

# Specificities of Digital Business Models in Relation to Taxation

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## Table of contents

### ACCOUNTING

FINANCIAL REPORTING QUALITY MEASUREMENT – APPROACHES, ISSUES AND FUTURE TRENDS ..... 1

Željana ALJNOVIĆ BARAĆ

PROFESSIONAL ACCOUNTANTS SKILLS EXPECTED FROM ACCOUNTING EMPLOYERS – EVIDENCE FROM RECENT RESEARCH ..... 14

Ivana BARIŠIĆ

Ana NOVAK

Sanja SEVER MALIŠ

ABSENTEEISM AND LOST PROFIT OF EMPLOYERS CAUSED BY THE COSTS OF ABSENTEEISM ..... 28

Sanja BROZ TOMINAC

Matea MILOŠ

Ana ALEKSIĆ

FINANCIAL POSITION AND PERFORMANCE OF LISTED HOTELS IN TIMES OF PANDEMIC – CASE OF CROATIA ..... 38

Mateja BROZOVIĆ

Sanja SEVER MALIŠ

Luana BOŽIĆ

TOWARDS FULL DIGITIZATION OF THE FINANCIAL REPORTING – OVERVIEW OF THE FINANCIAL REPORTING LANGUAGES ..... 55

Marina ĐUROVIĆ

Ana REP

Nikolina DEČMAN

SECTORAL ANALYSIS OF THE PROFITABILITY AND IMPORT COMPONENT CONTRIBUTION WITHIN THE VALUE CHAIN IN CROATIA ..... 71

Darko KARIĆ

Ivana PAVIĆ

Ana REP

THE CONSISTENT FEATURE: BRAND EQUITY ACCOUNTING – A CURRENT VIEW FROM THE PERSPECTIVE OF IFRS AND MARKETING ..... 91

Gunther MEEH-BUNSE

Katja LUER

Thorsten LITFIN



POSSIBLE APPROACHES FOR ACCOUNTING OF BUSINESS COMBINATIONS UNDER COMMON CONTROL- EVIDENCE FROM CROATIAN CONSOLIDATED GROUPS.....	106
Hrvoje PERČEVIĆ	
Marina ERCEGOVIĆ	
PRIORITY OF THE ECONOMIC SUBSTANCE OF THE TRANSACTION OVER THE LEGAL FORM IN THE FINANCIAL REPORTING OF LATVIAN COMPANIES.....	121
Jūlija POUHA	
CRITICAL AUDITORS' EXPERTISE FOR BLOCKCHAIN-BASED BUSINESS ENVIRONMENT	132
Boris TUŠEK	
Ana JEŽOVITA	
Petra HALAR	
<b>ECONOMICS</b>	
ENTREPRENEURSHIP EDUCATION AS A FACTOR OF ORGANIZATIONAL SUPPORT TO EMPLOYEE ENTREPRENEURIAL ACTIVITY WITH THE NECESSARY INCENTIVE OF TAX INSTRUMENTS.....	144
Ivana BEKIĆ	
Iva SENEGOVIĆ	
Tajana KRAMAR ŠANDL	
ECOMUSEUM – A CONTEMPORARY CONCEPT AND KEY SOLUTION FOR VALORISATION OF HERITAGE AND SUSTAINABLE DEVELOPMENT IN THE EUROPEAN UNION .....	160
Vlatka BILAS	
Lana TRIFUNIĆ	
HYSTERESIS IN TRADE FLOWS OF EX-YUGOSLAV COUNTRIES.....	172
Mile BOŠNJAK	
EFFECTIVE TANGIBLE FIXED ASSETS MANAGEMENT.....	182
Vladimir BUKVIČ	
YOUTH ENTREPRENEURSHIP IN RURAL AREAS – REFLECTION ON CROATIA .....	196
Borna BULJAN	
Božena KRCE MIOČIĆ	
SPECIFICITIES OF DIGITAL BUSINESS MODELS IN RELATION TO TAXATION .....	213
Mario HAK	
Berislav ANDRLIĆ	
Anton DEVČIĆ	
GROWTH OF SMALL AND MEDIUM SIZED ENTERPRISES: THE CASE OF KOSOVO .....	222
Arbenita HALILAJ	

TACKLING YOUTH UNEMPLOYMENT IN BOSNIA AND HERZEGOVINA: INSTITUTIONS, POLICIES AND CHALLENGES .....	237
Hatidza JAHIC	
Almir PESTEK	
EMPLOYMENT RELATIONS UNDER COVID-19 CRISIS – CASE OF SLOVAKIA .....	251
Miroslava KNAPKOVÁ	
THE ABSENCE OF INFLATIONARY PRESSURES DURING LARGE MONETARY INTERVENTIONS BY CENTRAL BANKS .....	263
Marin LEVAJ	
INNOVATIONS AND KNOWLEDGE-BASED ECONOMY: PERFORMANCE OF UKRAINE AND CROATIA .....	273
Olga MIROSHNYCHENKO	
Fran GALETIĆ	
THE EFFECTS OF LABOUR MARKET POLICY SPENDING SHOCKS: DOES IT MATTER WHERE WE ARE IN THE BUSINESS CYCLE?.....	289
Ozana NADOVEZA JELIĆ	
Tomislav SEKUR	
Marko DRUŽIĆ	
PERFORMANCE EVALUATION OF THE FRUIT AND VEGETABLE SUBSECTORS IN THE AZERBAIJANI ECONOMY: A COMBINATORIAL ANALYSIS USING REGRESSION AND PRINCIPAL COMPONENT ANALYSIS .....	307
Ibrahim NIFTIYEV	
LABOR MARKET INSTITUTIONS CONVERGENCE IN THE EUROPEAN UNION .....	327
Alka OBADIĆ	
Vladimir ARČABIĆ	
Lucija ROGIĆ DUMANČIĆ	
DEVELOPMENT POTENTIAL AND FUTURE OF CROATIAN SHIPBUILDING INDUSTRY .....	346
Luka PAVELIĆ	
Tomislav HERCEG	
EUROPEAN UNION ENERGY INDUSTRY: AN OVERVIEW .....	359
Dubravka PEKANOV STARČEVIĆ	
Boris CRNKOVIĆ	
Ivana BESTVINA BUKVIĆ	
COASTAL AND CONTINENTAL REGIONAL ENTREPRENEURSHIP IN THE MACRO SYSTEM .....	368
Damir PIPLICA	
Tihomir LUKOVIĆ	
Nikola VUKČEVIĆ	

INTERFERENCE OF THE PUBLIC SPHERE WITH THE PRIVATE SPHERE. A STUDY OF THE RELATIONSHIP BETWEEN THE DEGREE OF INSOLVENCY PHENOMENON PENALIZATION AND THE EFFECTIVENESS OF INSOLVENCY LAW..... 379

Katarzyna PUSTUŁKA

COMPARISON OF THE USABILITY OF EU FUNDS IN THE REPUBLIC OF CROATIA WITH THE COUNTRIES THAT HAVE SIMILAR ECONOMIC INDICATORS..... 389

Mladen RAJKO

INSTITUTIONS AND THE EFFICIENCY OF THE EUROPEAN UNION PRODUCT MARKET WITH AN EMPHASIS ON CROATIA – DYNAMIC PANEL DATA ANALYSIS..... 402

Lucija ROGIĆ DUMANČIĆ

Željko BOGDAN

Irena RAGUŽ KRIŠTIĆ

A POSSIBLE METHOD OF OPTIMIZATION OF INTERMITTENT RENEWABLE SOURCES PLANNING POLICY FOR MINIMIZED EXTERNAL COSTS OF VARIABILITY ..... 426

Dubravko SABOLIĆ

Iljko ĆURIĆ

THE EFFECT OF UNEMPLOYMENT ON THE CRIME RATE: COMPARATIVE ANALYSIS BETWEEN WESTERN BALKAN COUNTRIES AND SELECTED EU COUNTRIES (2012 - 2018)439

Durim SELMONAJ

Fisnik MORINA

DETERMINANTS OF EXPORTS IN KOSOVO: EVIDENCE FROM THE REGRESSION ANALYSIS ..... 460

Shkëlqesa SMAJLI

Agnesa SMAJLI

HOUSEHOLD CONSUMPTION STRUCTURE AS AN INDICATOR OF ECONOMIC MIGRATION IN EU COUNTRIES..... 476

Marin STRMOTA

Krešimir IVANDA

INVESTIGATING THE DETERMINANTS OF EU-28 SOVEREIGN CREDIT RATINGS USING STEPWISE LEAST SQUARES REGRESSION ..... 488

Berislav ŽMUK

Hrvoje JOŠIĆ

## **EDUCATION**

ONLINE LEARNING VS TRADITIONAL LEARNING: THE RESEARCH OF STUDENT ATTITUDES..... 501

Fran GALETIĆ

THE EFFECT OF ETHICS EDUCATION ON STUDENTS' ETHICAL DECISIONS: AN EXPLORATORY LAB EXPERIMENT..... 516

Chaoping LI

TO TEACH OR NOT TO TEACH BUSINESS ETHICS – THAT IS THE QUESTION .....	526
NATAŠA RUPČIĆ	
ENTREPRENEURIAL COMPETENCY DEVELOPMENT - EVALUATION OF TEACHING METHODS FROM THE PERSPECTIVE OF UNIVERSITY STUDENTS.....	540
Michaela SLABOVÁ	
Ladislav ROLÍNEK	
SERVICE QUALITY MEASUREMENT IN HIGHER EDUCATION .....	555
Vivien SURMAN	
Zsuzsanna Eszter TÓTH	
MOTIVATION DIMENSIONS OF BUSINESS ANALYSES STUDENTS IN THE DISTANCE LEARNING ENVIRONMENT.....	570
Zsuzsanna TÓTH	
Éva ERDÉLYI	
Zsolt TÖRCSEVÁRI	
<b>FINANCE</b>	
EFFECTIVE TANGIBLE FIXED ASSETS MANAGEMENT.....	589
Vladimir BUKVIČ	
START-UP FIRMS AS A FORM OF ENTREPRENEURIAL ACTIVITY: RECENT TRENDS IN CROATIA.....	603
Lucija JELIĆ	
Lidija DEDI	
THE IDENTIFICATION OF INDICATORS INFLUENCING THE CREDIT RISK OF AUTOMOTIVE COMPANIES IN THE CZECH REPUBLIC .....	612
Blanka KAMENÍKOVÁ	
Radka DAŇOVÁ	
Tomáš URBÁNEK	
“OLD” VS. “NEW” INTERNATIONAL FINANCIAL INSTITUTIONS: COMPETITORS OR SUPPLEMENTARIES .....	622
Gordana KORDIĆ	
BEHAVIOURAL BIASES AND RISK PROPENSITY OF CROATIAN CITIZENS IN THE CORONAVIRUS CRISIS .....	634
ANA KUNDID NOVOKMET	
DORA JUG	
PETAR AKRAP	

THE EVALUATION OF EFFICIENCY AFTER SOLVENCY 2 IMPLEMENTATION: AN EMPIRICAL STUDY IN THE REPUBLIC OF CROATIA.....	661
Maja MIHELJA ŽAJA	
Margareta GARDIJAN KEDŽO	
Marta HARAMUSTEK	
THE IMPACT OF FINANCIAL SERVICES DEVELOPMENT ON THE LIVING STANDARD OF POPULATION IN BOSNIA AND HERZEGOVINA .....	678
Zoran NAJDANOVIĆ	
Natalia TUTEK	
Mirko PALIĆ	
MONETARY FALLOUTS IN SINGLE LEGAL TENDER, IN GLOBAL AREA UNIONS .....	688
Mario PINES	
MANAGERIAL OVERCONFIDENCE IN CAPITAL STRUCTURE DECISIONS AND ITS LINK TO AGGREGATE DEMAND: AN AGENT-BASED MODEL PERSPECTIVE.....	701
Marcin RZESZUTEK	
Antoine GODIN	
Adam SZYSZKA	
Stanislas AUGIER	
BANKRUPTCY MODELLING: FACTORS INFLUENCING MODELS PREDICTABILITY .....	741
Martina SPONEROVA	
PORTFOLIO SELECTION: A GAME THEORY BASED MODEL FOR SUPERIOR PERFORMANCE .....	752
Mirza ŠIKALO	
Almira ARNAUT-BERILO	
Azra ZAIMOVIĆ	
THE EFFECTS OF QUANTIFICATION OF LIQUIDITY RISK REQUIREMENTS ON THE AGGREGATED LEVEL OF LIQUID ASSETS IN CROATIAN BANKING SECTOR.....	769
Džanela ŠTEFANEC	
Azra ZAIMOVIĆ	
THE IMPACT OF MEDIA REPORTING ON BANK SAVINGS AS AN INCENTIVE FOR PROMOTING FINANCIAL LITERACY.....	782
Roman ŠUBIĆ	
IT	
E-GOVERNMENT IN CROATIA: STATE OF PLAY AND LESSONS FROM THE COVID-19 CRISIS	
Ana ANDABAKA	

APPLICATION OF DIGITAL TECHNOLOGIES IN BANKING OPERATIONS IN THE REPUBLIC OF CROATIA.....	810
Filip BIROVČEC	
Vjekoslav BRATIĆ	
Božidar JAKOVIĆ	
THE INTERSECTION BETWEEN IOT AND BPM: SYSTEMATIC LITERATURE REVIEW .....	824
Vesna BOSILJ VUKŠIĆ	
Ana-Marija STJEPIĆ	
Dalia SUŠA VUGEĆ	
ICT INVESTMENT IMPACT ON THE COMPANY PROFITABILITY .....	837
Natalija KOKOLEK	
Božidar JAKOVIĆ	
Tamara ĆURLIN	
OPEN DATA, ONLINE VOTING AND ONLINE DISCUSSIONS: DIGITAL IMMIGRANTS vs. DIGITAL NATIVES .....	850
Jovana ZOROJA	
Ivan MILOLOŽA	
Igor KLOPOTAN	
MANAGEMENT	
CIVIC ACTIVISM OF BOSNIA AND HERZEGOVINA'S CITIZENS.....	865
Selma BITEVIJA	
Hatidza JAHIC	
Almir PESTEK	
REDUCING SOCIAL STRATIFICATION VIA DIGITAL SKILLS IMPROVEMENT: THE CASE OF SOCIAL ENTERPRISES IN LATVIA .....	877
Kristine CASNO	
Biruta SLOKA	
LINKING HRM PRACTICES TO OPERATIONAL PERFORMANCE IN THE EMERGING ECONOMY .....	890
Xhavit ISLAMI	
Enis MULOLLI	
SUPPLIER INVOLVEMENT IN NEW PRODUCT DEVELOPMENT.....	901
Aurelija MARCINA	
Jure ERJAVEC	

THE ROLE OF MISSION IN MANAGEMENT OF CULTURE AND ART – CASE STUDY OF MIMARA MUSEUM .....	915
Ivana MARIĆ	
Ana HOIĆ	
Josipa KVATERNIK	
GIG WORK: THE CHALLENGES FOR THE PROTECTION OF PLATFORM WORKERS’ RIGHTS .....	933
Ivana NAČINOVIĆ BRAJE	
Kosjenka DUMANČIĆ	
Zoran WITTINE	
INTERNAL SOCIAL NETWORKS IN DAILY OPERATIONS AND THEIR IMPACT ON GREATER EMPLOYEE SATISFACTION.....	945
Jelena PETROVIĆ	
WORK-STUDY-LIFE BALANCE – THE CONCEPT, ITS DYADS, SOCIO-DEMOGRAPHIC PREDICTORS AND EMOTIONAL CONSEQUENCES .....	954
Nina POLOŠKI VOKIĆ	
Milka RIMAC BILUŠIĆ	
Iva PERIĆ	
MAPPING THE EVOLUTION OF AGILITY MANAGEMENT AS A RESEARCH PARADIGM.....	970
Vasja ROBLEK	
Judita PETERLIN	
Maja MEŠKO	
Vlado DIMOVSKI	
EFFECT OF THE PANDEMIC ON SUSTAINABLE DEVELOPMENT OF ENTERPRISES .....	989
Aleksandra STANEK-KOWALCZYK	
Anna SKOWRONEK-MIELCZAREK	
Monika ZAJKOWSKA	
<b>MARKETING</b>	
CONCEPTUALIZATION OF SERVICE VALUE ON THE MARKET OF RESEARCH, DEVELOPMENT AND INNOVATION PRODUCTS AND SERVICES: INFLUENCE ON PURCHASE INTENTIONS.....	1009
Nina ANTIČIĆ	
DESCRIPTIVE STUDY OF THE COMPLEX DECISION-MAKING MECHANISMS OF CONSUMERS OF DIGITAL FPS GAMES: OR ON WHAT BASIS DOES THE HUNGARIAN FPS GAMER BUY? .....	1027
Gönczy BALÁZS	

TRAVEL INSURANCE ONLINE INTERMEDIARY PLATFORMS: FACTORS OF INFLUENCE ON BEHAVIORAL INTENTION AND THE ROLE OF INNOVATION ADOPTION TYPE.....	1041
Valentina BALDIGARA	
Ivana FIRST KOMEN	
POLITICAL BRANDS POSITIONING IN CROATIA WITHIN THE YOUTH SEGMENT .....	1056
Karla BILANDŽIĆ	
Ana PAP	
Marija HAM	
SENTIMENT ANALYSIS OF THE INFOGRAPHICS ON SOCIAL MEDIA .....	1072
Diana BRATIĆ	
Mirko PALIĆ	
Petar MILJKOVIĆ	
THE PATH TO AUTHENTICITY IS PAVED WITH THE RIGHT CUES: A DECADE OF RESEARCH ON BRAND AUTHENTICITY .....	1082
Branka DROPULIĆ	
Đurdana OZRETIĆ DOŠEN	
SOCIAL MEDIA USE IN MUNICIPALITIES IN LATVIA .....	1097
Biruta SLOKA	
Kate LASE	
Mārcis VĪTOLS	
INFLUENCE OF COVID-19 ON ONLINE PURCHASE HABITS IN CROATIA.....	1108
Marija STAMAĆ OŽANIĆ	
Irena STARMAN FRANČIĆ	
DID CORONAVIRUS PANDEMIC CHANGE CONSUMER PURCHASE BEHAVIOUR: PRELIMINARY RESEARCH .....	1124
Jelena ŠIŠARA	
Jasmina SLADOLJEV	
Divna GOLEŠ	
EXPLORING MOBILE SHOPPING INTENTIONS: AN ANALYSIS OF SELF-ESTEEM AND ATTITUDES TOWARD M-SHOPPING.....	1138
Radica VELJANOVA	
ANITA CIUNOVA-SHULESKA	
<b>TOURISM</b>	
LOCALS' ATTITUDES TOWARDS TOURISM DEVELOPMENT: THE CASE OF OMAN .....	1152
Zakiya S. AL-HASNI	
Galal M. H. AFIFI	



THE ROLE OF BIKE SHARING SYSTEM IN DEVELOPING SUSTAINABLE URBAN TOURISM DESTINATION .....	1169
Kristina BUČAR	
Petra BARIŠIĆ	
Nidžara OSMANAGIĆ BEDENIK	
EXPLORING HOW INTERNET IMPACTS NATURE-BASED DESTINATION SATISFACTION	1183
Songling CHANG	
Éva ERDÉLYI	
THE DIFFERENCES AND SIMILARITIES OF THE SPANISH FLU AND THE COVID-19 PANDEMIC IN THE REGION OF OPATIJA FROM A HORECA PERSPECTIVE.....	1199
Wolfram IRSA	
SHEDDING THE LIGHT ON DARK TOURISM RESEARCH: A SCIENTOMETRIC ANALYSIS OF LANDMARK STUDIES .....	1212
Ingeborg MATEČIĆ	
Oliver KESAR	
Danijela FERJANIĆ HODAK	
CREATIVE INDUSTRY AS GENERATOR OF TOURISM TRANSFORMATION AND ECONOMIC DEVELOPMENT .....	1230
Karmen MIKULIĆ	
Adriana JELUŠIĆ	
TRAVEL INFLUENCERS AS A NEW STRATEGIC PARTNERS IN TOURISM .....	1247
Magdalena MUSTAPIĆ VLAHOV	
Antonio VLAHOV	
CAN CULTURAL TOURISM FOSTER SOCIAL WELL-BEING? THE CASE OF THE MUSEUM OF BROKEN RELATIONSHIPS .....	1265
Lorena UJEVIĆ	
Ingeborg MATEČIĆ	
Daniela Angelina JELINČIĆ	

# SPECIFICITIES OF DIGITAL BUSINESS MODELS IN RELATION TO TAXATION

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## **Abstract**

*The digitalization of the economy has been a key issue of tax researches in recent years. Economic debates have focused on the differences between taxing physical business operations and virtual operations including new business models. Businesses in the digital economy can easily conduct activity remotely and are therefore very active in cross-border trade. The main characteristics of digital business models - as compared to more traditional ones - are their ability to conduct activities remotely, the contribution of internet users in their value creation and the importance of intangible assets. After theoretical part of paper, authors conducted research on this topic on sample of European Union countries, using method of comparison, induction and deduction.*

**Keywords:** management, taxation, digitalization, business models

**JEL classification:** A1, B26, F37, L86

## **Introduction**

E-business (electronic business) is the conduct of business processes on the internet. These e-business processes include buying and selling goods and services, servicing customers, processing payments, managing production control, collaborating with business partners, sharing information, running automated employee services, recruiting; and more. E-business can comprise a range of functions and services. They range from the development of intranets and extranets to the provision of e-services over the internet by application service providers. (Searchio, 2021).

Today's international corporate tax rules are not fit for the realities of the modern global economy and do not capture business models that can make profit from digital services in a country without being physically present. Current tax rules also fail to recognise the new ways in which profits are created in the digital world, in particular the role that users play in generating value for digital companies. As a result, there is a disconnect – or ‘mismatch’ - between where value is created and where taxes are paid. Because of that reasons further focus of this paper will be on new digital business model in field of taxation.

## **E-business methodology**

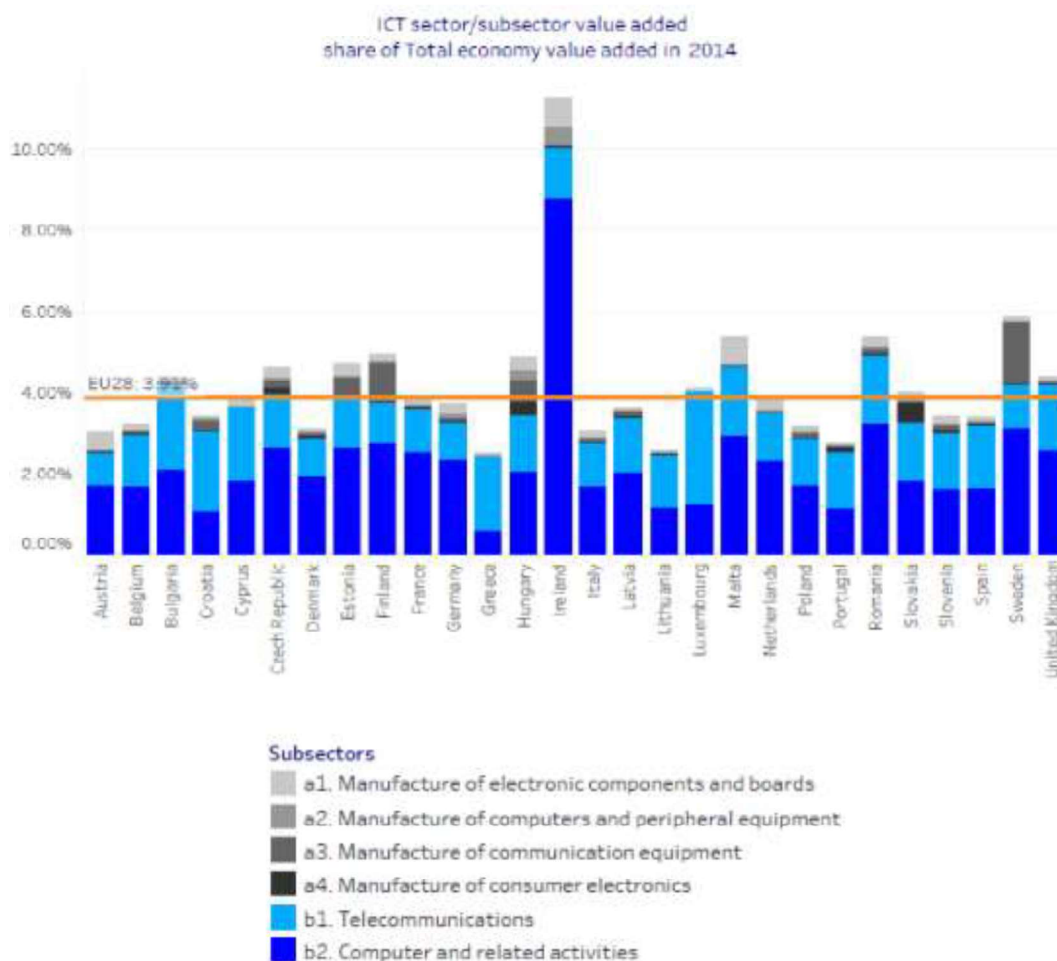
The language version of this term is electronic business, by which we mean a modern form of business organization, which includes the intensive application of information and, in particular, Internet and communication technology in performing key or core (core) business activities. Electronic business involves the electronic exchange of information within an organization, but also with other participants related to the organization by supporting business processes. (Bocij, et al, 2006).

In e-business, information and communication technology is used to connect and improve business processes, which ultimately results in lower costs, increased profitability and added value to customers. It includes the automation of business processes in the value chain - from ordering and purchasing raw materials, production, storage, distribution, promotion, sales and after-sales activities. E-business creates the possibility of online business, and includes e-commerce and e-marketing. E-marketing is at the core of e-business, as it is marketing that brings customers closer, adds value to products and services, expands distribution channels and conducts promotions using digital technologies. It is also a new business philosophy that aims to put the consumer at the center of the online activities of the business entity, and give him the opportunity to participate, share information and create offers.

## **The “Digital Sector”: Theoretical Review and Implications**

There is no well-defined digital sector as such. Notably, the Information and Communication Technology (ICT) sector is no synonym for the digital economy. Rather, one might consider the ICT sector as the backbone of the digital economy (and driving the digitalisation of more traditional industries). The ICT sector comprises both manufacturing activities and services, though services represent more than 90% of the total production. Computer and related activities is by far the largest sub-sector, followed by Telecommunications. ICT services are also growing at much faster rates than the ICT manufacturing. (European Commission, 2017b)

Figure 1. Value added in the ICT sector in the EU-28



Source: UNCTAD (2017a), 'World Investment Report 2017: Investment and the Digital Economy', United Nations, New York and Geneva

Digital companies should not be considered pre-dominantly as ICT companies. Many companies commonly considered as digital companies do not actually belong to the ICT sector. The 2017 World Investment Report (UNCTAD, 2017a and 2017b) has developed a methodology to classify international companies into (1) digital companies, (2) IT and telecoms companies (both enablers of the global digital economy) and (3) 'other multinational companies'. IT and telecoms companies are broadly equivalent to the ICT sector. They are either IT hardware manufacturers or software developers/providers of IT services, or they are providers of telecommunication infrastructure and connectivity. Digital companies are characterised by the nature of their

operations, which are strongly linked to the internet. The report distinguishes between providers of internet platforms, e-commerce, digital solutions and digital content. (UNCTAD, 2017).

Focussing on the top companies in each category clearly shows the much more dynamic revenue growth in the digital sector. Based on a unique assignment of companies into one of the categories, UNCTAD (2017b) has produced new lists of top 100 multinationals in the categories 'IT and telecoms' and 'digital'. Table (1) reports summary statistics for the largest companies in each category. Average revenue growth was around 14% for the top digital firms, compared to around 3% for IT and telecom enterprises and 0.2% for other multinational enterprises, although total revenue by the largest digital companies is still considerably lower than that of the other sectors. The table also reports the 'international footprint' and the relevance of intangible assets, discussed in the next subsection.

*Table 1. Revenue growth, international footprint and relevance of intangible assets of largest multinational companies*

Type of MNE	Total revenue	Annual revenue growth	International footprint	Relevance of intangible assets
<b>Digital</b>	872	14.2%	2.1	3.1
<b>IT&amp;Telecoms</b>	2825	3.1%	2.2	1.2
<b>Other</b>	5682	0.2%	1.1	1.4

*Source:* Own computations based on UNCTAD (2017a and 2017b)

*Notes:* Total revenue for the latest available year for the top companies in each category in \$ billion. 'Digital' and 'IT&Telecoms' each consist of 100 companies. The category 'Other' only includes 83 companies, since some of the companies on UNCTAD's usual list of top 100 global companies belong to the first two categories. Annual average growth is measured over the latest 7 available years. International footprint is the ratio of the share of foreign sales in total sales to the share of foreign assets in total assets. The relevance of intangible assets is computed as the market capitalisation over equity book value minus 1.

## **Specificities of Digital Business Models in Relation to Taxation**

The main characteristics of digital business models - as compared to more traditional ones - are their ability to conduct activities remotely, the contribution of internet users in their value creation and the importance of intangible assets. E-business has the potential to propel a company to “break out” of existing strategic constraints and radically alter business processes, strengthen customer and supplier ties, and open up new markets. (Hackbarth & Kettinger, 1999).

### ***Limited physical presence***

Businesses in the digital economy can easily conduct activity remotely and are therefore very active in cross-border trade. Little physical presence is required to sell into a market. From one click on the computer, consumers can order goods and services from all over the world, translating into new market reach. For digital services more specifically, this is even more acute as the delivery of the service itself requires no or little physical presence. Digitalisation also changes the nature of exchange by blurring the lines between goods and services, transforming

products to their digital representation such as e-books or using the little material as in 3D printing. (UNCTAD, 2017).

Digitalisation is profoundly changing the structure of businesses. Primary activities such as outbound logistics, marketing, sales and services that traditionally constitute an important part of the value chain/system (Porter, 1985) are going through a process of dematerialisation. Such activities were mostly conducted locally in the destination location, and are now conducted remotely in the country of origin (at source), although increasingly relying on consumer information from the destination country. One observes a disintermediation process – also referred as a '*scale without mass*' business structure. The disintermediation no longer allows the destination country to tax the profit generated from the sales/marketing activities, although the consumers/users in the destination country play an important role through their provision of data and other user contributions.

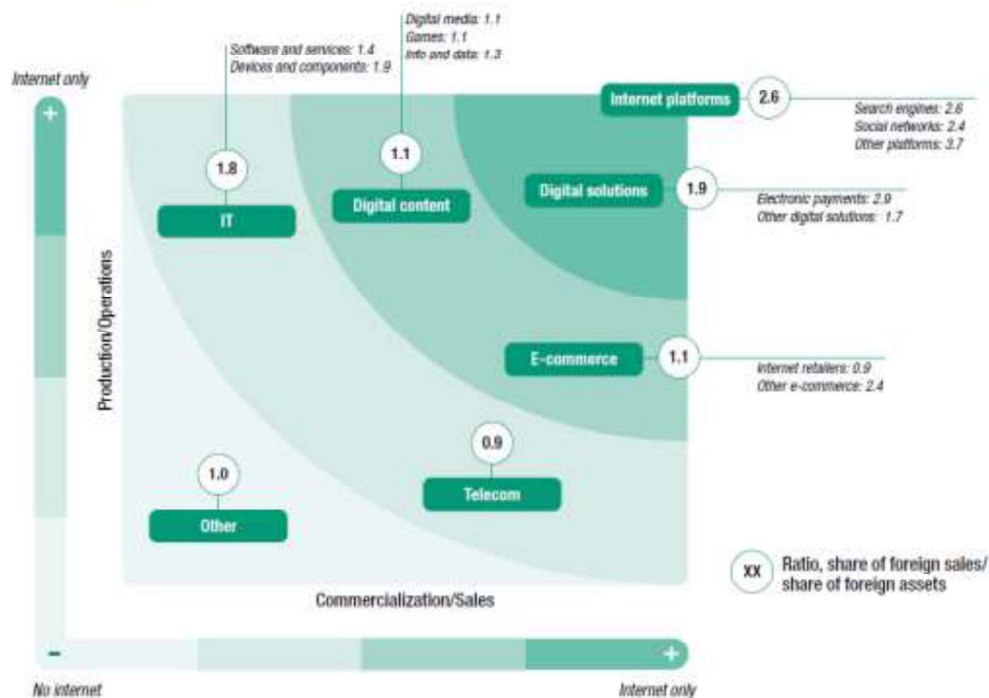
As a result, businesses of the digital economy have a fundamentally different international footprint, with far fewer assets in the location of their foreign sales. One way to measure this phenomenon is by measuring the share of foreign assets in total assets against the share of foreign sales in total sales.

$$\text{International footprint} = (\text{foreign sales}/\text{total sales})/(\text{foreign assets}/\text{total assets})$$

Doing so for the three categories of largest global companies (see Table 1 above) shows that, compared to the traditional non-IT companies, digital companies, have a much larger share of sales earned outside their home country relative to the assets they hold abroad compared to traditional multinational enterprises. The 2017 World Investment Report provides a more detailed breakdown which helps arriving at a clearer picture. Figure 2 reports ratios for the different business models used in the report. The international footprint is particularly striking, with values exceeding 2.0, for internet platforms (search, social networks or other platforms), electronic payment companies and companies classified as 'other e-commerce', which includes for example major travel platforms. In contrast, telecom companies, traditional businesses and online retailers, but also providers of digital media have overall a balanced ratio of around 1.

*Figure 2. The internet intensity matrix and the foreign sales/assets ratio*

Source: UNCTAD 2017 World Investment Report (UNCTAD, 2017a), based on UNCTAD's FDI/MNE database, company reports and data from Bureau van Dijk Orbis database and Thomson ONE.



Most of these remote activities by large global companies are conducted from non-EU locations. Only 50% of the affiliates of digital multinational enterprises are foreign-based, indicating the reduced need to be physically present abroad – for other (traditional) multinationals the share is 80%. Large digital multinationals are particularly concentrated in the United States. From the top 100 digital multinational enterprises, two-thirds had their headquarters in the United States, whereas for tech companies and other multinationals the share was only 20%. (UNCTAD, 2017).

### ***Disruption in value creation and indirect revenue generation***

The relevance of user contributions is central, materialising through the mass of adopters, the production of data and other forms of user contributions to the production process. Participating in a platform or a network creates a value. As opposed to the conventional 'value chain' business model where value is generated by the supplier of a product or a service, a large part of the value derived by users of an online platform's is created by other users. This is particularly true for multi-sided platforms. The effects that one user of a good or service has on their value to other users are known as network effects (i.e. the marginal benefit of adopting the service increases with the number of users).

Digital platform models have moved from the traditional linear structure (from production to after-sales services), to the development of an ecosystem. This involves different skills, sources of power, strategic assets, market values and sources of growth (see Table 2). Instead of monitoring a value chain, digital platforms need to manage a community of providers and users to increase their network. In other words, instead of maximising the value of individual consumers, the platforms need to maximise the value of a network of transactions. (Estrategiaparatodos, 2021) This translates in an increase in the value of the company or service, exceeding the proportional increase in the number of users.

*Table 2. Differences in business models in the industrial and digital economies*

	Industrial Economy	Digital Economy
Focus	Product	Platform
Structure	Value chain	Ecosystem
Source of Power	Monitoring and control of the value chain	Governance and architecture of the platform
Economic model	Economies of scale on the supply side	Economies of scale on the demand side
Strategic assets	Physical assets	Ecosystem capacity, platforms attractiveness
Market value	Return on assets	Return on transactions within the ecosystem
Source of growth	Organic growth or acquisitions	Network effects

*Source: Accenture (2016)*

The concept of 'prosumers' is emerging where the end-user participates in the value creation. The end-user is no longer solely a consumer but contributes, either actively or passively, to the value creation. The extent to which digital business models disrupt the value chain varies quite significantly from one model to another. For example, network effects will be particularly relevant for business model acting as marketplace (two-sided platforms) or social media that connect users. Reliance on big data is very strong for social media, Internet search services and online advertising platforms while it is moderate for cloud services. The consumer may receive services for free, but also provides data that are valuable for a company or contributes more actively to the service, for example by uploading content. This is a phenomenon that associates to a form of work without monetised compensation (obvious examples are Google or Facebook to which access is free but all activities, searches, interactions that reveal interests and preferences are recorded and can used to create value).

Some authors also refer to 'unconscious contributor' or 'unconscious employees'. This creates challenges in determining where and by whom, value is created. (Petruzzi, Buriak, 2018). Often digital businesses provide certain types of products for free and monetise other products, creating a disconnection between revenues generated and services provided. Revenue generation in the digital economy derives from both direct payments (subscription or transaction fees) and indirect payments through the generation of value in one activity (e.g. social media, search engines) that



is later monetized as input for another activity (e.g. sales of advertising space or transmission of data). The generation of income via advertisements arguably replicates the selling of advertisement space on television or radio. What does make a difference, however, is the unique, almost personalised manner in which advertising placements track the user – by responding directly to their search-engine searches or direct clicks on to adverts (Gaspar, et al, 2014). Taken together the disconnection between the consumers of advertisements and the advertising companies and the fact that user data are central to the personalisation of advertisements result in a particularly stark deviation from the principle of taxation where the value is created.

### ***Importance of intangible assets***

One key feature of intangible assets is that they are difficult to value reliably, while they are the essence of a competitive advantage in some businesses. When generated internally, generally accounting principles including international accounting standards prohibit the recognition of those assets, even though they are a core component of a business model. As a consequence, they do not appear on a company's balance sheet until such assets are either acquired or otherwise transferred to a third party for a consideration (e.g. business combination), in which case the financial statements of the acquiring company must generally recognise these assets for its fair value.

There is evidence that intangible assets are particularly important for companies with significant digital activities. Markets tend to attribute their own value to assets, whether recognised or not. Therefore, as a proxy, differences in the importance intangible assets can be derived by comparing differences between a company's equity book value and its market valuation (UNCTAD, 2017). The increasing importance of intangible assets is shown by a widening gap between book and market values of companies. Undisclosed intangibles of the largest digital multinationals are estimated to be on average roughly equal to 3 times the company's total equity book value – significantly more than the average recorded for IT & telecom companies and other multinational enterprises (see Table 3 below). At the same time, the excess in market capitalisation over equity book values are of course also an indication of the market expectations about future revenue generation.

*Table 3. Overview of physical presence per sector (digital, ICT and other)*

	International footprint	Relevance of IP
Digital	2.1	3.1
IT & Telecoms	2.2	1.2
Other	1.1	1.4

*Source: Based on data from the Bureau van Dijk Orbis database. Notes: The relevance of intangibles is computed as the market capitalisation over equity book value minus 1.*

The differences in asset profiles indicate a structural shift in the sources of value creation, from physical assets to intangibles. It also illustrates the profound disruption brought about by digital multinationals discussed above. The intangible investment offers a high competitive advantage. At the same time it raises a concern over a growing distance between highly productive firms at the frontier and the followers.

## Conclusion

The development of modern telecommunications and digital technology, and consequently the Internet, provide marketers with many new competitive opportunities. Simply put, traditional business activities are gaining e-characteristics, but we can also talk about a new, specific type - e- business in field of taxation. The limitations and research proposals in this paper are related to the need to increase the sample of research in future research, as well as the analysis of user satisfaction of these business models.

Across industries, firms have adopted e-business initiatives to better manage their internal business processes as well as their interfaces with the environment. (Wu, et, al, 2003).

The Internet provides support to a range of functions and processes in an economic operator in order to develop products and provide services to consumers. Then, it represents a powerful communication medium that can effectively connect the subjects of supply and demand in field of taxation. Consequently, new changed habits and business models are emerging, which is primarily marked by the use of the Internet as an information, communication and transaction channel. This category is, looking forward, at a wider global level in constant progression, so it will be also focus of researches in future.

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