

Over-The-Top Media in Digital Economy and Society 5.0

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Abstract: Indonesia has entered into global economic development that is based on innovation, communication and technology. This is the first point where it becomes the driving force in economic growth. The Indonesian millennial population, which is creative and innovative, has the potential to increase national economic growth based on the digital economy and aim for Society 5.0. Nowadays, innovation and creativity are the keys to success in economic growth in the globalization era. Those keys are closely related to the intellectual property system. In the globalization era, developed countries are the ones utilizing intellectual property as a driving force for the economy through science, technology, creativity and new innovation. One of the changes in media is the rise of Over-The-Top (OTT) service providers, a media service growing in popularity in the world of telecommunication, government and academia. Given these changes, Indonesia should protect a creator's economic rights over content through implementing regulations to enforce its copyright law and enable the monetization of content. Telecommunications providers should focus more on the content industry.

Keywords: Digital Economy, Innovation, Society 5.0, Technology.

Introduction

By 2019, digital transformation has changed the way of life for millennial communities. For instance, the Japanese government has begun to introduce **Society 5.0**, where digital

technology is centred on human life; thus, people can enjoy life in a simple manner. In today's digital era, technology and science have grown rapidly. Advances in technology and science have influenced many aspects of human life that have never been imagined before ([Ramli, 2018](#)).

In an era of massive data exchanges, economic growth and digital technology development have been supported by global citizens from various backgrounds. Corporations have made many efforts in the use of information technology as a competitive advantage. This is because at the heart of company performance is a competitive marketplace; it is mandatory that companies put strategies into practice ([Porter, 1985](#)).

Transformation of Information and Communication Technology

Information and communication technology have also shifted the paradigm in the global economy from traditional economic systems that relied on manufacturing towards a digital economy based on information as well as intellectual and scientific creativity, also known as the creative economy ([Makarim, 2010](#)).

In this regard, the Internet of Things and Big Data are likely to take over to change human life in the ever-growing future. In the Society 5.0 era, money is no longer the main point; instead, data connects and moves everything. It fills the gap between anything and the infrastructure. In Japan, for example, the projected reduction in population influences the infrastructure for the number of residences.

Life is about a change and transformation. Firstly, in Society 1.0, people conducted themselves in a communal group. In Society 2.0, people understood social order, so that they could engage from one group with another. In Society 3.0, they were able to make groups to find ways to solve their problems; hence, they communicated to make group decisions.

Table 1. The Industrial Revolution

Industry 1.0	Industry 2.0	Industry 3.0	Industry 4.0
1712 Implementations of Mechanical Production Plants	1840 Mass Production based on the Division of Labour and electricity	1971 Automation of Production Processes	1998 Autonomous Machines and Virtual Reality
Through the Introduction of Mechanical Facilities powered by Water and Steam	Through the Introduction of Mass Production based on electrical energy	Electronics, IT and Heavy-Duty Industrial Robots for further Automatic Production	Cyber Physical Systems Internet of Things

Indonesia has now entered into the industrial era 4.0, as characterised by a society that has engaged in digital technology and information. Society 5.0 is a group that has been able to utilize technology in their daily lives since the Industry 4.0 era.

The current development also affects the industrial world. The term Industrial Revolution 4.0 originates from a continuation of the previous industrial revolutions. The Industrial Revolution 4.0 is a combination of manufacturing industry optimized with the latest internet technology. This revolution is not only initiated by the emergence of certain telecommunications technologies but also by the cooperation of several technologies that create new ways of production. Prior to the Industrial Revolution 4.0, there were three previous industrial developments, namely steam engines in the early 19th Century, electricity in the 20th Century and electronic devices, such as computers, in the early 1970s that enabled automation of production ([Schmidt et al., 2015](#)).

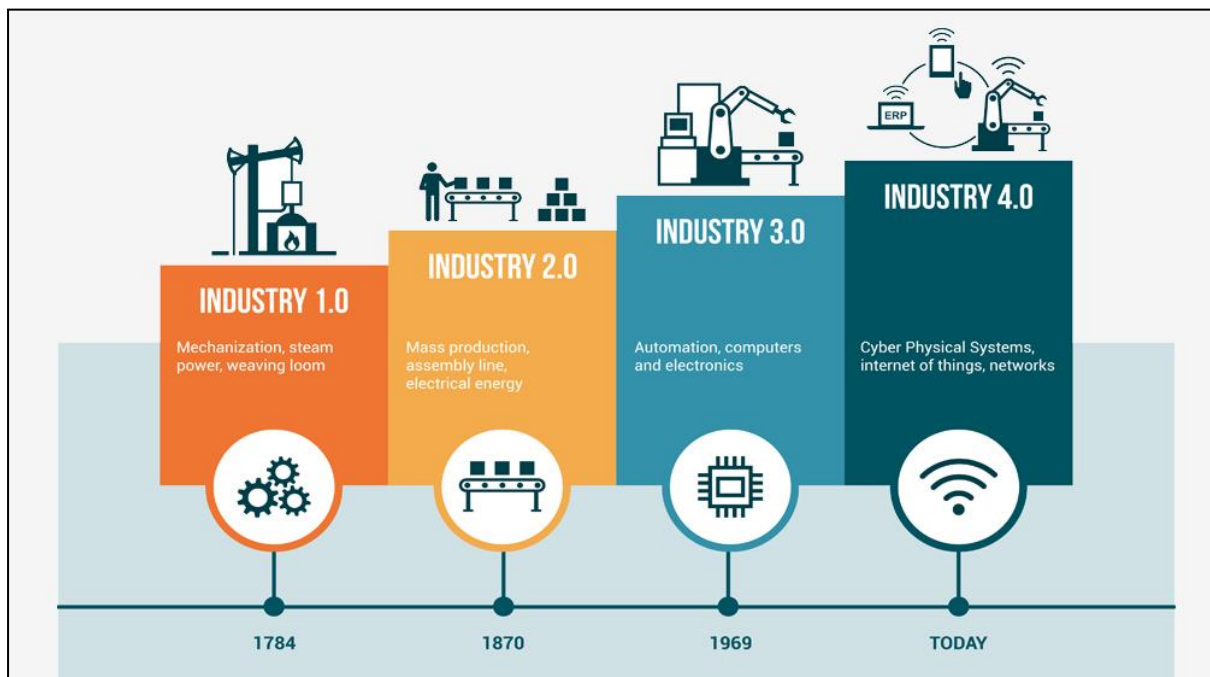


Figure 1. Industry Revolution ([Momentum, 2019](#))

Industrial Revolution 4.0 has a trading model and processes for production. In addition, there is a relation between material production and computer-based processes. Specifically, technology related to the Industrial Revolution 4.0 is the Internet of Things, IT and heavy-duty industrial robots for further automatic production ([Cordes & Stacey, 2017](#)).

A challenge for the Industrial Revolution 4.0 arises from intellectual property on digital media, Cyber-Physical Systems and the Internet, specifically the relationship between the Industrial Revolution and Copyright ([Samuelson, 1990](#)).

The Industrial Era 4.0 is the technology process of Society 5.0, with advanced technological development in the form of infrastructure that can cause major changes to the work of

information technology in the field of government or the behaviour of everyday society. Rapid technological developments bring progress to almost all aspects of human life. ([Sastrawidjaja, 2002](#)).

Digital Media Changes the Copyright on Intellectual Property

In Society 5.0, human daily problems can be solved by various technologies, such as artificial intelligence. Now, robots and sensors can be used to do the work that is only feasible by means of digital technology-driven processes based on sophisticated big data and the Internet. This can reduce a range of risks, including alleviating accidents in the workplace. Further, it can decrease time duration and even improve work security and productivity.

Digital technology is a “perfect” technology, as it can be freely and easily copied, manipulated and re-edited. Hence, intellectual property is increasingly recognized as the most important intangible asset determining a company’s market value ([Shettar, 2008](#)).

Copyright infringement may cause losses to companies operating on a larger scale. Hence, there is an urgent need for copyright protection that covers digital content distribution. Information protected by copyright is secured when transformed into a digital form: for example, an article, song, image, or photo distributed through Internet media.

From practices around the world, it is known that copyright protection cannot be guaranteed without law enforcement infrastructure. In general, the legal procedures for copyright law enforcement are governed by national law and are carried out by the national authorities.

However, there are multinational norms or regional instruments from national authorities with regards to the enforcement of intellectual property rights in general, and copyrights in particular. In international scope, due to territorial and procedural costs, most disputes seek alternative mechanisms to achieve resolution.

A digital economy concept is applicable not only to the Internet world but also to global economic impacts on information and communication technologies, aside from the economy in general. It is a new perspective on the development of innovations and technology that impact on the Indonesian economy that ultimately depends on digital technology. E-commerce is defined as the concept of digital economic transactions involving the Internet, the World Wide Web, applications and browsers in transactions that essentially utilize digital technology as an economic transaction ([Laudon & Traver, 2017](#)).

The e-commerce sector is the largest contributor to the Indonesian digital economy this year, in which it was predicted to reach 12.2 billion USD, indicating an increase of 94 percent compared to 2015. Further, it is predicted that it will contribute 52.7 billion USD, or more than half of Indonesian digital economic revenue, by 2025. E-commerce is the main driver of digital

economic growth. There will be huge opportunities in this sector. It includes wireline or wireless communication network (e.g. Internet, intranet, extranets), computers, software, and other related information technologies ([Turban et al., 2017](#)).

In addition, information and communication technology also influences a paradigm shift of the global economy from a traditional economic system towards a digital economy. Information, intellectual activities, science, and creativity are also known as the creative economy.

The Indonesian government will encourage the development of digital economic industries and electronic commerce (e-commerce). One of the keys to success in the implementation is information and communication technology (ICT). The ICT implementation can be carefully studied from companies that pioneer the way to succeed in utilizing new digital technologies.

The emergence of Over-The-Top (OTT) Media is as an application service provider for digital Internet media. Telecommunication network operators and Internet Service Providers (ISPs) are the impetus for the rapid advancement of globalization of the economy. Technology advances must continuously strive to reach the international market.

OTT, a media creator through Cyber Broadcasting, is well known as a service that utilizes network infrastructure owned by an operator, yet puts the operator at a disadvantage. An OTT service is an application through the Internet and a content service over the Internet.

OTT service providers are parties who provide, manage, and service activities, either individually or collectively, for other parties. OTT service provision includes the use of OTT services by an individual or business entity. OTT service providers are individuals, communities or business entities. With regards to the object of copyright in OTT, the use of applications with the power of big data and the Copyrights Act is the rule that protects the contents of OTT applications.

E-commerce is an example of the digital economy. It can be defined as the concept of digital economic transactions involving the Internet, the World Wide Web, applications, and browsers in transactions. Basically, it utilizes digital technology as the media in carrying out economic transactions. To take a case in point, a successful e-commerce utilization is Uber. It implements a ride-sharing system that allows someone in need of transportation to seek mobilization options and pay for the request; peer-to-peer facilitates both in the network ([Masoud et al., 2017](#)).

The concept of ride-sharing divides the economy into two important elements, namely the availability of offers that have excess capacity and the attitude or willingness to share. As Yochai Benkler said, the sharing economy, in this context, is also called "excess capacity" of various goods or vehicles and services ([Calo & Rosenblat, 2017](#)).

Recommendations

- Indonesia must apply Monetization Technology to protect a creator's Economic Rights to the Copyright Content that is broadcast through Over-The-Top media services, such as YouTube, Netflix, or Spotify. These are platforms that can only survive based on the content availability. These media accommodate content uploaded by users and become part of the substance of commercialized content that is accessible by the public.
- Indonesia should implement regulations that cover the authority of institutions managing copyrights, as well as those in charge of handling information and telecommunications to regulate the implementation of the Copyright Law ([Indonesia, 2014](#)) in relation to Content Commercialization by means of OTT media services.
- The Telecommunications Industry needs to focus more on and prioritize the content industry. Enhancing the national commercialization of Copyright Content will have a direct impact on the development of the national Digital Economy that is currently moving towards Society 5.0.

Conclusions

The emergence of e-commerce provides a range of convenience, from buying products without the need to come to the store, selling products without requiring a physical store, ordering food without leaving the house, delivering products, to ordering public transportation by only tapping mobile phones.

By means of the digital platform, all services can easily reach many people in different countries. As a result, it would benefit those living far away from the metropolitan area as digital services can also be of benefit to them. The development and innovation of digital platforms greatly affect efficiency, both in terms of manufacturing and marketing. It certainly requires intelligence to optimize strategies in the digital disruption era.

Digital transformation occurs rapidly. Copyright contents become a critical element and have a high valuation, especially in relation to OTT media services. OTT Media such as YouTube, Netflix, and Spotify are examples of platforms that can only survive based on content availability. A media, in principle, does not create content, rather it accommodates content uploaded by its users to become a part of the substance of the commercialized and publicly accessible content. The international practice places an OTT media service as a party that publishes copyright content. The problem is whether the content is published with the authors' permission. The issue arises as the users uploading the content are not always the creator of the content. It can therefore be concluded that the practice of content commercialization

through OTT, either directly or indirectly, must continue to protect the exclusive rights, both economic and moral, of the content creators. Thus, those having economic benefit are not only the channel owners, the uploader, and the owners of the OTT platform, but also the creators. This can be conducted by utilizing methods such as monetization technology.

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