 2018.

At the same time, by 2030 it is planned to implement measures to develop the concept of "Digital Uzbekistan". The draft resolution will continue to be discussed until August 31 this year.

3. Main part.

Sectors as diverse as retail, logistics and education have changed and keep changing due to the spread of ICT:
Retail: The digital economy has enabled retailers to allow customers to place online orders (often fulfilled from a local store) and has made it easier for retailers to gather and analyse data on customers, to provide personalized service and advertising. It has also enabled retailers to manage logistics and supply stores with products, which has had a significant, positive impact on productivity.

Transport and Logistics: The logistics sector has been transformed by the digital economy, which enables the tracking of both vehicles and cargo across continents, the provision of information to customers and facilitates the development of new operational processes such as Just In Time delivery in the manufacturing sector. Vehicle telemetry also helps maximise fuel efficiency, ensure efficient use of the transport network and support fleet maintenance activities. The information collected by fleets can also be used to create datasets with commercial value.

Financial Services: Banks, insurance providers and other companies, including non-traditional payment service providers, increasingly enable customers to manage their finances, conduct transactions and access new products online, although they still continue to support branch networks for operations. Better use of data also allows growth in customer insights and associated products, such as personalized spending analysis, which can be used to generate advertising revenue. The digital economy has also made it easier to track indices and manage investment portfolios and has enabled specialist businesses such as high-frequency trading.

Manufacturing and Agriculture: The digital economy has enhanced design and development, as well as the ability to monitor production processes in factories and control robots, which has enabled greater precision in design and development and ongoing product refinement. The products being produced are also increasingly knowledge-intensive. In the automobile industry, for example, it is estimated that 90% of new features in cars have a significant software component. On farms, systems can monitor crops and animals, and soil/environmental quality. Increasingly, routine processes and agricultural equipment can be managed through automated systems.

Education: As the digital economy spreads, universities, tutor services and other education service providers are able to provide courses remotely without the need for face-to-face interaction through technologies such as video conferencing and streaming and online collaboration portals, which enables them to tap into global demand and leverage brands in a way not previously possible.

Healthcare: The digital economy is revolutionizing the healthcare sector, from enabling remote diagnosis to enhancing system efficiencies and patient experience through electronic health records. It also allows opportunities for advertising, for example of drugs and other treatments.

Broadcasting and Media: The digital economy has dramatically changed the broadcasting and media industry, with increasing broadband access in particular opening new avenues for delivery of content for traditional media players, while also enabling the participation in the news media of non-traditional news sources, and expanding user participation in media through user-generated content and social networking. The digital economy has also enhanced the ability of companies to collect and use information about the viewing habits and preferences of customers, to enable them to better target programming.

4. Conclusion.

As digital technology is adopted across the economy, segmenting the digital economy is increasingly difficult. In other words, because the digital economy is increasingly becoming the economy itself, it would be difficult, if not impossible, to ring-fence the digital economy from the rest of the economy. Attempting to isolate the digital economy as a separate sector would inevitably require arbitrary lines to be drawn between what is digital and what is not. As a result, the tax challenges and base erosion and profit shifting (BEPS) concerns raised by the digital economy are better identified and addressed by analyzing existing structures adopted by MNEs together with new business models and by focusing on the key features of
the digital economy and determining which of those features raise or exacerbate tax challenges or BEPS concerns, and developing approaches to address those challenges or concerns.

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