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## **CONCEPTUALIZATION OF THE DIGITAL MEDIA MARKET IN THE CONTEXT OF THE WORLD ECONOMY**

## **КОНЦЕПТУАЛІЗАЦІЯ РИНКУ ЦИФРОВИХ МЕДІА В КОНТЕКСТІ СВІТОВОЇ ЕКОНОМІКИ**

## **КОНЦЕПТУАЛИЗАЦИЯ РЫНКА ЦИФРОВЫХ МЕДИА В КОНТЕКСТЕ МИРОВОЙ ЭКОНОМИКИ**

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**Abstract.** *The advent of new technologies, such as portative computers and the internet, favoured the formation and development of a new market — digital media market. In the past 15 years technologies have grown exponentially within media and entertainment, fundamentally affecting film, television, publishing, music and video games industries with new competition, innovative business models and new product landscapes. Thus, the digital media market, with its disruptive influence and growth potential, requires the comprehensive explanation and definition. The article raises a problem of digital media market lacking its clear conceptualization in the context of the world economy.*

*The article provides a thorough analysis of existing researches of the digital media market and the overview of its place in the modern industry classifications. The authors enunciate their own up-to-date definition of digital media, which is the following: “Digital media refer to products and services in the digital format, produced by the media and entertainment industry group (according to The Global Industry Classification Standard), which can be created, viewed,*

*distributed, modified and preserved through different digital devices.” The following structure of the modern digital media market was compiled: it consists of 7 segments, namely video-on-demand, video games, e-publishing, digital audio, social media, search engines and digital advertising.*

**Key words:** *digital media, digital media market, media and entertainment industry group, video-on-demand, video games, e-publishing, digital audio, social media, search engines, digital advertising.*

**Анотація.** *Поява нових технологій, таких як портативні комп'ютери та інтернет, сприяли формуванню та розвитку нового ринку — ринку цифрових медіа. За останні 15 років технології у галузі медіа та розваг розвивалися експоненціально, спричинивши зрушення у ряді галузей: кіно, телебачення, видавничої справи, музики та відеоігор. Поглибилася конкуренція, змінилися бізнес-моделі, були створені нові продукти. Зважаючи на сучасні тенденції трансформації світової економіки та значний потенціал ринку цифрових медіа, цей ринок вимагає всебічного вивчення та визначення. У статті висвітлюється проблема відсутності чіткої концептуалізації ринку цифрових медіа в контексті світової економіки.*

*У статті подано ретельний аналіз існуючих досліджень ринку цифрових медіа та його місця в сучасних класифікаціях галузей. Авторами сформульовано власне сучасне визначення цифрових медіа: «Цифрові медіа — це товари та послуги в цифровому форматі, які виробляються у галузевій групі медіа та розваг (відповідно до Глобальний стандарт галузевої класифікації), які можна створювати, переглядати, поширювати, змінювати та зберігати за допомогою різних цифрових пристроїв». Авторами була побудована структура сучасного ринку цифрових медіа, яка складається з 7 сегментів, а саме: відео за запитом, відеоігри, електронні видання, цифрове аудіо, соціальні мережі, пошукові системи та цифрова реклама.*

**Ключові слова:** *цифрові медіа, ринок цифрових медіа, галузева група медіа та розваг, відео за запитом, відеоігри, електронні видання, цифрове аудіо, соціальні мережі, пошукові системи, цифрова реклама.*

**Аннотация.** *Появление новых технологий, таких как портативные компьютеры и интернет, способствовали формированию и развитию нового рынка — рынка цифровых медиа. За последние 15 лет технологии в области медиа и развлечений развивались экспоненциально, вызвав сдвиги в ряде отраслей: кино, телевидения, издательского дела, музыки и видеоигр. Углубилась конкуренция, изменились бизнес-модели, были созданы новые продукты. Учитывая современные тенденции трансформации мировой экономики и значительный потенциал рынка цифровых медиа, этот рынок требует всестороннего изучения и определения. В статье освещается проблема отсутствия четкой концептуализации рынка цифровых медиа в контексте мировой экономики.*

*В статье представлен подробный анализ существующих исследований рынка цифровых медиа и его места в современных классификациях отраслей. Авторами сформулировано собственное современное определение цифровых медиа: «Цифровые медиа — это товары и услуги в цифровом формате, которые производятся в отраслевой группе медиа и развлечений (в соответствии с Глобальный стандарт отраслевой классификации), которые можно создавать, просматривать, распространять, изменять и сохранять при помощи различных цифровых устройств». Авторами была построена структура современного рынка цифровых медиа, которая состоит из 7 сегментов, а именно: видео по запросу, видеоигры, электронные издания, цифровое аудио, социальные сети, поисковые системы и цифровая реклама.*

**Ключевые слова:** *цифровые медиа, рынок цифровых медиа, отраслевая группа медиа и развлечений, видео по запросу, видеоигры, электронные издания, цифровое аудио, социальные сети, поисковые системы, цифровая реклама.*

## **Introduction**

Until the 1990's, media existed primarily in the print and analogue formats, such as radio and television. The emergence of new technologies, such as portative computers and the internet, facilitated the formation and development of a new market — digital media market. During the first stages of its development, its presence was insignificant and neglected by many leading companies. However, in the past 15 years technologies have grown exponentially within media and entertainment, transforming film, television, publishing, music and video games industries with new business models and product landscapes that benefit a digitally sophisticated consumer base. In view of the aforesaid, the digital media market, with its transformative power and growth potential, requires comprehensive explanation and definition, because the more we go in depth, the more we discover that the digital media market lacks its clear conceptualization in the context of the world economy.

The purpose of research is to enunciate the up-to-date definition of digital media and the essence of modern digital media market in the context of the world economy.

## **Literature Review**

The word “digital” comes from the Latin “digitus” meaning “finger” or “toe”. As B. Peters (2016) has argued, we can say that human beings are “naturally” digital, because they always have to count, point and manipulate with their fingers — just like what digital media are.

As a starting point, digital is often defined in contrast to analogue. A concrete example of a common definition of digital and analogue opposition comes from the music field — comparing and contrasting vinyl records and CDs. The vinyl record sound is a product of physical contact between the player's needle and the grooves scored into the vinyl: a different groove depth produces a different sound. With CDs, on the other hand, sound is broken up into discrete and non-continuous units, which values are registered on support surfaces in binary format as 0s and 1s. The sound is generated by the laser reading the values of these discrete units, which, converted into sound frequencies, can be listened to in sequence, recreating the music continuity (Balbi & Magaudda, 2018).

Digitization turns out to be simply a matter of assigning numerical values (in English word “digit” means number). In the analogue model, video, audio and text are transmitted as continuous signals in different forms. With digitization, video, audio and text are, on the other hand, all codified in the same way: in the numerical data that allows information to be transferred and stored independently of the original content format.

Unique features of digital media constitute the key to their commercialization and ultimately to their potential impact on our lives. Unlike the press, radio and television, digital media facilitated the transmission of their content to global audiences. In recent years, this transterritorial quality has been somewhat diminished for legal reasons, as restrictions on publishing rights have proliferated, namely in relation to certain content such as sports videos, audiovisual fiction series and other similar content. Such types of content can be consumed by users in one country, however, they are blocked for users outside that country. Despite these legal limitations, all digital media are, in essence, global (Lister, Dovey, Giddings & Kelly, 2009).

Moreover, digital media are, or can be, personalized. In the last ten years, due to the development of social media based on personal profiles and the refinement of algorithms, which can assign content increasingly adapted to the interests and preferences of each user, personalization became a common quality of most digital media types. The new wave of technologies based on artificial intelligence, which can produce, organize and distribute the individualized information to each user, significantly transformed business models in the digital media market (Carlson, Rahman, Voola & De Vries, 2018).

The speed, at which the technology is expanding and evolving, challenges the ability to define clear-cut boundaries around the concept of digital media market. Digital media include a wide range of products and services that continue to be developed, launched, re-launched and improved every day in different countries all over the world. A review of existing definitions is collected in Table 1.

Table 1.

**Definitions of Digital Media**

<b>Author(s)</b>	<b>Definitions</b>
T. Feldman (2005)	“The forms of media, that we understand in the analogue media world, turned into bits and bytes so they can be manipulated, processed and transmitted by computer systems.”
W. H. K. Chun, B. Soderman (2011)	“Content created, disseminated, and/or stored using digital computers or mobile devices (video games, blogs, e-books, etc.), as well as their physical embodiment (hard drives, DVDs, flash memory sticks, etc.)”
C. Valentini, D. Kruckeberg (2012)	“An umbrella term for the digital technology-based environment that allows networking, multimedia, and collaborative and interactive communications.”
A. Delfanti, A. Arvidsson (2013)	“A set of technologies and media based on computers and networks. Digital media carry information represented by numerical sequences that they can rework and transform.”
S. Thanuskodi (2015)	“Media that are encoded in machine-readable format and can be created, viewed, distributed, modified and preserved on computers.”
World Economic Forum (2016)	“Products and services that come from the media, entertainment and information industry and its subsectors. It includes digital platforms (e.g. websites and applications), digitized content (e.g. text, audio, video and images) and services (e.g. information, entertainment and communication) that can be accessed and consumed through different digital devices.”
Statista (2019)	“Audiovisual media contents and applications that are distributed directly over the Internet. This includes digital video content, digital music as well as digital games for different devices and electronically published written content.”
Microsoft (2020)	“Digital media refers to audio, video, and photo content that has been encoded (digitally compressed). After digital media is encoded, it can be easily manipulated, distributed, and played by computers, and it is easily transmitted over computer networks.”
Dictionary.com (2020)	“(Usually used with a singular verb) video, audio, software, or other content that is created, edited, stored, or accessed in digital form, through numeric encoding and decoding of data.”
Oxford Dictionary of Media and Communication (2020) <b>1.</b>	“An umbrella term often treated as synonymous with new media or computer-mediated communication. A distinction can be made between media which are based on encoded physical qualities such as light or sound waves through the re-encoding of analogue information (e.g. with digital cameras or digital sound equipment), and media which are based on the re-encoding of previously encoded cultural forms such as such as writing, mathematics, linear perspective, or the Cartesian coordinate system that is used to represent physical space in virtual reality applications.”

Note: made by the authors

## Main Results of the Research

The thorough analysis of the existing definitions of digital media leads to the conclusion that the most comprehensive definition is the one enunciated by the World Economic Forum, since it reflects the scope of modern digital media landscape, which are not limited only to digitized content. However, one point in this definition needs more clarification, namely what industry specifically these products and services come from. World Economic Forum indicates that digital media are “products and services that come from the media, entertainment and information industry and its subsectors”, however, they didn’t indicate the essence of this industry and what it includes. To deal with this issue, it makes sense to have a look at modern industry classifications, which organize companies into industrial groupings based on similar production processes, similar products or similar behaviour in the markets.

The most famous industry classifications, which are renewed regularly and cover the up-to-date economy structure are the following:

- The Global Industry Classification Standard (GICS) developed by MSCI and Standard & Poor’s (S&P);
- The Industry Classification Benchmark (ICB) developed by Dow Jones and the Financial Times Stock Exchange (FTSE);
- The Hang Seng Industry Classification System (HSICS) developed by Hang Seng Indexes Company Limited;
- The Thomson Reuters Business Classification (TRBC) developed by Thomson Reuters.

Table 2.

### Media & Entertainment in The Global Industry Classification Standard (GICS)

Sector	Industry Group	Industry	Sub-industry	Description
50 Communi- cation Services	5010 Telecom- munication Services	...	...	...
	5020 Media & Entertainment	502010 Media	50201010 Advertising	Companies providing advertising, marketing or public relations services.
			50201020 Broadcasting	Owners and operators of television or radio broadcasting systems, including programming. Includes radio and television broadcasting, radio networks, and radio stations.
			50201030 Cable & Satellite	Providers of cable or satellite television services. Includes cable networks and program distribution.
			50201040 Publishing	Publishers of newspapers, magazines and books in print or electronic formats.
		502020 Entertainment	50202010 Movies & Entertainment	Companies that engage in producing and selling entertainment products and services, including companies engaged in the production, distribution and screening of movies and television shows, producers and distributors of music, entertainment theatres and sports teams. Also includes companies offering and/or producing entertainment content streamed online.
			50202020 Interactive Home Entertainment	Producers of interactive gaming products, including mobile gaming applications. Also includes educational software used primarily in the home. Excludes online gambling companies classified in the Casinos & Gaming Sub-Industry.

		502030 Interactive Home Entertainment	50203010 Interactive Media & Services	Companies engaging in content and information creation or distribution through proprietary platforms, where revenues are derived primarily through pay-per-click advertisements. Includes search engines, social media and networking platforms, online classifieds, and online review companies. Excludes companies operating online marketplaces classified in Internet & Direct Marketing Retail.
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Note: Adapted from The Global Industry Classification Standard (GICS) Methodology, 2020, retrieved from:

<https://www.msci.com/documents/1296102/11185224/GICS+Methodology+2020.pdf/9caadd09-790d-3d60-455b-2a1ed5d1e48c?t=1578405935658>

Table 3.

### **Media & Entertainment in The Industry Classification Benchmark (ICB)**

<b>Industry</b>	<b>Supersector</b>	<b>Sector</b>	<b>Subsector</b>	<b>Definition</b>
5000 Consumer Services	5300 Retail	...	...	...
	5500 Media	5550 Media	5553 Broadcasting & Entertainment	Producers, operators and broadcasters of radio, television, music and filmed entertainment. Excludes movie theatres, which are classified under Recreational Services.
			5555 Media Agencies	Companies providing advertising, public relations and marketing services. Includes billboard providers and telemarketers.
			5557 Publishing	Publishers of information via printed or electronic media.
5700 Travel & Leisure	...	...	...	

Note: Adapted from ICB Structure & Definitions, 2019, retrieved from

[https://research.ftserussell.com/products/downloads/ICBStructure-Eng.pdf?\\_ga=2.212156503.2108512420.1561509060-1968584676.1548988834](https://research.ftserussell.com/products/downloads/ICBStructure-Eng.pdf?_ga=2.212156503.2108512420.1561509060-1968584676.1548988834)

Table 4.

**Media & Entertainment in The Hang Seng Industry Classification System (HSICS)**

Industry	Sector	Subsector	Definition	
23 Consumer Discretionary	2310 Automobiles	...	...	
	2320 Household Goods & Electronics	...	...	
	2330 Textiles & Clothing	...	...	
	2340 Travel & Leisure	...	...	
	2350 Media & Entertainment	235010 Advertising & Marketing	235010 Advertising & Marketing	Companies providing advertising, marketing or public relations services.
		235020 Broadcasting	235020 Broadcasting	Owners and operators of television or radio broadcasting systems.
		235030 Movies & Entertainment	235030 Movies & Entertainment	Companies engaged in the production and distribution of movies, television shows, music, artiste management and theatre operation.
		235040 Publishing	235040 Publishing	Publishers of newspapers, magazines and books; providers of information via print or electronic media.
2360 Support Services	...	...		
2370 Specialty Retail	...	...		

Note: Adapted from Hang Seng Industry Classification System, 2019, retrieved from [https://www.hsi.com.hk/static/uploads/contents/en/dl\\_centre/brochures/B\\_HSICSe.pdf](https://www.hsi.com.hk/static/uploads/contents/en/dl_centre/brochures/B_HSICSe.pdf)

Table 5.

**Media & Entertainment in The Thomson Reuters Business Classification (TRBC)**

Business Sector	Industry Group	Industry	Activity
5330 Cyclical Consumer Services	533010 Hotels & Entertainment Services	...	...
		533020 Media & Publishing	53302010 Advertising & Marketing
	5330201011 Advertising Agency		
	5330201012 Media Buying Agency		
	5330201013 Signs & Advertising Specialty Producers		
	5330201014 Outdoor Advertising		
	5330201015 Direct Marketing		
	5330201016 Sales Promotions & Events Management		
	5330201017 Guerrilla Marketing		
	5330201018 Public Relations		
	5330201019 Digital Media Agencies		
	5330201020 Branding & Naming		
	5330201021 Market Research		
	5330201022 Marketing Consulting Services		
	53302020 Broadcasting	5330202010 Broadcasting (NEC)	
		5330202011 Television Broadcasting	
5330202012 Radio Broadcasting			
5330202013 Cable Service Providers			
53302030	5330203010 Entertainment Production (NEC)		

	Entertainment Production	5330203011	Movie, TV Production & Distribution			
		5330203012	Music, Music Video Production & Distribution			
		5330203013	Plays & Concert Production			
		5330203014	Entertainment Production Equipment & Services			
		5330203015	Copyright Management			
		5330203016	Adult Entertainment Production & Broadcasting			
	53302040 Consumer Publishing		5330204010	Consumer Publishing (NEC)		
			5330204011	Newspaper Publishing		
			5330204012	Magazine Publishing		
			5330204013	Book Publishing		
			5330204014	Directory Publishing		
			5330204015	Digital Publishing		
			5330204016	Adult Publishing		

Note: Adapted from The Thomson Reuters Business Classification Quick Guide, 2012, retrieved from [https://www.refinitiv.com/content/dam/marketing/en\\_us/documents/quick-reference-guides/trbc-business-classification-quick-guide.pdf](https://www.refinitiv.com/content/dam/marketing/en_us/documents/quick-reference-guides/trbc-business-classification-quick-guide.pdf)

The comparison of industry classifications (Tables 2-5) shows that GICS is the most comprehensive to cover the issue of media and entertainment. Besides traditional media formats, such as video, publishing or music, GICS gives prominence to interactive media formats, which include video games, search engines, social media, networking platforms and online classifieds, excluding online gambling and online marketplaces classified in the internet and direct marketing retail. Such precise classification of GICS lets us define clear-cut boundaries around the concept of digital media and understand the full structure of the modern digital media market.

In view of the aforementioned, the own definition of digital media enunciated by the authors is the following: “Digital media refer to products and services in the digital format, produced by the media and entertainment industry group (according to GICS), which can be created, viewed, distributed, modified and preserved through different digital devices.”

Using the GICS approach, the modern digital media market can be divided into 7 segments: video-on-demand, video games, e-publishing, digital audio, social media, search engines and digital advertising (Figure 1).

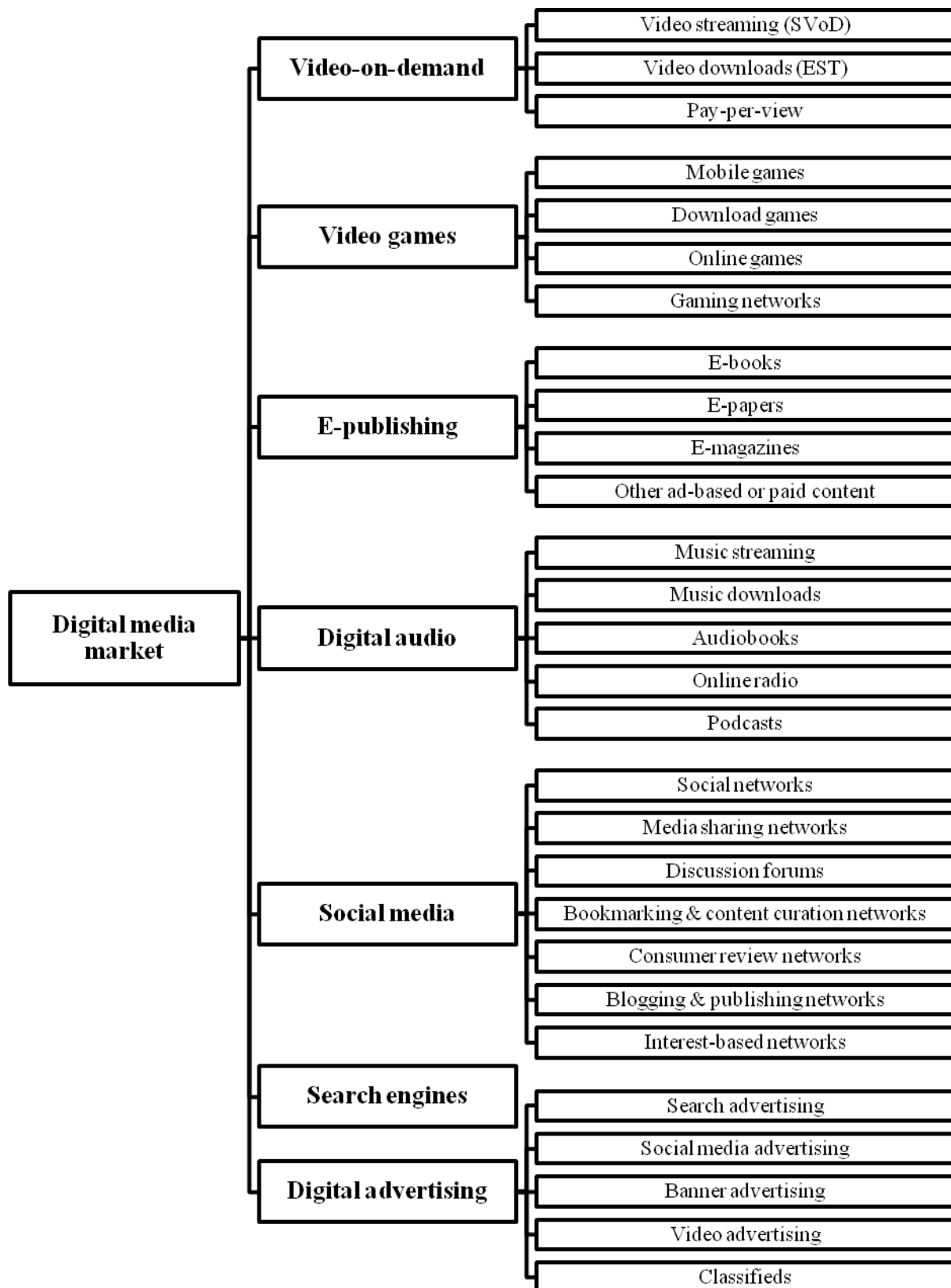
The video-on-demand segment includes digital video content which is distributed over the internet. A distinction is made between the following business models: video streaming (SVoD), video download (EST) and pay-per-view (TVoD) (Statista, 2019).

The video games segment includes fee-based digital games which are distributed over the internet. A distinction is made between mobile games for smartphones and tablets, full games that need to be downloaded and installed on consoles or PCs, online games which can played without installing them and fee-based gaming networks that offer additional features and content for subscribers (Statista, 2019).

E-publishing is defined as paid written editorial content distributed over the internet. This editorial content can be differentiated into e-books, e-papers and e-magazines and other ad-based or paid content distributed by publishers through websites or applications (Statista, 2019).



Figure 1. Digital Media Market Structure



Note: made by the authors

The digital audio segment includes on-demand streaming services, either subscription based or ad supported, paid digital downloads of professionally produced single tracks or albums/compilations, audiobooks and podcasts (Statista, 2019; Magna, 2019).

Social media segment includes websites and applications that allow people to communicate and share information, ideas, career interests and other forms of expression on the internet using a computer or mobile phone via virtual communities and networks. This segment includes social networks, media sharing networks, discussion forums, bookmarking and content curation networks, consumer review networks, blogging and publishing networks and interest-based networks (Kakkar, 2018).

Search engine segment includes software systems designed to carry out web search (internet search), which means to search the World Wide Web in a systematic way for particular information specified in a web search query. The information may be a mix of links to web pages, images, videos, infographics, articles, research papers, and other types of files (Statista, 2019).

Digital advertising segment includes forms of marketing and advertising, which use the internet to deliver promotional marketing messages to consumers. This segment includes search advertising, social media advertising, banner advertising, video advertising and classifieds (Statista, 2019).

### **Conclusions**

There is no doubt that digital media are now a crucial sector in contemporary society and the modern economy. Unlike traditional media, modern digital media are manipulable, networkable and easy shareable. Moreover, they can be effectively personalized using AI technologies. Such unique features of digital media ensure the further development and revenue growth of companies engaged in the digital media market. However, the more we go in depth, the more we discover that in modern researches the digital media market lacks its clear conceptualization in the context of the world economy.

A thorough analysis of existing industry classifications, definitions and features of the modern digital market led authors to enunciating their own definition of digital media, which is the following: “Digital media refer to products and services in the digital format, produced by the media and entertainment industry group (according to GICS), which can be created, viewed, distributed, modified and preserved through different digital devices.” All in all, the authors came up with the structure of the modern digital media market, which includes 7 segments: video-on-demand, video games, e-publishing, digital audio, social media, search engines and digital advertising.

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