

# Leading trends in regulation of digital economy: best world's practices

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**Abstract** This paper focuses on the leading modern approaches to the governmental regulation of the digital economy. In particular, it assesses the best world's practices in such digitally advanced countries as EU Member States, Israel, Mexico, India, or P.R. China.

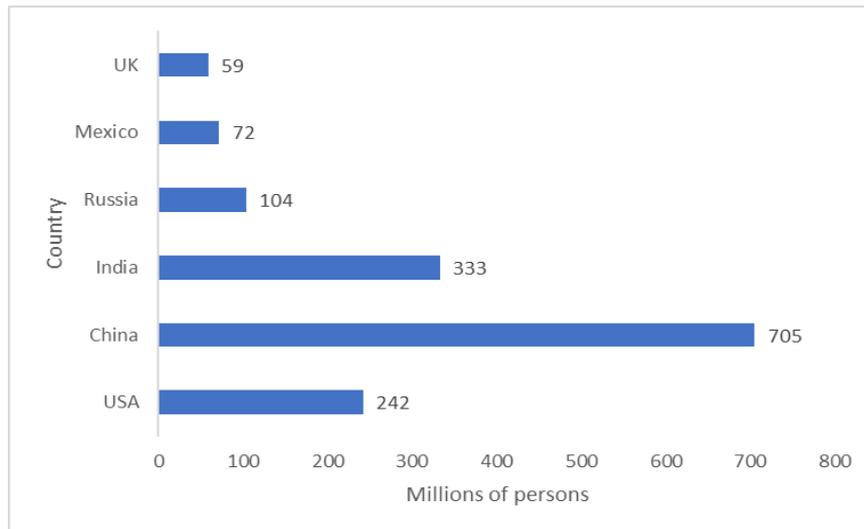
Digital economy is becoming increasingly popular and ubiquitous, but it brings such issues as cyber security, hacking, shadow economy and even the violation of human rights. All those developments call for tighter control over the digital realms of economy which is subjected to more transparent and stricter government regulation of these sectors.

Our results demonstrate that regulators worldwide need to concentrate on tackling misuse and breaches in the digital economy and engage in mutual learning in order to share and to transfer the best practices. This initiative represents the leading and most needed step that is necessary for moving forward and embracing more technological advancements into all parts of our social and economic lives. Moreover, it appears necessary to build an international cooperation in the sphere of regulation of the digital economy with the purpose of linking databases and joining efforts for higher efficiency and safety of all the parties involved.

## 1 Introduction

Digital economy is on the rise with all its applications and aspects experiencing rapid success and implementation. Its rise contributes to the generation of a large amount of valuable data. Each data point provides valuable insights into the success or failure of creating, deploying and using services that can all contribute to the advancement of a digital business (Wargin and Dobiey 2001; Zielińska 2016). Regulators of the digital economy have to adopt a data management strategy that creates consistent data flows, simplifies data sharing, and enables continuous operational improvements (Korchagin et al. 2015; or Linkov et al. 2018). With the proliferation of the digital economy, customer and service travel will span multiple points and businesses, exposing service users to countless partners (Zlyvko et al. 2014). By discussing online youth practices in the context of the blurred boundaries between work and leisure, we will critically examine the changing nature of work, the types of skills required to participate in the digital economy, and the question of how the digital inequalities continue to evolve in complex ways.

Driven by rapid technological change, the digital economy creates challenges and opportunities for the young and old people alike (Teece 2018). Large social, commercial, and entertainment platforms provide interconnected spaces where adolescents can learn, create, play, and develop a range of skills critical to our rapidly changing economic landscape (Chiabai et al. 2014). In its early days, the digital economy was sometimes referred to as the Internet economy, new economy, or weaving, relying on Internet connectivity. Economists and business leaders claim that the digital economy is more advanced and complex than the Internet economy which by definition simply means economic value derived from the Internet. The widespread use of Internet is fostering its development. Figure 1 that follows shows the number of Internet users in selected countries in 2015.



**Fig. 1.** Numbers of Internet users by countries in 2015  
Source: UNCTAD (2017)

All in all, it is apparent that digital economy reflects the transition from the third industrial revolution to the fourth industrial revolution. All world's nations are all individually aware of ground-breaking progress that could have a significant impact on digital growth inside and outside their countries. Because of its inherent accessibility, the digital economy promises lower barriers to entry and more opportunities to benefit people across the economic, geographic, and social spectrum. Governments are also focusing on providing essential services to their citizens through these initiatives. For example, Israel has expanded its digital services in the public sector with a focus on health, education, and social systems (Cooke 2017).

The public sector can follow this example by aligning its technologies with those that the public wants to use while improving the performance and efficiency of applications (Jankelová et al. 2017). As with many other companies, it is critical for public sector organizations to have a clear view of the performance of their apps and the impact on the user experience. By identifying the cause of performance issues, they can fix them before users notice them, resulting in increased productivity and customer experience.

However, there is also a problem. The lack of digital literacy among government leaders is one of the main causes of some of the challenges we face today for public sector organizations trying to adapt to the digital age and succeed in the digital age (Dwivedi et al. 2016). In addition to understanding the great strategic drivers of the digital age, there are three disciplines that we believe should have any foundation for any government representative: design thinking, digital technology, and data. It also seems crucial that they also need to learn how to understand the management practices of the digital age that can be adopted by their organization, including the impact on hiring and retention, procurement and budgeting. Thus, it is not surprising that governments across the board are under considerable pressure to apply the same digital transformation best practices that are already fundamentally changing the way the private sector conducts business. In fact, many governments and agencies have taken the digital path with various projects.

However, as a recent McKinsey survey of 3,000 government officials in 18 countries has shown, efforts to digitally transform the public sector are not doing well (Steward 2018). California is the youngest player to seriously engage with digital government services.

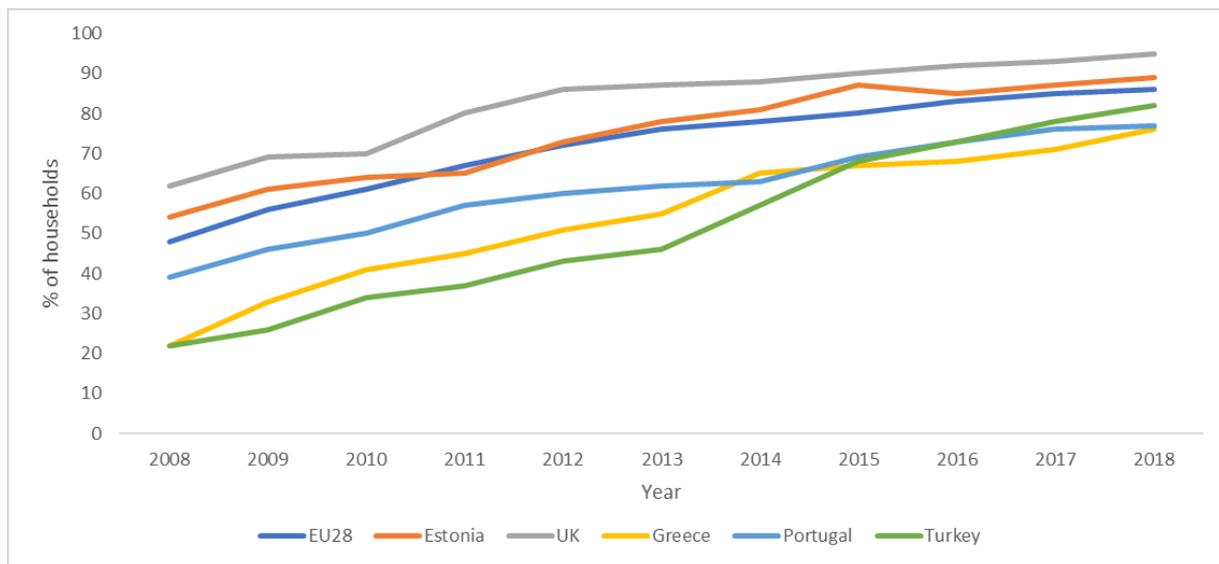
The government is making proactive changes to improve online public services. We need to see a more integrated approach to improving digital public services from all sectors of government and using the latest technologies to make a real impact in the near future. The relocation would also lead to a more efficient government offering its citizens better digital services. The public sector should also adopt policies that enable the use of technology. Even if an agency uses advanced technology, it may not be able to use it if the policies do not support its use. Much of his early work was extremely reactive, supporting problematic technology projects by the federal government.

Digital identification systems also indirectly provide ways for more inclusive financial inclusion. It also builds systems that make it easier for people to access and use their data to access important financial services, such as student loans. Internet governance and digital policies are regularly and regularly expressed in official speeches and documents. Developing quality capacity requires resources, and very often those most qualified in education cannot spend the time and effort required to collect donations. Some pioneering countries (e.g. Switzerland with the Geneva Internet Platform project) have surpassed their own capacity development needs and expanded their provision to the global community.

## 2 Government regulation of digital economy

Thus, government regulation of the digital economy is becoming one of the most crucial priorities of most countries and their governments. One of the interesting examples of the recent digital economy developments and the resulting need for its regulations is the case of Mexico where digitalisation constituted an important priority (Olivas-Lujan et al. 2007). Mexican authorities have decided to build digital Mexico where technology and innovation help to maximize their economic and social impact. As a first and decisive step, in 2013 the Federal Telecommunications Act was reformed in order to create an innovative and competitive set of rules that connects citizens and integrates Mexico into the information society. In this way, an ecosystem was created in which ITCs become true enablers of our law development goals. The reform recognized access to the Internet as a fundamental human right and as the tool that is the backbone of the digital economy (Pyka 2017).

Overall, the digital economy creates a transparent, inclusive and sustainable path for growth and development. In order to achieve the goals ahead, policymaking in the modern digital economy needs to be reviewed. The globalization of the digital economy has brought unprecedented growth to all sectors of the public and private sectors, enabling a globally accessible market.



**Fig. 2.** Households with broadband access by selected European countries  
Source: Eurostat (2019)

Figure 2 above shows the % of households with at least one member aged 16 to 74 with broadband access in the European Union (EU) Member States. In the EU, the Digital Single Market advocates are also calling for a new telecoms framework for companies to improve spectrum coordination, as well as more modern, consistent copyright provisions across the EU to help consumers access digital content and protect businesses. Goods, people, services and capital must be able to move freely across national borders, and the differences between EU countries in terms of data protection and Internet law must be harmonized if there is to be a Digital Single Market. Critics warn that over-concentration on the EU could drive a wedge between Europe and the rest of the world as uniform rules could lead to digital isolation. Businesses and organizations benefiting from a Digital Single Market could also bear the burden of new legislation that must be adhered to internally and implemented. Digital technology also allows for cross-border transactions that are not adequately covered by national regulations such as consumer law or where national regulations vary significantly, such as data protection law. Many regulators have some catching up to do in a digital world and this can lead to unequal competitive conditions from which either established companies or less frequently new entrants can benefit.

However, all too often, regulators focus on how to integrate innovation or new technology into the existing legal framework. This is important because investment in new industries can be thwarted by inadequate regulation, the protection of established companies, and the lack of additional policies, such as standards and data access. Unintentional distortions, such as changes in investment or innovation incentives, or the introduction of barriers to the introduction of new business models, can be costly to the economy. These unintentional costs come to the fore when regulation is outdated or slow to catch up. In short, a failure to maintain the usefulness of regulation affects the ability of new companies to enter markets and spread new technologies throughout the economy.

Sometimes, digital economy regulation attempts by the officials become too dubious. One of such cases is the face recognition technologies. It is apparent that live face recognition is likely to violate human rights law. Although face recognition allows such countries as China to fight crime and thus contribute to public safety, it has a long list of limitations. Human Rights Watch objected when the residents of some Chinese cities were forced to make iris scans and fingerprints. In addition, strong confidence in face recognition can lead to data hacks that lose a lot of confidential information, which can lead to security and privacy violations.

And there are other ways to track and identify people who are not using that particular technology. However, the documents provide insight into the capabilities the government currently has as mistrust between Hong Kong and its dissidents increases. Consumer advocates are also concerned that biometric technology is being used for commercial purposes. In 2015, the United States Department of Human Resources reported that the fingerprint data of 5.6 million people had been stolen in two separate cyberattacks. At the time, officials said there was no sign of abuse, but that in the future, a problem of counterintelligence might emerge. Consumer advocates are also concerned that biometrics is being used for commercial purposes. The Government of the P.R. China has also developed new tools to monitor cyberspace in a broader sense.

Hence, even though technology offers immense possibilities, it can become a restrictive tool in the hands of the governments that are aimed at repressing democratic rights and freedoms. Therefore, these technological advancements should be used with care and always correspond to the local laws and norms.

### **3 Modern approaches and best practices of digital economy regulation**

In general, economists and business leaders argue that the digital economy is more advanced and complex than the Internet economy, which by definition simply means economic value derived from the Internet. The digital economy reflects the transition from the third industrial revolution to the fourth industrial revolution. The third industrial revolution, sometimes referred to as the digital revolution, refers to the changes in the late 20<sup>th</sup> century that accompanied the transition from analogue electronic and mechanical devices to digital technologies. Much has been written about the digital transformation of individual business functions: marketing, sales, human resources, customer experience and so on. In the digital economy, the whole thing is more important than the individual parts. A successful digital enterprise is one whose departments and functions are more interconnected and integrated than before. Whether the company operates in a traditional or a modern industry, every business today has to adhere to the rules of the digital economy. The new normal is a constant change. Successful, modern businesses must become powerful engines for service innovation, constantly evolving both the services they provide to their customers and the underlying operational business. Conventional business strategies simply do not build on this principle of constant change.

What follows are some case studies listing the leading world's best practices from several countries around the world and encompassing such interesting cases as Mexico, Estonia, or India. Each case requires closer attention and studying, however due to the limited scope of this research, we only focused on the most important issues and patterns.

In Mexico, technology and innovation help to maximize their economic and social impact. As a first and decisive step, in 2013 Mexico reformed the Federal Telecommunications Act to create an innovative and competitive set of rules that connects citizens and integrates Mexico into the information society. In this way, an ecosystem will be created in which ITCs become true enablers of our law development goals. The major pillar of the plan focused on the environmental dimension, to conserve natural resources and to support their efficient use and investment, thereby protecting the rights of future generations. For example, we use technologies and Internet of Things (IoT) solutions to streamline energy consumption and conserve natural resources, especially water. The authorities have consistently worked to exploit the potential of digital technologies in close collaboration with the various industries and through consultation with a range of stakeholders. Coordinators of the digital economy worldwide should be committed to developing our infrastructure to keep pace with the global advances in ICT and the demands of the knowledge society and digital economy, as demonstrated by our upcoming introduction of 4G communications. With a variety of disruptors using traditional market dynamics, it is difficult today to find growth opportunities under increasingly challenging regulatory and competitive conditions. In other words, rise above the level of disturbers and turn one's scale from a liability into an asset. With the speed and uncertainty that characterizes this new digital economy, traditional growth planning has reached the end of its useful life.

In Estonia, the digital economy penetrated all aspects of economic, public, and social life. In particular, it is strong in the e-government and public administration. Estonians can vote online using advanced digital voting applications that ensure the digital safety and lack of data breaches. This system draws admiration around the world and is used as the successful example of digital public administration (Björklund 2016; Strielkowski et al. 2017).

Another advanced example of digital economy is the case of Aadhaar card system in India. Designed for making it easier to track Indian citizens residing in remote areas and to provide welfare in a more effective way, it quickly became a success. Using quite a complex mechanism of verifications, the system works on smartphones

and handheld devices that enables its deployment in rural areas. Within a short span of time, it revolutionised Indian e-commerce, retail sales, and small business (Masiero 2015). However, the success was overshadowed by a massive data breach since the large span of Indian territory required outsourcing the implementation of Aadhaar to the third parties which lost the personal data of its users or reluctantly uploaded then online without any protections in several cases (see Tarafdar and Bose 2019).

Generally, one can see that digital economy regulations might vary in different countries, however the principles remain the same: there is often a lack of the appropriate legislative acts and norms and the technological advancements often have unforeseen consequences that are not easy to envisage when they are first introduced. Governments in many countries are confronted with the rapidness of the digital economy deployment that often prevents them from making some advanced steps for its regulation. Quite often it is difficult to imagine the problems that that technology might bring about in the nearest future. Therefore, more research and investigation in this matter are required until the well-established and well-functioning system of digital economy regulation is created.

## 4 Conclusions and discussions

Digital economy truly represents the leading trend in today's digitalised and globalised economy marked such phenomena as the use of Internet, social networks, and the Big Data. Similar to all other innovative patterns in the world's economy, it needs to be regulated. However, this regulation should not be restrictive or limiting for its further development and growth. Quite contrary, it should provide a comprehensive framework for its further prosperous growth.

Overall, our outcomes confirm that online businesses must begin to take responsibility for their digital economy platforms and help restore public confidence in the digital technology that becomes prevailing in the modern globalised world governed by the information technologies.

In order to meet the expectations of the users to the digital, modern, intuitive and appealing experiences must be offered. In addition to improved services for constituents, the plan also addresses other priorities, including the need to attract and promote digital talent and create more adaptable infrastructures and processes. Delivering exceptional digital experience to local businesses and citizens is a crucial task that needs to be handled with care and in coordination with the rule of law.

The case studies from several selected countries showcase the issues with digital economy – it is not mature enough to be relied upon entirely and without any restrictions. Governments and regulators need to be alert about the hidden threats and unexpected outcomes the recent technological development might cause.

## References

- Björklund F (2016) E-government and moral citizenship: The case of Estonia. *Citizenship Studies* 20(6-7):914-931. doi: 10.1080/13621025.2016.1213222
- Chiabai A, Platt S, Strielkowski W (2014) Eliciting users' preferences for cultural heritage and tourism-related e-services: a tale of three European cities. *Tourism Economics* 20(2):263-277. doi: 10.5367/te.2013.0290
- Cooke P (2017) 'Digital tech'and the public sector: what new role after public funding? *European Planning Studies* 25(5):739-754. doi: 10.1080/09654313.2017.1282067
- Dwivedi YK, Sahu GP, Rana NP, Singh M, Chandwani RK (2016) Common Services Centres (CSCs) as an approach to bridge the digital divide: Reflecting on challenges and obstacles. *Transforming Government: People, Process and Policy* 10(4):511-525. doi: 10.1108/TG-01-2016-0006
- Eurostat (2019) Household data. <https://ec.europa.eu/eurostat/tgm>. Accessed on 29<sup>th</sup> of August 2019
- Jankelová N, Jankurová A, Masár D (2017) Effective management and self-government: current trends. *Czech Journal of Social Sciences, Business and Economics* 6(2):21-31. doi: 10.24984/cjssbe.2017.6.2.3
- Korchagin P, Korneeva E, Nikitina N (2015) Factors that Influence the Effectiveness of Russian Telecommunication Companies. *Economics and Sociology* 8(3):119-130. doi: 10.14254/2071-789X.2015/8-3/9
- Linkov I, Trump B, Poinssatte-Jones K, Florin MV (2018) Governance strategies for a sustainable digital world. *Sustainability* 10(2):440. doi: 10.3390/su10020440
- Masiero S (2015) Redesigning the Indian food security system through e-governance: The case of Kerala. *World Development* 67:126-137. doi: 10.1016/j.worlddev.2014.10.014

- Olivas-Lujan MR, Ramirez J, Zapata-Cantu L (2007) e-HRM in Mexico: adapting innovations for global competitiveness. *International Journal of Manpower* 28(5):418-434. doi: 10.1108/01437720710778402
- Pyka A (2017) Dedicated innovation systems to support the transformation towards sustainability: creating income opportunities and employment in the knowledge-based digital bioeconomy. *Journal of Open Innovation: Technology, Market, and Complexity* 3(4):27. doi: 10.1186/s40852-017-0079-7
- Strielkowski W, Gryshova I, Kalyugina S (2017) Modern Technologies in Public Administration Management: A Comparison of Estonia, India and United Kingdom. *Administration & Public Management Review* 28:174-185
- Stward K (2018) Obstacles aside, the potential savings are driving efforts to fundamentally change government services to citizens. <https://www.infor.com/blog/mission-possible-public-sector-digital-transformation> Accessed on 20 August 2019
- Tarafdar P, Bose I (2019) Systems theoretic process analysis of information security: the case of Aadhaar. *Journal of Organizational Computing and Electronic Commerce* 29(3):209-222. doi: 10.1080/10919392.2019.1598608
- Teece DJ (2018) Profiting from innovation in the digital economy: Enabling technologies, standards, and licensing models in the wireless world. *Research Policy* 47(8):1367-1387. doi: 10.1016/j.respol.2017.01.015
- UNCTAD (2017) Information Economy Report 2017. [https://unctad.org/en/PublicationsLibrary/ier2017\\_en.pdf](https://unctad.org/en/PublicationsLibrary/ier2017_en.pdf). Accessed on 28 August 2019
- Wargin J, Dobiey D (2001). E-business and change-Managing the change in the digital economy. *Journal of Change Management* 2(1):72-82. doi: 10.1080/714042483
- Zielińska A (2016) Information is a market products and information markets. *Czech Journal of Social Sciences, Business and Economics* 5(4):31-38. doi: 10.24984/cjssbe.2016.5.4.4
- Zlyvko O, Lisin E, Rogalev N, Kurdiukova G (2014) Analysis of the concept of industrial technology platform development in Russia and in the EU. *International Economics Letters* 3(4):124-138. doi: 10.24984/iel.2014.3.4.2