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FREQUENCY

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JOURNAL HISTORY

The journal *Annals of Spiru Haret University. Economic Series* was founded in 2000 at the initiative of two professors from Spiru Haret University: professor Ph.D. Gheorghe Zaman – also corresponding member of the Romanian Academy and professor Ph.D. Constantin Mecu – one of the University's founders and vice-rector.

Between 2004-2010, the journal is headed by professor Ph.D. Constantin Mecu, as editor-in-chief, and associate professor Ph.D. Aurelian A. Bondrea, as deputy editor, both of them vice-rectors of the university.

In 2011, associate professor Ph.D. Aurelian A. Bondrea, rector of the university, takes over the presidency as editor-in-chief and leads the journal until present.

The *Annals of Spiru Haret University. Economic Series* was issued annually, once a year, starting 2000, until 2009.

Since 2010, the *Annals* have a new format, with a four-annual issuance exclusively in English, with both redaction and review conditions comparable to the most rigorous international requirements.

In 2007, *Annals of Spiru Haret University. Economic Series* obtained the B+ quotation from The National Council of Research in Higher Education in Romania, becoming a publication of real scientific interest.

Starting 2009, the review is indexed in REPEC, SSRN and Google Scholar and beginning with 2016 our Journal is under a process of rebranding, the new team trying to rethink the journal indexing strategy in international databases, suggesting a greater external visibility.

Along the years, in the journal pages, the members of the teaching personnel – professors, associate professors, lecturers and teaching assistants – active in six economics faculties and distinct specialty departments, as well as in the Central Scientific Research Institute, functioning within Spiru Haret University, present the results of their scientific research. The journal also hosts many studies of professors, researchers or Ph.D. students from other universities and research institutes all over the world.

The subject of the publication firstly reflects the concern for the modernization of teaching economic science in University: marketing, management, finance, banking, accounting, audit, international economic relations, trade, business, tourism, administrative data processing, politic economy, commercial law, cybernetics, environmental economics, statistics, ethics in economics, insurance, advocacy & lobby, economic philosophy, econometrics etc.

In the published materials, there are analyzed theoretical and practical issues of edification and consolidation of the Romanian market economy, as well as the fundamental directions of the technical and scientific progress, the actual state and ways of its promotion in the Romanian economy, the issue of developing the new world economy, the directions of globalization and contemporaneous economic integration and Romania's participation to these processes. Also, there are hosted articles that refer to different aspects of economic phenomena from all over the world.

The editing team and the scientific advisors are Romanian intellectual personalities – members of the Academy, professors, and specialists in different fields of the practical economic and social activities. In scientific committee have been engaged as reviewers different professors and personalities in economic field coming from economics and academic institutions in our country, such

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FOREWORD

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The COVID-19 pandemic has spread with alarming speed, infecting millions and bringing economic activity to a near-standstill as countries imposed tight restrictions on movement to halt the spread of the virus. The COVID-19 pandemic is a global health crisis without precedent in living memory. It has triggered the most severe economic recession in nearly a century and is causing enormous damage to people’s health, jobs and well-being. As the health and human toll grows, the economic damage is already evident and represents the largest economic shock the world has experienced in decades.

The June 2020, *Global Economic Prospects* describes both the immediate and near-term outlook for the impact of the pandemic and the long-term damage it has dealt to prospects for growth. **The baseline forecast envisions** a 5.2 percent contraction in global GDP in 2020, using market exchange rate weights — the deepest global recession in decades, despite the extraordinary efforts of governments to counter the downturn with fiscal and monetary policy support. Over the longer horizon, the deep recessions triggered by the pandemic are expected to leave lasting scars through lower investment, an erosion of human capital through lost work and schooling, and fragmentation of global trade and supply linkages.

The same *Global Economic Prospects* looks beyond the near-term outlook to what may be lingering repercussions of the deep global recession: setbacks to potential output – the level of output an economy can achieve at full capacity and full employment – and labour productivity. Efforts to contain COVID-19 in **emerging and developing economies**, including **low-income economies** with limited health care capacity, could precipitate deeper and longer.

Global growth is projected at –4.9 percent in 2020, 1.9 percentage points below the April 2020 as showed by World Economic Outlook (WEO) forecast. The COVID-19 pandemic has had a more negative impact on activity in the first half of 2020 than anticipated, and the recovery is projected to be more gradual than previously forecast. In 2021, global growth is projected at 5.4 percent. Overall, this would leave 2021 GDP some 6½ percentage points lower than in the pre-COVID-

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19 projections of January 2020. The adverse impact on low-income households is particularly acute, imperilling the significant progress made in reducing extreme poverty in the world since the 1990s.

As with the April 2020 WEO projections, there is a higher-than-usual degree of uncertainty around this forecast. The baseline projection rests on key assumptions about the fallout from the pandemic. In **economies with declining infection rates**, the slower recovery path in the updated forecast reflects persistent social distancing into the second half of 2020; greater scarring (damage to supply potential) from the larger-than-anticipated hit to activity during the lockdown in the first and second quarters of 2020; and a hit to productivity as surviving businesses ramp up necessary workplace safety and hygiene practices. For **economies struggling to control infection rates**, a lengthier lockdown will inflict an additional toll on activity. Moreover, the forecast assumes that financial conditions, which have eased following the release of the April 2020 WEO, will remain broadly at current levels. Alternative outcomes **to those in the baseline** are clearly possible, and not just because of how the pandemic is evolving. The extent of the recent rebound in financial market sentiment appears disconnected from shifts in underlying economic prospects – as the June 2020 Global Financial Stability Report (GFSR) Update discusses – raising the possibility that financial conditions may tighten more than assumed in the baseline.

Every region is subject to substantial growth downgrades. East Asia and the Pacific will grow by a scant 0.5%. South Asia will contract by 2.7%, Sub-Saharan Africa by 2.8%, Middle East and North Africa by 4.2%, Europe and Central Asia by 4.7%, and Latin America by 7.2%. These downturns are expected to reverse years of progress toward development goals and tip tens of millions of people back into extreme poverty.

Advanced economies are projected to shrink 7 percent. That weakness will spill over to the outlook for emerging market and developing economies, which are forecasted to contract by 2.5 percent as they cope with their own domestic outbreaks of the virus. This would represent the weakest showing by this group of economies in at least sixty years.

All countries – including those that have seemingly **passed peaks in infections** – should ensure that their health care systems are adequately resourced. The international community must vastly step up its support of national initiatives, including through financial assistance to countries with limited health care capacity and channelling of funding for vaccine production as trials advance, so that adequate,

affordable doses are quickly available to all countries. Where lockdowns are required, economic policy should continue to cushion household income losses with sizable, well-targeted measures as well as provide support to firms suffering the consequences of mandated restrictions on activity. Where economies are reopening, targeted support should be gradually unwound as the recovery gets underway, and policies should provide stimulus to lift demand and ease and incentivize the reallocation of resources away from sectors likely to emerge persistently smaller after the pandemic.

The pandemic is expected to plunge most countries into recession in 2020, with per capita income contracting in the largest fraction of countries globally since 1870.

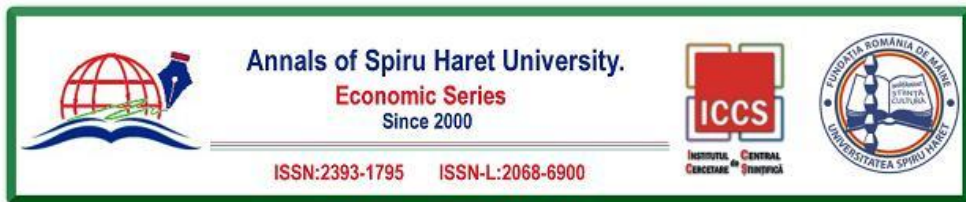
Businesses might find it hard to service debt, heightened risk aversion could lead to climbing borrowing costs, and bankruptcies and defaults could result in financial crises in many countries. Under this downside scenario, global growth could shrink by almost 8% in 2020.

Looking at the **speed with which the crisis** has overtaken the **global economy** may provide a clue to how deep the recession will be. The sharp pace of global growth forecast downgrades points to the possibility of yet further downward revisions and the need for additional action by **policymakers** in coming months to support economic activity.

A particularly concerning aspect of the outlook is the **humanitarian and economic toll** the global recession will take on **economies with extensive informal sectors** that make up an estimated one-third of the GDP and about 70% of total employment in **emerging market and developing economies**. **Policymakers** must consider innovative measures to deliver income support to these workers and credit support to these businesses.

The forecast assumes that the pandemic recedes in such a way that domestic mitigation measures can be lifted by mid-year in **advanced economies and later in developing countries**, that adverse global spillovers ease during the second half of 2020, and that widespread financial crises are avoided. This scenario would envision global growth reviving, albeit modestly, to 4.2% in 2021. However, this view may be optimistic.

The crisis highlights the need for urgent action to cushion the pandemic's health and economic consequences, protect vulnerable populations, and set the stage for a lasting recovery. For **emerging market and developing countries**, many of which face daunting vulnerabilities, it is critical to strengthen public health systems, address the challenges posed by informality, and implement reforms that will support strong



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and sustainable growth once the health crisis abates. **Emerging market and developing economies** will be buffeted by economic headwinds from multiple quarters: pressure on weak health care systems, loss of trade and tourism, dwindling remittances, subdued capital flows, and tight financial conditions amid mounting debt.

Exporters of energy or industrial commodities will be particularly hard hit. In the face of this disquieting outlook, the immediate **priority for policymakers** is to address the health crisis and contain the short-term economic damage. Over the longer term, authorities need to undertake comprehensive reform programs to improve the fundamental drivers of economic growth once the crisis lifts. Policies to rebuild both in the short and long-term entail strengthening health services and putting in place targeted stimulus measures to help reignite growth, including support for the private sector and getting money directly to people. During the mitigation period, countries should focus on sustaining economic activity with support for households, firms and essential services.

The pandemic and efforts to contain it have triggered an unprecedented **collapse in oil demand and a crash in oil prices**. Low oil prices are likely to provide, at best, temporary initial support to growth once restrictions to economic activity are lifted. However, even after demand recovers, adverse impacts on energy exporters may outweigh any benefits to activity in energy importers. Low oil prices offer an opportunity to oil producers to diversify their economies. In addition, the recent oil price plunge may provide further momentum to undertake energy subsidy reforms and deepen them once the immediate health crisis subsides. Demand for **metals and transport-related commodities** such as rubber and platinum used for vehicle parts has also tumbled. While agriculture markets are well supplied globally, trade restrictions and supply chain disruptions could yet raise food security issues in some places.

Strong multilateral cooperation remains essential on multiple fronts. Liquidity assistance is urgently needed for countries confronting health crises and external funding shortfalls, including through debt relief and financing through the global financial safety net. Beyond the pandemic, policymakers must cooperate to resolve trade and technology tensions that endanger an eventual recovery from the COVID-19 crisis. Furthermore, building on the record drop in greenhouse gas emissions during the pandemic, policymakers should both implement their climate change mitigation commitments and work together to scale up equitably designed carbon taxation or equivalent schemes. The global community must act now to

avoid a repeat of this catastrophe by building global stockpiles of essential supplies and protective equipment, funding research and supporting public health systems, and putting in place effective modalities for delivering relief to the neediest.

Global coordination and cooperation – of the measures needed to slow the spread of the pandemic, and of the economic actions needed to alleviate the economic damage, including international support – provide the greatest chance of achieving public health goals and enabling a robust global recovery.

In the current context, the authors who have written articles for the current issue have tried, as far as possible, to look at some solutions of the current problems facing the world economy. Whether or not they succeeded in responding to the challenges, we leave it to you to determine.

In the first article of this issue entitled *Digitalization, Dual-Use Technologies and Management of New Business Models – Ways to Respond to Challenges. USH Pro Business, Wallachia Hub and Dual-Use Cluster. Case Study*, the authors **Irina Gabriela RĂDULESCU**, **Costin LIANU** and **Cosmin LIANU** are talking about dual-use technologies, which mean technologies used for both military and civil applications, who are evolving in the context of digitalization.

Even in pre-digital era, at the dawns of the technological progress of mankind, the use of technologies was ambivalent, both for warfare and civil wellbeing. Now however, we assist to a fast blending of dual use and digital processes which is changing the landscape of the business models. This new process of interaction is known as Dual-use Digital Blending (DDB). This paper is investigating the trends of evolution of this blended dual-use digital transformation technologies and their impact on the new geo-economic and geopolitical confrontations, on the trade flows and economic balance of power. The authors analyse the new emerging business models triggered by DDB and the managerial challenges they will require, especially for innovative SMEs. Finally, the authors argue that university led innovation ecosystem, as the case study presented, may offer knowledge hubs for managers, organized in clusters in order to be better prepared for the described DDB process.

The second academic paper called *Influence of Social Networking on Small Business Performance in Nigeria* is written by **Olushola Joshua OMOLEKAN** and **Olushola OMOLE**. Networking has made the world become a small community, especially through social media. The usage of social networking sites by all has made the world a commonplace for both individuals and businesses alike. Small businesses now utilized social media to promote and communicate their products and services to the global community. Thus, the inherent small business challenges such as finance,

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low patronage, high cost of doing business and low market share are being checked. Therefore, the study examines the influence of social networking on small business performance in Nigeria. Specific objectives of the paper are to evaluate the influence of social media on market share and determine the effect of search engine on consumers' choice making. Survey design was adopted for the study. The study population comprises of registered small businesses in Ilorin, Kwara state, Nigeria. Judgmental and simple random techniques were used to select the sample respondents. Ordinary least square regression was used to analyse the collated data. The findings revealed that social media have significant effect on market share. Also, search engine significantly influences consumers' choice making. The study concluded that significant relationship exists between social networking and small business performance. The study recommended that video sharing platform should be adequately embraced to favourably positioned products and services. Besides, consumer trust should be built through timely delivery and product quality to encourage repeat purchase.

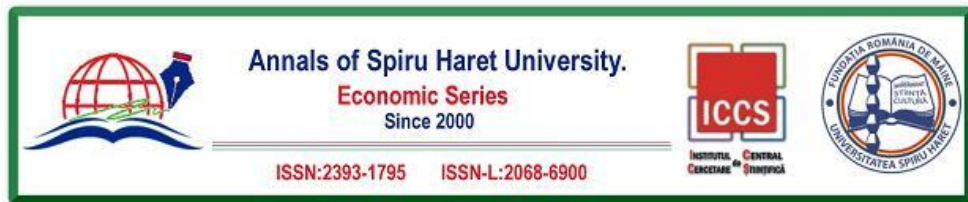
Ugo Chuks OKOLIE, in his paper entitled *Effect of Diversity Management on Human Resource Management: Recruitment and Selection in Focus* is talking about the changing demographic composition of the workforce, the overall effects of globalization and the increasing social sensitivity to ethical concerns that are compelling multinational organizations to deal with diversity management. However, organizations worldwide, in their attempt at diversity management, have faced challenges as stereotypes and are deeply rooted in one's culture and there is resistance to change. The key to diversity management hinges on strategic thinking and people centred policies. It is against this backdrop that this paper examines the effects of diversity management on human resource management with special reference to recruitment and selection. In the paper, the author explores the interface between diversity management and human resource management and how this impinges on recruitment and selection when HR managers fails to acknowledge cultural and individual differences in the workplace, focus attention on individual differences rather than group differences. Ugo Chuks OKOLIE developed a conceptual framework of HR diversity management, linking HR diversity strategies with major HR diversity issues. He also, examines the state of HR diversity practices that have been adopted in organizations worldwide and finally the author discusses the gaps in the literature and the implications of his findings for practitioners and researchers.

Dr. Tajudeen Adejare ADEGBITE, in his academic paper called *An Assessment of Non-Oil Taxation Inflow on Economic Growth: Verdict from West African*

Countries, examined the impact of non-oil taxation inflow on economic growth in selected West African countries using World Bank panel data from 1999 to 2018. Ten (10) West African countries were purposefully selected from 1999 to 2018. Specifically, five Francophone and five Anglophone countries were selected for the study. Panel data analysis was employed to articulate the effect of independent variables (company income tax, value added tax, education tax, and custom and excise duties) inflow on dependent variable (economic growth (GDP)). The results showed that corporate income tax, value added tax, education tax and custom and excise duties had positive significant effect on economic growth of West African countries. In conclusion, non-oil taxation inflow influenced economic growth significantly and positively in selected West African countries. This predicated that money realized as taxation income has been utilized effectively, productively and efficiently on economic enhancement in terms of employment creation, roads construction, income distribution, provision of infrastructural facilities and economic stability. The study postulated that West African countries should lay much emphasis on the collection of non-oil taxation effectively, especially VAT and CIT, and expend much of this revenue prudently for the augmentation and enrichment of the populace.

Another interesting paper is written by **Costin LIANU, Irina-Gabriela RĂDULESCU** and **Simona Corina DOBRE (GUDEI)**, and is entitled *Impact of Digitalization in Management of International Business in Organic Agriculture. Ways to Respond to Challenges. USH Pro Business, Inter-Bio, Wallachia Hub Study Case*. Digital technologies are used increasingly in everyday life, in any aspects of human activities. Pandemics like coronavirus imposed stricter rules for health, and people, most probably, will prefer to be safer with organic products. Even before the crises, organic agriculture especially was on the path to digitalization. Now the authors realized better that Digitally Conducted Organic Agri-food (DCOA) solutions would emerge even faster. The paper is investigating the trends of evolution of digital transformation in organic agri-food industry and their impact on trade flows with food products. The authors look at the new emerging business models triggered by the DCOA solutions and the managerial challenges that this will require, especially for innovative start-ups, farmers and SMEs in agri-food sector. Finally, the authors argue that university led innovation ecosystem, as the study case presented, may offer knowledge hubs for farmers, processors and sector branch organizations in the organic sector.

Haradhan Kumar MOHAJAN, in his paper entitled *COVID-19 – The Most Fatal Pandemic Outbreak: An Analysis of Economic Consequences* is talking about



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the novel coronavirus (CoV) fatal disease (COVID-19) that caused a lot of damage in world economy. It has been identified as the causative agent of the viral pneumonia outbreak in Wuhan, China, at the end of 2019. It is now becoming a major concern for global public health, as well as the cause of a possible global economic crisis. The International Monetary Fund (IMF) estimates that the outbreak of COVID-19 has cost the world economy up to \$ 9 trillion. After COVID-19 outbreak, home quarantines, lockdown, widespread restrictions on labour mobility and travel, border closings and closing of economic activities has affected the global supply chains, oil prices, travel and tourism, restaurants, conferences, sporting events, government budget, etc. The amount of the global economic damage is very uncertain at present, but it is estimated that it will be larger depending on the length of COVID-19. The paper discusses the social, economic, and health impacts on the world's poorest countries. An attempt has been made here to discuss the current economic situation of the world and analyses the potential consequences on global economy in future.

We hope that our journal issue caught your attention and made you read it. Also, we strongly believe that all the articles are interesting and deserve to be appropriated by those who are interested in understanding the specific issues of the global economy.

If you've liked our articles, please visit our website at <http://anale-economie.spiruharet.ro/>. If you want to write an article in our journal, we are waiting you to expose your ideas in new studies published by us.

Finally, hoping that you found interesting Issue 2/2020, I strongly invite you to address your comments and suggestions at ashues@spiruharet.ro and, of course, to submit your own paper via online submission system, using the following link: <http://anale.spiruharet.ro/index.php/economics/login>.

Research is the breath of the future. Let's shape the world together!

*Associate Professor Elena GURGU, Ph.D. in Economics
ASHUES Deputy Chief Editor*

ACADEMIA PAPERS

**DIGITALIZATION. DUAL-USE TECHNOLOGIES
AND MANAGEMENT OF NEW BUSINESS MODELS –
WAYS TO RESPOND TO CHALLENGES.
USH PRO BUSINESS. WALACHIA HUB AND DUAL-USE
CLUSTER CASE STUDY**

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Abstract

*Dual-use technologies, which mean technologies used for both military and
civil applications, are evolving in the context of digitalization.*

*Even in pre-digital era, at the dawns of the technological progress of
mankind, the use of technologies was ambivalent, both for warfare and civil
wellbeing.*

*Now however, we assist to a fast blending of dual use and digital processes
which is changing the landscape of the business models. We name this new
process interaction as Dual-use Digital Blending (DDB).*



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This paper is investigating the trends of evolution of this blended dual-use digital transformation technologies and their impact on the new geo-economic and geopolitical confrontations, on the trade flows and economic balance of power. We analyse the new emerging business models triggered by DDB and the managerial challenges they will require, especially for innovative SMEs and SMEs. Finally, we argue that university led innovation ecosystem, like the case study presented, may offer knowledge hubs for managers, organized in clusters in order to be better prepared for the described DDB process.

Keywords: *dual-use; export; digital transformation; new business models.*

JEL Classification: F50, H56

The Global Technological Context and the Emergence of DDB

Extensively, dual-use goods refer to any item or technology that has both civil and military commercial applications. It can include the components of weapons, but also items used in the manufacture of a component of a weapon as well. The complexity comes from the process of digitalization when not only products can contribute to weapons manufacturing but also IT&C services.

The process within which digital technologies are used is often named digitalization. This process has important consequences on the future warfare. In the global or regional confrontations, digital processes became an important advantage in defence and security. Internet of Things (IoT), Cloud Computing, Big Data, Data Analytics, Artificial Intelligence, Augmented Reality and Blockchain are important technologies not only for civil purposes, but also for cyber confrontations.

The growing trend of digital platforms has led to an increase in military capability to allow a better development of armed forces operations. The level of combat readiness is essentially related to digitalization. The digital transformation also brings new players to the market in the sphere of traditional industries that have been directed for a long time towards well-established business and work processes. Beside big companies specialized in defence and security, many of the contributors with innovation are SMEs or even start-ups non-incumbent in the defence sector before. There is strong growth in services in military structures, which are increasingly adopting aaS (as-a-service) models to be implemented, data monetization services or also “pay as you go”, due to tight defence budgets.



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Important part of that growth is coming from new, innovative players. They are consistently involved in changing the labour processes and traditional services that have effects on the provision of military capabilities. These unicorn tech companies are familiar with dual-use digital technologies such as Internet of Things (IoT), Cloud Computing, Big Data, Data Analytics, Artificial Intelligence, Augmented Reality and Blockchain and they are able to make military missions more efficient.

Even for some new players, the technical maturity of new technologies is missing, but their acceptance on the market will come sooner or later. One of the most important aspects to be considered is the security. That is why the entry of external players may be delayed, especially in the IT sector. Even top companies such as Amazon, Google, Microsoft, IBM, Cisco, etc. may not have formed all the military standards and requirements that need to be verified by military entities from the outset. Social acceptance within these large IT companies is a key factor that can have potential effects on subsequent market penetration. The strength of new technologies in the environments in which they operate is a permanent concern of military entities.

Literature Review

In the literature there is a fairly broad interpretation of dual-use goods covering the chemical, biological and nuclear industries, as well as encryption and navigation, computers, telecommunications, etc. Dual-use goods are advanced technological items that are not freely available on the world market and can be obtained from a limited number of exporters.

According to Fuhrmann “*dual-use commodities are those that can be used in weapons of mass destruction (WMD) programs or in legitimate civilian applications*”. He has identified some determinants of dual-use trade related to democracy, alliance and military conflict. Dual-use exports are much more promoted in those countries where there are security guarantees and the default gains will be higher.

Kanetake examines in his study how EU dual-use exports control, in particular those associated with the export of cyber surveillance technologies, falls within the risks of human rights. Markides and Charitou looked at how a company can adopt two different business models in the same market. There are strategic innovative companies on the market that use radically different business models. Consecrated companies can benefit from growth opportunities following the implementation of the business models of innovative companies. At the same time, there is a risk of



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mismanagement if both types of business models are adopted. In another study, Markides and Oyon have identified the differences between the main business model of the established company and the disruptive business model that invaded its market. The authors observed how the established company tried to adopt the disruptive business model and the evolution of the company on the respective market.

Starting from the ambidexterity literature, Winterhalter, Zeschky and Gassmann investigated the problem of how companies integrate or separate business models at the level of value chain activities. Firms can become ambidextrous in their business models by separating domains, more precisely by separating the activities of the value chain in order to address the various additional customer segments in emerging markets.

Methodology

In this article, we analysed statistical data and literature related to production and trade and business models related to dual-use technologies. We also analysed the international norms and regulations related to this sector. In parallel, we analysed and described business models and clusters which are active in dual-use industries. Finally, we investigated best practices and made case studies.

Impact of DDB on Trade Flows

Dual-Use Export Control Regime

Dual-use goods are primarily regulated through an export control regime. Co-ordination of export control measures assist countries to fulfil their obligations under the Chemical Weapons Convention and the Biological Weapons Convention.

In most jurisdictions, including Hong Kong, United Kingdom, Australia, United States and the European Union, there are proscribed dual-use goods that require prior authorisation/licensing to export items outside the jurisdiction. In this way, government can identify and trace the movement of dual-use goods and, to the necessary extent, monitor and restrict the trade of such items.

The global nature of trade necessitates co-ordination and harmonisation of processes and approach

Each country has its own (often complex) set of prohibitions and licensing requirements, with differing scopes and requirements. Appropriate analysis and



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professional advice are often needed to navigate these rules and to assess cross-border implications.

Product Control Lists

Most jurisdictions maintain a control list of dual-use goods. In many cases, these lists are very specific and reflect that, as described above, the devil is often in the detail. Broadly speaking, prescribed control products lists are divided into broad categories, including nuclear materials, electronics, computers, navigation and aerospace. Recently, the EU updated its export list to include laser measuring systems, specified medical supplies and several biological agents. Ultimately, the success of a controls list is dependent on its global adoption, and regular review to ensure the list remains up to date.

Sanctions Enforcement

The effectiveness of any export control or control lists measures is dependent on an effective enforcement and sanctions regime. The enforcement regime often applies to all persons and companies who supply, sell or transfer sanctioned or proscribed goods without a license. Often, dual-use goods form part of sanctioned goods, or are destined for a sanctioned country, which serves an additional means to control the trade or supply of such goods.

The key global sanctions program is realized through the United Nations Security Council and implemented into domestic law. Jurisdictions such as the United States and Europe also impose their own sanctions programs. The lists are dynamic. Monitoring them typically involves using third party service providers and implementing robust compliance plans, as we describe below.

The Wassenaar Arrangement, the most comprehensive international regime for setting export control standards, has emerged to increase accountability in transfers of conventional dual-use weapons and technologies. Its purpose is to contribute to regional and international security and stability and to prevent the acquisition of these items by occult forces.

Obtaining reliable data on the export of dual-use items is very difficult as there is no well-defined economic sector. At European level, the competent institutions collect data with which approximate estimates of exports of dual-use goods can be made. These estimates are based on the number of licenses collected by the authorities and customs statistics for dual-use goods.

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Following the adoption of the EU Regulation from 2018, a checklist (Annex 1 from Regulation 2018/1922) was drawn up comprising 1,846 dual-use items classified into 10 categories comprising 1,000 customs goods (electrical equipment, metals and non-metallic mineral products, machinery, electronic and optical products, vehicles and transport equipment, chemicals, computer etc.).

Export of dual-use goods requires an authorization issued by the competent national authorities except for two situations:

- ✓ intra-EU transfers of dual-use items are not controlled, except for the strategic items listed in Annex IV which contains 239 items (items for cryptography, elements of secure technology, some items of MTCR technology, some items of Community strategic control);

- ✓ for Annex 1 items to certain non-EU countries, no authorization is required except for the items listed in Annex II to Regulation 428/2009. These transactions are made on the basis of the Union General Export Authorization (EU GEA) E001, which has the role of facilitating the export of dual-use items when the risk of diversion is low. There are 7 destinations provided in E001, namely Australia, Canada, Japan, New Zealand, Norway, Switzerland and the United States called E001 countries.

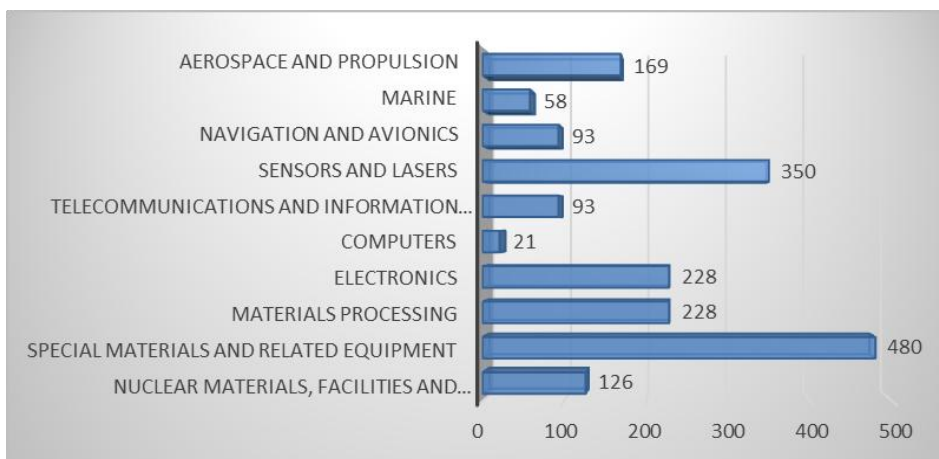


Fig. 1. Number of Dual-Use Items Listed in the 10 Categories

Source: www.ec.europa.eu

For the Articles listed in Annex I to the Dual-Use Regulation which require export licenses, an export license application shall be submitted by the exporter stating its value. This value is called the Dual-Use Licensed Value (DULV) and is expected to be a lower bound to the real Dual-Use Export Value (DUEV).

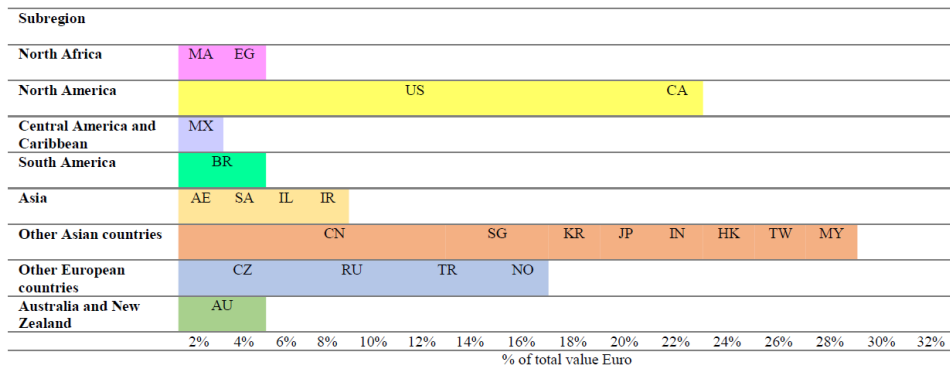


Fig. 2. Destination Countries by Regions of EU Dual-Use Export in 2017

Source: www.ec.europa.eu

There is a merchandise area that includes the dual-use trade as a part called the Dual-Use Export Domain (DUEV). DUEV is composed by the EU export value (intra and extra-EU) corresponding to the set of goods identified by the Combined Nomenclature and is an upper bound to the real Dual-Use Export Value (DUEV). The relative importance of dual-use trade shows us that dual-use exports represent about 2.3% of EU total exports (intra and extra-EU) within the ‘dual-use export domain’ of customs commodities.

Most dual-use exports are directed to the countries listed in the Union General Export Authorisations (EUGEA), which give us an idea of the structure of the EU export market in the relevant commodities. In figure 2, we can observe destination countries by sub-regions of EU dual-use export.

From the point of view of dual-use licensed value, the total value of applications reached EUR 50.2 billion and controlled dual-use exports thus represented 2.7% of total extra-EU exports. Authorised dual-use trade amounted to EUR 36.6 billion, representing 2.0% of total extra-EU exports (see figures 3 and 4).

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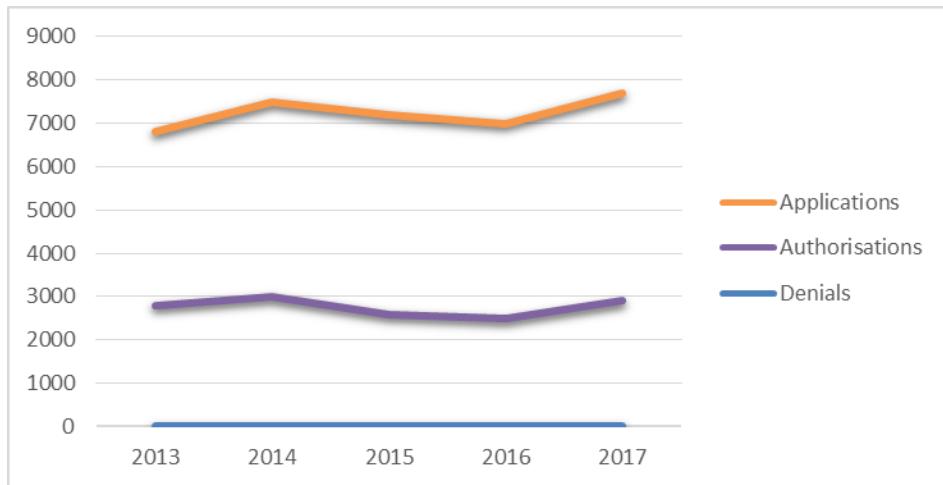


Fig. 3. Controlled Export Volume – Number of Authorisations and Denials in 2013-2017

Source: www.ec.europa.eu

Applications data includes all license applications, thus providing an indication of “controlled exports”, *authorisations* data refers to dual-use exports authorised under individual and global licences and *denial* refers to the volume and value of denied exports.

Following tripartite meetings between the European Parliament, the Council of the European Union and the European Commission on the EU Dual-Use Export Control Regulation, a number of key concerns have emerged from the various associations directly involved in the application of this Regulation:

- Avoid diversion from multilateral export control regimes;
- The proposed catch-all controls will not have the desired effect and will hurt EU competitiveness;
- The due diligence clause overbears individual business’ competences;
- Business should be consulted when drafting guidelines.

But there are some positive proposals welcomed by these associations such as:

- Introduction of new EU general export authorizations (EUGEA) – beneficial for intra-company software and technology transmissions, encryption;

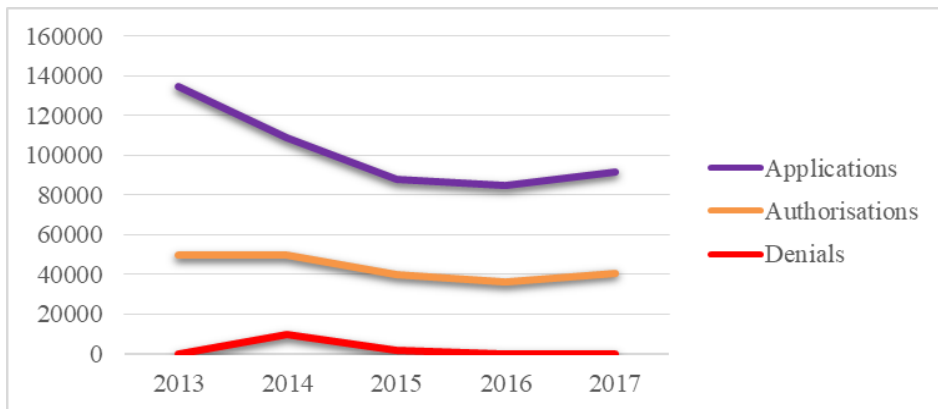


Fig. 4. Controlled Export Value – Value (Mln Euro) of Authorisations and Denials in 2013-2017

Source: www.ec.europa.eu

- Extension of validity period will give companies more security in planning and will stimulate and facilitate enterprises in their operations;
- Intra-EU transfers will facilitate intra-EU trade in dual-use items and reduce the administrative burden for companies.

Difficulties in Regulating Dual-Use Goods

Since DDB products or services can promote technological, human development and strengthen economic ties, it is difficult, in many situations, to introduce rules of control. It is also difficult to clearly measure when these products pose a potential risk to international security objectives and to promote the proliferation of weapons. Many of them have a large variety of industrial civil applications but when they are used for military purposes, they are very dangerous.

In this context, organizations should develop specialized knowledge. Information and advice is often needed to determine the use of the good and its legal and regulatory implications. Training is necessary to enable entrepreneurs to look beyond the peace full appearance of such items and the question is if managers have the necessary skills.



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New Business Models and Managerial Skills

From the point of view of military actors, DDB is seen as a tool that will be used when there are real benefits such as faster deployments, safety, health, operation fluidity, which is a totally different vision from other commercial industries. The state of the military ecosystem in terms of digital transformation will change the global competitive environment and traditional business models. Due to the sensitivity of the military sphere, the outsourcing approach for a newly entered civilian company is the most valid option. According to this model, the IT&C supplier of technology has limited access to the final use of its delivery.

Since the role of dual-use technologies and product or services generated by these technologies is critical and under international scrutiny for geo-political reasons, the managerial question is how a manager should be aware of the possible role in the supply chain – as a researcher, manufacturer, supplier, broker or investor. These value chains may include a variety of organizations, industries, companies, industrial suppliers, shipping, IT&C companies, but also research entities like universities start-ups, incubators or transfer centres. The awareness is even more difficult in the existing DDB, as described in this article. For example, if a start-up in precision agriculture will make a breakthrough invention in blockchain or GIS technologies, when he wants to sell it abroad, how can he be aware of a possible misuse of its inventions?

In various situations related to use of chemical items, terrorist activities or cyber-attacks, reality demonstrates that, despite strict rules and regulations there are important difficulties with regulating such goods especially when we speak about digitization services which may cross boarder much easier and apparently they are not harmful.

In this context, first important action for an entrepreneur is awareness about critical aspect of DDB products, thus contributing to the effort to curb terrorist or mass destruction proliferation weapons.

Knowing how your business could be misused is only one aspect. Controls will be always crucial to avoid even unintentionally proliferation. Entrepreneurs can also look beyond their business line to see if in other places of his business line commercial partners may be engaged intentionally or not in such activities.

According to our assessment, transfer of knowledge to the managers regarding the dual-use context of a certain discovery or product is crucial. Main parts of the training should be:



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- ✓ understanding the technological landscape of DDB;
- ✓ understanding the industrial value chains of weapon creation and the possible unknown persons which may enter into a civil transaction for military purpose;
- ✓ general knowledge about use of digitalization for military purposes;
- ✓ risk management.

Training of entrepreneurs should be focused on:

- ✓ risk assessment of the organization in dual-use activities;
- ✓ appropriate use of digital technologies, which is rapidly developing such as Artificial Intelligence (AI) and others;
- ✓ capacity to adapt to changes in export control laws and regulations and standardized procedures;
- ✓ understand early warning of potential misuse;
- ✓ access to reliable source of information (for example, the European Commission's TARIC database or other official data bases) to assess the risk of the particular dual-use good, or if there is a restriction placed on its export;
- ✓ promotional events or pre-contractual events training, to check the legitimacy of any transaction;
- ✓ understanding financial mechanisms. Services that are relevant to dual-use goods include: issuing letters of credit, trust recipients, bank accounts, money laundering etc.

Awareness and Solutions

It is no surprise that trade and money are central elements to every effort to sidestep, subvert measures to obtain military components – it is here that effective regulation can help to minimize the risk and proliferation.

Importantly, if your business is of significant size and scope, you must:

- ✓ assess your risk exposure;
- ✓ understand your obligations; and
- ✓ develop effective tools and programs that are commensurate with those risks.

The Case for Cluster Intervention in the Business Model of Companies

As we have seen, the question of training and coaching regarding dual use is essential. We can look at it from two angles:

- ✓ protection;
- ✓ innovation management.



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In the last angle, companies should focus on ways to manage innovation in DDB processes.

In both regards, clusters as alliances of companies are playing a major role. Their involvement is important as knowledge centres for all member managers which will get, through permanent activities, a level of awareness of the issue of compliance but also in promotion of innovation.

There are several good practices in the world that are famous in bringing together technology providers, integrators and the most important, the future customers of security solutions. For example, SAFE cluster in France is offering global security solutions based on the integration of aerospace and defence technologies. Such major clusters may bring together hundreds of affiliates, including companies, training and research organizations related to dual-use technologies and industries.

Clusters invest not only in training, but also on applied research and development capabilities in a constantly changing environment triggered by DDB. Clusters may offer networking, business and growth services, ranging from a project idea to finding technology partners, financiers and international development. The “business to client” type network includes insurance companies, universities, banks, industrial parks, R&D units etc.

Many clusters are organized in thematic areas (or programs) that address several issues related to the security and defence sector. One interesting area developed by SAFE cluster in France is “resiliating territories” (to mitigate the effects of disasters, anticipating disruptions and rehabilitating through surveillance, forecasting, real-time management, adaptation and innovation). From the angle of the COVID-19 crisis, pandemics can be added to the concept of innovation in resilient territories, as such a situation must create a framework for collaboration between institutions, business and research actors to provide innovations in the field of resilience.

Regarding DDB fields on innovations, clusters are targeting a wide variety of topics some of them with clear connection to defence such as safety and security of sensitive areas, support for security and defence forces, satellites, aircrafts, cyber security etc. But there are also areas not necessary so closed like robotics, health, food etc. which often need that managers in DDB should be embedded in a local innovation ecosystem where they can cooperate with other industries.

In this context, we look closer to the way DDB sector may be embedded in a local ecosystem with a study case.



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USH Pro Business and Dual-Use Cluster Case Study

USH Pro Business is specialized in activities dedicated to the entrepreneurial environment such as: research, development, innovation and technology transfer; entrepreneurial development; business education; establishment and development of innovative clusters; internationalization; establishment and development of start-ups. It is a dedicated centre for entrepreneurial activities, designed to support companies and provide solutions to sustain competitiveness throughout the business life cycle. It has been created in 2015 as a university spin off (www.ushprobusiness.ro).

The centre offers support and consultancy services in the formation, development and collaboration of intra and inter-clusters at regional, national and international level in order to promote, revive and develop the cluster members and for interprofessional organizations.

One of the USH Pro Business strength is its capacity to develop clusters and to stimulate smart specialization among them.

USH Pro Business actively contributed to the creation of “Dual-Use Cluster” in order to assist entrepreneurs to better connect to the defence and security sectors. The security and defence sectors represent a vital strategic area in the Euro-Atlantic context regarding national security, but also an important vector of export competitiveness. The cluster is addressing the issues already mentioned in this article such as:

- ✓ complexity and specificity of the international market in the field;
- ✓ the advantages of a national integrator through collective bargaining and marketing power, focused on large importers, directly or indirectly linked to military and defence structures;
- ✓ inclusion of all the components of the sector, including civil or dual use, in the collective offer for large importers.

The sector also needs to be integrated into the national effort to develop innovation and to move the Romanian economy towards an innovation-based economy and to rebuild the industrial base. In this respect, the military sector can enter the national research effort applied for dual-purpose innovations by disseminating applied research from the military to the non-military sector.

Dual Use Cluster (DUC) is a non-governmental, non-profit apolitical body with legal personality, aiming to develop an innovative functional network based on the *multiple helix* model to ensure the stimulation of collaboration between representatives of the economic environment, research and education with the



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direct involvement of funders, whose main and related activities will revolve around the challenge of generating and bringing to the highest level the local industry.

Creating a collaborative platform between these areas to enable the defence industry to benefit from non-military productive innovation and supply on one hand and, on the other hand, military innovation to be applicable in the civil sector, has remained undesired by the economic actors, despite its establishment as a strategic objective.

Biotechnology, Cybersecurity, E-Learning, E-Training, One health Textile industry, Command control systems, Intelligence surveillance reconnaissance systems, Critical infrastructure protection, Special materials/items are major fields of activities.

The cluster is taking action offering the following services meant to upgrade the skills of the managers in DDB: Know-how technology transfer; Financing; Visibility; Matchmaking; Foresight; Security operations centre / cyber security and incident response team.

Following the first meeting of the Dual Use Cluster in July 2019, the DUC concept brought together interested entities and experts in the sector, in order to try to define the concept and vision, to debate the objectives, to harmonize the parts, to analyse the complementarity and to establish the role of each in the management of the cluster. During these meetings, the participants have been presenting concepts such as associative experience in the dual field, dual industry and geopolitics, best practice examples, clusters role and advantages etc.

Dual Use Cluster is embedded on a cluster platform USH Pro Business has developed in the last 5 years as founding member and active promoter. These clusters are related to several economic areas – (Bio Danubius, Prahova Valley Bio Concept), Green Energy (Cermant), IT&C and Engineering (Danube Engineering Hub and Smart Alliance), the Romanian Textile Concept and Construction Industry (CCIO). Due to its activity, USH Pro Business became the specialized part of the managerial unit of the clusters in issues such as internationalization and R&D. The centre takes an active role in promoting smart specialization among companies.

In this context, USH Pro Business and existing clusters above-mentioned will integrate DUC in the smart specialization processes of the southern part of Romania through “Wallachia Hub” consortium.



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Walachia Hub is an ecosystem of innovative clusters comprising different industries such as engineering, GIS and sensors technologies, energy, smart localities, organic and bio technologies. Bringing managers together from civil industries with defence companies or military experts is one important task targeted. During several meetings, the managers are learning about the DDB process and the way to cooperate. One important area of cooperation is considered to be access to European defence programs. Another topic is related to training the managers. Walachia Hub consortium intends also to launch the concept of “resilient territory” for the region.

Conclusion

Dual-Use Digital Blending (DDB) is a new economic phenomenon triggered by digitalization. Companies activating into this sector will have to obey stricter rules of export controls extended to digital research and services apparently with no military implications, but they have to be more active in applied research and development capabilities in a constantly changing environment triggered by technological progress. Digital transformation in dual use sector already impact on trade flows with physical products, but also with IT&C services related to this sector. The new emerging business models triggered by the DDB solutions should be able to access, process and put in work important amount of information. Also, they must learn to cooperate. USH Pro Business provided knowledge in creating DUC, but also the ability to work with other regional players, such as Wallachia Hub, a cluster consortium in which DUC has developed special ties. The cluster aims to harmonize and represent the interests of enterprises, research entities, administrations and catalysts in order to increase economic competitiveness and create skills, sustainable development and sustainability. It’s involved in the process of digital transformation and understands that the rapid adoption of new technologies within an organization will improve their long-term performance. Through this interaction, DUC is incorporated with a regional innovation ecosystem and into other areas of smart specialization.

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INFLUENCE OF SOCIAL NETWORKING ON SMALL BUSINESS PERFORMANCE IN NIGERIA

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Abstract

Networking has made the world become a small community especially through social media. The usage of social networking sites by all has made the world a commonplace for both individuals and businesses alike. Small businesses now utilized social media to promote and communicate their products and services to the global community. Thus, the inherent small business challenges such as finance, low patronage, high cost of doing business and low market share are being checked. Therefore, this study examines the influence of social networking on small business performance in Nigeria. Specific objectives are to: evaluate the influence of social media on market share; and determine the effect of search engine on consumers' choice making. Survey design was adopted for the study. The study population comprises of registered small businesses in Ilorin, Kwara state, Nigeria. Judgmental and simple random techniques were used to select the sample respondents. Ordinary least square regression was used to analyse the collated data. The findings revealed that social media have significant effect on market share. Also, search engine significantly influences consumers' choice making. The study concluded that significant relationship exists between social networking and small business



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performance. The study recommended that video sharing platform should be adequately embraced to favourably positioned products and services. Besides, consumer trust should be built through timely delivery and product quality to encourage repeat purchase.

Keywords: *social media; business performance; small business; market share; networking sites.*

JEL Classification: M21

1. *Introduction*

Technological revolution in the 21st century has changed the way of doing business globally. The digitalization of the economy and the application of information technology into business have necessitated the need for a change in the marketing plans and marketing strategy in the competitive business environment. The advent of online tools and application approaches such as online communities, blogs, wikis, and the virtual world known as web media is now attracting increasing attention from entrepreneur, manufacturers and academics [Davila et al., 2003]. It introduces and adopts new ways of communicating with potential customers, maximizing opportunities and creating market niche.

The rise, growth and usage of social network sites (SNS) like Facebook, Twitter, YouTube, Instagram, and MySpace has been on increase and spread all over the world [Boyd & Ellison, 2007]. However, this development prompts business enterprises irrespective of the nature and size to also make use of social networking while promoting their products and services. Business enterprises now make use of social media as one of their active marketing strategies while customers also make use of it to gathered information in making their buying decisions with minimal shopping effort.

Haenlein (2010) describes social networks as internet-based applications built on the ideology and breakthrough of Web 2.0 technology that enables the creation and exchange of user-generated content. Web 2.0 is simply an internet enabled platform that allows sharing of user generated content which served as the basis on which people within social networks can use, interact and connect. A registered user can create, generate and communicate online. Social networks allow business enterprise to connect with new customers and improve ease of doing business, as most websites



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allow the provision of customized web links for specific websites related to specific companies.

Wright and Hinson (2008) argue that with the use of social media there is a change in the way we interact with each other, and that organizations communicate with employees, customers, the public and other stakeholders. Many businesses and consumers alike have used social media for their active marketing strategies. It is expected to aid and better the performance of small businesses and organizations using the new communication platform.

However, despite the enormous benefits of social media contributions to the promotion of business enterprise, the usage by small businesses in Nigeria has not been fully maximized, especially for marketing activities. Though, social media is characterizing with a lot of misinformation, deceitful advertisement, products misinformation, exaggerated product attributes and the likes. Yet, the wide dissemination of information, the impact of specific tools and technologies on business operations is unknown. Therefore, the study examines the influence of social networking on the performance of Small businesses in Nigeria focusing on small businesses in Ilorin, Kwara State, Nigeria. The specific objectives are to: examine the effect of social media on market share; and determine the influence of search engines on consumers' choice making.

2. Literature Review

2.1. Concept of Social Networking Site (SNS)

Social networking sites can be defined as a social place where people connect to the web-mobile and can communicate, create and share with others [Boyd & Ellison, 2007]. One can allow a person to be recognized as a "friend" or a contact in red, or you can ask all relationships to be agreed upon by both parties. In general, it supports the ability of reworked people to limit public opinion, as well as privacy restrictions or facilitate public services. Managing relationships on the Internet and managing your online presence is the key to fun and reliable use of social media [Dwyer et al., 2007]. These are skills that young people develop not intuitively under the guidance and support of adults, but intuitively or under the influence of their peers. Social sites differ in types of tools and features they provide [Dwyer et al., 2007]. Boyd and Ellison (2007) identified three common elements of social networking sites. Social networking sites are often closed environments where members chat with other members, a media which creates pressure to provide services to other private



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individuals or to clarify speech and translate messages that are not locked out of expected context [Peretti, 2007]. It is important for children and young people to understand the general nature of most SNS activities (and the privacy and privacy controls of personal information and connections), and the full online activity so that all online websites and networks are owned by them.

2.2. Types of Social Networking Sites

• *Profile-Based SNS*

The profile based service is organized first on the member profile page. Bebo, Facebook, Twitter and MySpace are good examples [Schonfeld, 2008]. Users expand their locations in many ways and can often help fill them by providing links to articles, content, or external content via the wall messages, review or verification tool. Often the user will access the content of third parties (in the form of a “widget” dictionaries) to enhance the profile or introduce new services and SNS websites [Quantcast, 2007].

• *Content-Based SNS*

In these services, user information is still an important tool for building relationships, but they play a minor role in content sharing. Image sharing site Flickr is one of the sites where this group of services and examples is based on images. Of course, there are those who have a “blank” Flickr account, people who sign up for the service to see protected photos with the permission of your friends or family. Shelfaria Amazon is one of the existing cultures of book-oriented sites, the “library” is the focus of the profile and members. YouTube.com and last.fm are other examples of content-based video sharing communities, where the content is created by a program that views and represents the music that users are listening to. In the second case, the content is mainly the user’s activity – listening to audio documents [Peretti, 2007].

• *White-Label SNS*

Thus, the SNS organizations involved in this work have successfully overcome the problems facing small communities around the world. In 2004, the platform run by the Public Aggregator has become a better model of advertisers on social sites and social media sites. This site is built by users in any community within it. As a result, 10 MySpace companies have taken control of the existing 10 social networks, despite improvements in operations [Quora, 2016].



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- *Multi-User Virtual Environments*

Sites like Second Life, an online virtual world, allow users to connect with each other – sites next to members, while permitting users to create and edit profile card profane governing system. There are also a form of social networks such the Habbo Hotel Cyworld website [Juliana, 2011].

- *Mobile SNS*

Many social networking sites, such as Facebook and MySpace, offer mobile telecommunications services that allow members to connect to their phones and networks. More and more people, especially in urban areas, are driven by laptops. For example, MYUBO allows users to share and watch videos on mobile networks [Wang et al., 2014].

- *Micro-Blogging/ Presence Updates*

Microblogging services like Twitter and Jaiku allow you to send short messages (140 characters, space included) in open groups or contacts. They are designed to operate as a mobile service, but are widely used and read online. Many services offer a “status update” – a short, customizable message to let users know about your mood or what you’re doing. These can be checked on site or exported for read elsewhere. They involve users in constantly updated online conversations and networks [Lebans, 2006].

- *People Search*

Another important website development is human search. There are different types of social media and people’s searches, but sites like Wink search for public profiles on numerous social media sites. It allows you to search for other information published in names, interests, locations, and profiles, and allows individuals to create “documents” on the Internet. This type of human search goes beyond the traditional boundaries of belonging to a social networking site, although the information obtained must already be public [Quora, 2016].

2.3. Classification of Social Networking Site

However, three of the most popular social networking services will be explored for this study.



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Facebook

Facebook was launched in 2004 and has over 800 million active users (active as of September 2011), with 350 million users accessing Cornelius and mobile devices. Facebook is a very powerful instrument. In April 2011, the company launched a new range of offices, the department and the sales operation, and the Board invited the authorities. Facebook and Google are competitors in the field of online advertising companies. [Boyd & Ellison, 2007]

Twitter

Twitter was founded by Jack Dorsey in March 2006 and launched in July of the same year. Unlike Facebook, where you can have friends to share different things, you need to join Twitter with the latest information about the things they are interested in. You need to find a social feed that interests them and watch the talks. Each tweet is 140 characters long. Whether you are civilized or not, you can always follow the tweets, and there is no limit to the number of tweets you can send on a given day. Thanks to Twitter, companies now share information or news more quickly with a wider online audience after the company, and strategically, this has helped companies that use Twitter to position and collect brands at the same time. Commercial information is provided through comments to accurately target customers with relevant services and products or to strengthen market information to improve business relationships. Twitter has directly targeted the audience working on the platform, helping to develop brands, develop customer-related marketing, and improve direct sales [Boyd & Ellison, 2007].

YouTube

YouTube has revolutionized the way we watch, create and think about videos. It made the environment accessible. Recent improvements in technology and connectivity have helped improve the way video works. This accessibility makes video a very important environment. YouTube was created in February 2005 as a video sharing site where users can upload, view and share their videos for informative and inspirational use by others [youtube.com, 2011].

Just like a picture of glasses is worth a thousand words, pictures affect the creation of an image in a person's brain. This has given YouTube a competitive advantage in online marketing. In general, more and more companies are using YouTube for marketing and advertising campaigns. Various companies with extraordinary video campaigns have been successful in this form of brand marketing,



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especially when videos go viral. Many of these viral successes can be attributed to the brand marketing experience and creativity to entertain the audience, allowing viewers to share their videos with others [Boyd & Ellison, 2007].

2.4. Influence of Social Networking on Business Performance

Companies are already dealing with employment on social media sites, including profile pages and online advertisements for social media users. Studies by Krasnova, Spiekermann, Koroleva and Hildebrand (2009) have shown that sales agents or marketers send messages to specific interest groups function in the same way as traditional search engines or advertising channels. Another way to reach consumers is for brands, by creating their own profiles on social networks, by accepting “friends” who can follow them with the latest brands.

Social networking sites are an important source of traffic for other sites, especially those in the entertainment industry [OFCOM, 2008]. There are companies that run promotions on social media sites that remind members of their brands and websites when they communicate. This kind of information is often positive. Businesses, banner ads and tours, blogs, medium groups, and groups sharing valuable new articles and videos are increasing their social media participation in several ways – create a member profile that redirects business traffic to the company website and posts relevant business events and activities [Cain, 2008].

It is also important to give users control in the context of online transactions. Research shows that companies develop a more confident relationship with consumers when they check their information and are ready to continue their relationship with the company [Dinev & Hart, 2003].

2.5. Business Performance

Business plays an important role in our daily lives, which is why business success is an important part of developing countries. For example, many economists view businesses and institutions as motives for economic, social and political progress. Sustainable performance is at the heart of every business, because it is only through action that businesses can thrive and thrive.

Therefore, job performance is one of the most important variables in management research and perhaps the most important business indicator. Although the concept of business performance is common in academic literature, it is difficult to define due to its many meanings. For this reason, there is no general definition of this concept.



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Lebens and Euske (2006) offer a series of definitions to illustrate the concepts of organizational performance:

- Performance is a set of financial and non-monetary indicators that provide information on the achievement of objectives and decisions [Euske, 2006].
- Dynamic performance requires evaluation and interpretation.
- Performance can be illustrated using a causal model that describes how current actions can affect future results.
- Performance may be understood differently depending on who is involved in evaluating the performance of the organization (for example, performance may be perceived differently by someone in the organization than by someone outside).
- The definition of performance concepts is necessary to identify the elements that characterize each area of responsibility.

To report on organizational performance, you need to measure results.

2.6. Market Share

The market share of the company is a proportion of sales compared to the market in which it operates. It is part of a market driven by a company or product [Will, 2018]. Market share is the percentage of total sales in a market that a particular company wins over a period of time. Market share is a measure of customer preference for one product. Higher market dominance generally means higher sales, less effort to sell more and a stronger barrier to entry for other competitors [Kithaka, 2016]. Having a bigger market share means that as the market grows, leaders will earn more than others. Here, market share refers to the number of customers benefiting a particular company based on the number of customers in the market for such a company.

2.7. Theoretical Review

The theories relevant to this study are discussed below.

The Global Village Theory

This is Marshall McLuhan's global village theory. This theory describes international relations well, as Okoro (2002) argues that "the phenomenon of increasing cultural accessibility has broken the boundaries of dividing society and creating new structures. The global polemical environment." Looking at the impact of ICT in global communications on the development of the Third World, Baran (1998) states:

“As the media shrinks, the world becomes more and more involved in the lives of others.” New useful relationships will grow as you age.

The growing progress of ICT has confirmed the construction of McLuhan in the real research space, and this is relevant for our research because technology has made the world a global village where marketing activities are possible. Therefore, social media can be effectively used to promote the Nigerian market globally. The use of social media for marketing activities can develop more channels and marketing channels for the Nigerian market globally. Three theories of value management are applied to social networks and communities. This theory emphasizes the importance of large and complex posture examples. Although the theories of Sarnoff and Metcalfe were not invented by the creators of social media networks, they were accepted because their structure was similar to that of social media networks [Baker, 2009].

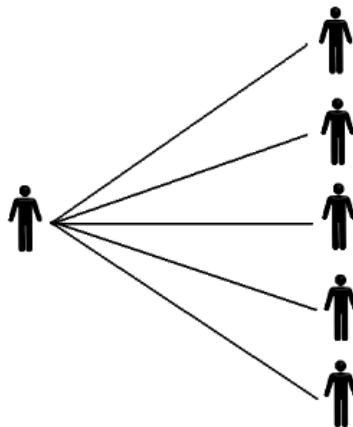


Fig. 1. A Network Representative of Sarnoff Theory

Source: Madge (2009)

Sarnoff Theory

David Sarnoff, an American businessman and pioneer of American commercial radio and television networks, is engaged in this theory. He is the founder of the National Broadcasting Company (NBC). Sarnoff’s theory was developed to relate the value of radio stations to the number of listeners. According to him, the value of the network has directly increased the number of listeners of the network. Therefore, a network of 100 members has 10 times more access value than a 10-

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member network [Evans, 2008]. In terms of social media, this theory claims that the more people interact with brands on social media, the greater their impact. The figure below shows how this theory relates to an individual network.

Metcalf Theory

This theory belongs to Robert Metcalfe, a graduate of the Massachusetts Institute of Technology (MIT), one of the creators of Ethernet and one of the founders of 3com network companies, Network Communication Technology and Social Networks. He has a wealth of network connections, such as the Internet and the World Wide Web. The theory is that the more you use the service, the more valuable it becomes to the community. Therefore, taken in the context of social networks, this theory means that any new members received or added to the network site theoretically make the user profile more valuable [Evans, 2008]. Most people share and value what they love; they also tend to tell their dear friends and relatives things. In this case, it is possible to extend the link chain on the social networking site to others through sharing. This may indicate that marketing is the result of increased satisfaction with products and services. The following diagram supports the theory – the increase in the network chain affects the reach of the message.

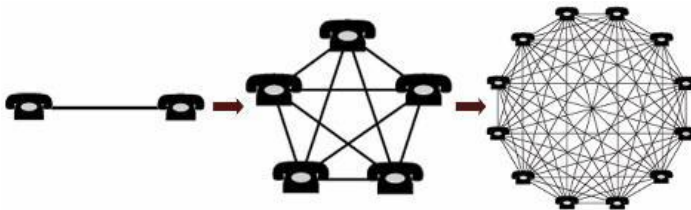


Fig. 2. A Network Representative of Metcalfe’s Theory
 Source: Madge (2009)

Reed Theory

According to the teaching of reed, the functionality of larger network could increase depending on the size. It was developed by David S. Reed, a computer scientist at the Massachusetts Institute of Technology (MIT) specialized in computer networks. This theory applies to the use of social networks. The teaching focuses on the impact of network member and group values in recognition and

assistance. Good networks encourage the creation of subgroups and a strong flow communication, which is the most relevant and important focus on the data network [Evans, 2008]. The members can also help in creating opportunities for all persons. Both of them are increasing the number of the knowledge of the discipline of smaller groups.

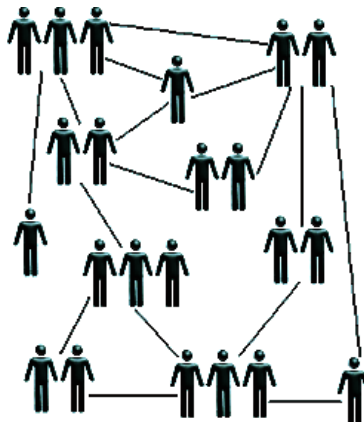


Fig. 3. A Network Representative of Reed's Theory
 Source: Madge (2009)

The theory of global village has been adopted because it emphasizes the phenomenon of the increasing accessibility of the lifestyles of different cultures which divide societies and create a controversial new global environment.

2.8. Empirical Review

Many studies have been carried out on the relationship between the usage of social networking on business performance both in developed and developing countries but their results are inconclusive.

Belch and Belch (2001) show that, unlike traditional forms of business communication, such as advertising, a natural environment, this new medium allows users to perform various functions, such as changing the receiver and the image, ask questions, answer questions and immediately get it indeed. The unique opportunities offered by this social network have enormous advantages over other commercial



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channels in terms of interactivity and can be useful in promoting commercial activities in Nigeria. As organizations continue to develop and implement various business strategies and communication programs, new media can also be integrated into consistent marketing strategies.

Jillian (2003) argues that the development and advancement of technology has brought traditional media closer to the new internet environment. Surrounded by all print, audio and visual media, the internet is a bridge to accessing internet work for jobs such as magazine and newspaper ads, radio and television ads, web posters and pop-up ads. As mentioned above, Internet technology has provided an excellent channel for business performance that can affect Nigeria's business performance.

Boyd, Harper, John and Orville (2007), they found that the biggest problem facing entrepreneurs and social media advertisers is the return on investment that improves their business. Overall, 40% of advertisers and administrators surveyed said measuring social media performance was the biggest challenge facing social media initiatives. Less than half, 19%, are concerned about finding the right person to run such a campaign. Another 13% say that commercial financing is the biggest problem. While business leaders are sceptical of measuring the effectiveness of social media campaigns, getting social media support is a problem for only 10% of marketers. This shows that companies are willing to invest in social media, although there is no concrete result to measure workplace performance. Therefore, there is no doubt that social media can be a great way to promote Nigerian business.

Chude (2012) conducted a study on social networking about job problems for about 320 business people from the various industries with different experience in social networking, emphasizing that professionals can develop social networking skills and reach a wider audience to increase profits. The aim of this study will be to identify higher frequency and focus more on job management monitoring on social networks. One of the main problems faced by businessmen is the availability of adequate resources, 77% of respondents said. 58% of respondents find it difficult to accurately measure their return on investment in a business campaign. In addition to popular social networking sites such as Facebook, Twitter and LinkedIn, companies are trying to use other resources such as blogs, forums and YouTube. Research shows that newcomers to social media don't pay much attention to the availability of appropriate tools and methods, but those who already run social campaigns focus on the tools and methods needed to reach the target audience.



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“Despite the popularity of social media in recent years, entrepreneurs still don’t know how to help their business,” said Mielach (2012). The reason is that they don’t have the time to learn about the success achieved through social networks. This is also possible in Nigeria, where existing social networks are not fully used to market Nigerian brands.

3. *Methodology*

This study adopted survey research design. The study was conducted with the aim of determining the influence of social networking on the performance of small business in Ilorin, Kwara State, Nigeria. The target population was 375 registered small businesses out of which 157 were selected using Krejcie and Morgan (1970) sample size formula. Judgmental and simple random sampling techniques were used to select the sampled respondents. Data was collected using a structured questionnaire that has two sections, Section A was design to provide demographic and structural information, while Section B focused on the study variables using 5-point Likert scale. The questionnaire were administered to and collected from the respondents by the researcher with the aid of trained research assistants. To analyse the data, the demographic and structural part of the questionnaire were subjected to descriptive statistics in the form of percentages and frequencies, while regression analysis was adopted to analyse the research hypotheses with the aid of Statistical Packages for Social Sciences (V.19) so as to show effect of the various variables in the study on one another.

In line with the objectives of the study and literatures for the study, the following hypotheses were formulated to guide the context of the study:

Ho₁: Social media does not have significant effect on market share.

Ho₂: Search engine does not have significant influence on consumers’ choice making.

As shown in the table 2 on age of respondents, 51.3% were between 18-25 years, 25.9% were between 26-33 years, and 22.8% were between 34 years and above respectively. This indicates that most of the respondents are young and full of energy, therefore flexible enough to provide their opinion on items raised in the questionnaire in terms of academic qualification of the respondents, 13.3% had primary school certificates, 26.6% were OND/NCE holders, 57.0% had first degree and 3.2% had MSc/MBA/MPA qualifications. The implication of this is that most of the respondents are averagely educated and are in position to provide answers to the questions raised in the questionnaire.

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4. Data Presentation, Analysis and Interpretation

Table 1. Attributes of Sampled Responses

Variables	Frequency	Percentage
Age of the Respondents	158	100
18-25	81	51.3
26-33	41	25.9
34 and above	36	22.8
Highest Educational Qualification	158	100
SSCE	21	13.3
OND/NCE	42	26.6
BSc/HND	90	57.0
MSc/MBA/MPA	5	3.2
Marital Status	158	100
Single	104	65.8
Married	52	32.9
Divorced/Separated	2	1.3
Gender of the Respondents	158	100
Male	105	66.5
Female	53	33.5

Source: Based on Sample Survey (2020)

In terms of marital status, 65.8% are single, 32.9% are married, and 1.3% are divorced or separated. The implication of this is that the majority of the respondents were single, a thing showing high level of youth and agility in the company, which shows, in its turn, that the firms have a future in terms of productivity and continuum. In terms of gender of the respondents, 66.5% are male, while 33.5% of the respondents were female. Hence, this revealed that there are more male than female respondents, the implication was that the sampled small businesses are run more by male than female.

4.1. Test of Hypotheses

Test of Research Hypotheses 1

H₀₁: Social media does not have significant effect on market share.

Table 2. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.287	0.282		1.019	0.010
	Facebook	0.048	0.032	0.104	1.492	0.138
	Twitter	0.443	0.089	0.345	4.966	0.000
	Instagram	0.394	0.090	0.318	4.377	0.000
R = 0.565 ^a R Square = 0.319 Adjusted R Square = 0.306 F ratio = 24.062 Sig. = 0.000						

a. Dependent Variable: Market share

b. Predictors: (Constant), Instagram, Twitter, Facebook

Source: SPSS Printout, 2020

Table 2 provide a model to summarize the impact of social media on market share. The table shows that the correlation coefficient (R) and R² are 0.565 and 0.319, respectively. This explains the significant impact of social media on market share, with social media reporting 31.9% of changes in consumer patronage, while the remaining 68.1% is due to other factors not included in the model. This implies that social media platform only contribute 31.9% to the variability in market share. Thus, other factors or variables also influence market share in the sampled area.

The analysis of variance of social media result shows the F-statistic to be 24.062. Also, the level of significance of 0.000 is less than the p-value of 0.005. This shows how fit the model is. The coefficients of social media indicate that there exists a positive relationship between Twitter and Instagram except for Facebook. More so, the probability values of 0.000, 0.000 and 0.138 with t-statistics value of 4.377, 4.966 and 1.492 respectively further suggest that the relationship between Twitter, Instagram and market share is significant except for Facebook, which has a greater value of 0.138 (i.e. 0.138 > 0.005). The reason for this might not be farfetched from the fact that Facebook is seen by the sampled respondents rather as a platform for social interaction than for business purpose. Also, some respondents attributed

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Facebook to low income earner and to a low social status. However, the overall results revealed that social media has a positive significant effect on market share when focusing more on Twitter and Instagram handled pages.

Test of Research Hypothesis Two:

H0₂: Search engine does not have significant influence on consumers’ choice making.

Table 3. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.637	0.276		2.311	0.022
	Google	0.290	0.101	0.206	2.875	0.005
	Yahoo	0.186	0.097	0.140	1.926	0.056
	Bing	0.499	0.097	0.369	5.145	0.000
R = 0.487 ^a R Square = 0.237 Adjusted R Square = 0.223 F ratio = 15.979 Sig. = 0.000						

a. Dependent Variable: Customer Choice making

b. Predictors: (Constant), Bing, Google, Yahoo

Source: SPSS Printout, 2020

The table 3 reflects the consumer choice search engine power model. The table shows that the correlation coefficient (R) is 0.487 and 0.237 of R squares, respectively. This explains the relationship and the variability of the search engine and consumers’ choice making in the study area. Search engines have a positive significant impact on consumer decision, i.e. 23.7%. Though, the contribution of search engine to consumers’ choice making is low, is still positive. This implies that consumers’ decision is only influenced by 23.7% and the remaining 76.3% variation is due to other variables besides from search engines. Of course, a rational consumer will not take decision solely on the information provided on the search engines because of the misleading information on the search engines and the issue of trust.



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The F-statistic shows 15.979 with p-value of 0.000 which is less than the p-value of 0.005. This implies that the model is fit to evaluate the effect of search engines on consumer choice making. The significant value also supports the result of the R^2 of 23.7% which has a positive value. Therefore, search engines have significant influence on consumer's choice making.

The coefficients value indicates that there exist a partial relationship between Google and Bing except for Yahoo. More so, the probability values of 0.005, 0.056 and 0.000 with t-statistics value of 2.875, 1.926 and 5.145 respectively further suggest that the relationship between Google, Bing and customer choice making is significant except for Yahoo because it has a probability value of 0.056, which is greater than 0.005. The responses from the sampled respondents' show that consumers' dependency on Yahoo search engine for information has drastically reduced. This is evident from the observation that most respondents are no longer using Yahoo mail as much as they use Google mail and the likes. Though, this might may be attributed to the sampled area of the study. However, the findings revealed that search engines have significant influence on consumers' choice making.

4.2. Discussion of Findings

The analysis of the effect of social media on market share shows that Twitter and Instagram have a strong positive effect on market share of the firms, since p-value shows that 0.000 and 0.000 were lesser than 0.05. Therefore, the null hypothesis was rejected and the alternative hypothesis was accepted. Therefore, social media have significant effect on market share. This result is in tandem with the findings of Mielach (2012) who maintained that social network marketing is significantly related to increase in performance of the organisation.

Also, the study hypothesized that search engines do not significantly influence consumer choice making. The result shows that Google and Bing have a strong positive influence on consumers' choice. This result is in line with the outcome of Jillian (2003) who also confirmed that ICT advertisement and marketing approach is significant in promoting effective awareness of products among consumers.

5. Conclusion and Recommendations

The results show that social media has a significant impact on the market share of small businesses. It was concluded that for a business enterprise to be able to attract new and retain existing customer, the introduction and improvement on social



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networking must be engaged in, as it was found that the firms that are known for introducing social networking as well as those that mostly ensure improvement on their existing networking are well appreciated by their customers, thereby leading to the retention of the existing customers as well as attraction of new customers, which leads to the overall increase in the market share. Also, search engines have significant influence on consumers' choice making. It is concluded that search engines have a significant influence on consumer decision as they provide needed information to consumers with little or minimum shopping effort.

Based on the results of the study, the following recommendations are given:

i. Small business owners should integrate the usage of social media in their marketing and advertising strategy to increase product awareness to the target audience irrespective of level of income and social class. Also, video sharing platform should be adequately embraced to favourably positioned products and services.

ii. It is expedient for small business owners to develop consumer trust through effective and timely delivery. Besides, deceitful advertisement and misleading information should be avoided to build consumer trust and promote social media patronage.

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EFFECT OF DIVERSITY MANAGEMENT ON HUMAN RESOURCE MANAGEMENT: RECRUITMENT AND SELECTION IN FOCUS

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Abstract

The changing demographic composition of the workforce, the overall effects of globalization and the increasing social sensitivity to ethical concerns are compelling multinational organizations to deal with diversity management. However, organizations worldwide, in their attempt at diversity management, have faced challenges as stereotypes are deeply rooted in one’s culture and there is resistance to change. The key to diversity management hinges on strategic thinking and people centred policies. It is against this backdrop that this paper examines the effects of diversity management on human resource management with special reference to recruitment and selection. In this paper, we explore the interface between diversity management and human resource management and how this impinges on recruitment and selection when HR managers fails to acknowledge cultural and individual differences in the workplace, focus attention on individual differences rather than group differences; we develop a conceptual framework of HR diversity management, linking HR diversity strategies with major HR diversity issues; we also, examine the state of HR diversity practices that have been adopted in organizations worldwide and finally we discuss the gaps in the literature and the implications of our findings for practitioners and researchers.



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Keywords: *diversity management; human resource management; recruitment; selection.*

JEL Classification: M9, M15, M27

Introduction

Workforce diversity acknowledges the reality that people differ in many ways, visible or invisible, mainly age, gender, marital status, social status, disability, sexual orientation, religion, personality, ethnicity and culture [Kossek *et al.*, 2005]. The predominant diversity issues in each country may be different. While gender inequality is the oldest and most common diversity issue worldwide, religion and ethnicity separate people in India and Middle East and household status differentiates off-farm migrants from urbanites in China. Rural migrants are routinely looked down upon by urbanites and mistreated at the workplace and in society. Multiculturalism has always been the most important dimension of diversity in Western countries, including the USA, the EU, Australia, New Zealand and South Africa, where there are a large number of international migrants. Although researchers have examined several aspects of diversity, no comprehensive model exists. A diverse workforce comprises a multitude of beliefs, understandings, values, ways of viewing the world, and unique information. The rapid internationalization and globalization has enhanced the significance of workforce diversity [Kossek, Lobel & Brown, 2005]. A cross cultural and multicultural workforce is a common thread not only in organizations in Western economies but also in all global corporations. As a result, diversity has increasingly become a “hot-button” issue in political, legal, corporate and educational arenas.

However, the attitude towards a diverse workforce in these corporations and from researchers has been very mixed. The organizational attitudes range from intolerance to tolerance and even appreciation of diversity [Joplin & Daus, 1997]. On one hand, a large number of corporations are reluctant to hire and promote female employees and ethnic minorities, especially for top positions. Some studies have found that some HRM diversity practices are not associated with increases in diversity. For instance, Rynes and Rosn (1995) argued that the adoption of diversity training does not increase top management diversity and overall workforce diversity. Blum, Fields and Goodman (1994) affirmed that companies with higher diversity tend to provide



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lower salaries and have higher turnover. On the other hand, there is a wide recognition of the value of workforce diversity. Research by the Australian Centre for International Business shows that diversity improves the quality of management's decisions and provides superior solutions to organizational problems and innovative ideas [ACIB, 2000]. Firms that have effective diversity management stand to benefit through bottom line returns. Information sharing and constructive task based conflict management are the keys to the 'value' in diversity management. Managing diversity is premised on recognition of differences as positive attributes of an organization, rather than as problems to be solved [Thompson, 1997].

In a similar vein, authors, such as McLeod, Lobel and Cox (1996) and Wilson and Iles (1999), argued that a diverse workforce has better-quality solutions on brainstorming tasks, displays more cooperative behaviour, relative to homogenous groups, and can raise organizational efficiency, effectiveness and profitability. In addition to the full utilization of the skills and potential of all employees, managing diversity can contribute to organizational success by enabling access to a changing marketplace and by mirroring increasing diverse markets [Cox & Blake, 1991; Gardenswartz & Rowe, 1998; Iles, 1995] and improving corporate image [Kandola, 1995]. Therefore, valuing diversity may become a source of competitive advantage, increase the quality of organizational life and ultimately be good for business [Cassell, 1996]. The popularity of the diversity approach comes from these positive assumptions. However, the potential benefits will not come into being simply because of greater workplace diversity, as pointed out by Thomas (1990), corporate competence counts more than ever, and today's non-hierarchical, flexible, collaborative management requires an increase in tolerance for individuality. The question is not, therefore, one of accepting that individuals are different but creating an atmosphere of inclusion and making a commitment to valuing diversity. Similarly, Liff and Wajcman (1996) argued that far from pretending workplace differences, managers should be trying to actively manage and value diversity. Managing diversity has its origin in the USA [Kandola & Fullarton, 1994] and has now become a strategic business issue for many organizations worldwide [Wilson & Iles, 1999]. If designed and implemented properly, effective diversity management can support key organizational development initiatives [Agocs & Burr, 1996; Storey, 1999].

Research by Goodman, Fields and Blum (2003) found a positive relationship between emphasizing employee development and promotion, and the representation of women. Other studies have confirmed the association between identity-conscious



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or formalized HRM practices which address demographic representation in human resource decision-making and greater representation of women and minorities in management [Kalleberg *et al.*, 1994; Konrad & Linnehan, 1995]. It is, therefore, widely recognized that effective diversity management can be achieved through using appropriate HRM strategies [Litvin, 1997]. Diversity management has a place in HRM and should be at the heart of human resource practices and policies. We argue that the reason for the absence of association of HRM diversity practices with increases in diversity and improved organizational performance reported in some past studies, such as Blum, Fields and Goodman (1994), Rynes and Rosn (1995), is actually a lack of effective HR diversity management practices. These studies regarded HRM diversity practices only as the compliance with AA and EEO and neglected the practices appreciating and making use of diversity. In the early 1990s, several scholars have commented that diversity research lacks scientific precision, theoretical analysis, historical specificity, empirical grounding, and is seriously under researched [Litvin, 1997; Nkmo & Cox, 1996; Sanchez & Brock, 1996]. Moreover, Maxwell, Blair and McDougall (2001) highlighted the potential disparity between espoused organizational rhetoric on managing diversity, and the reality of organizational practices in key human resource areas. This situation has changed marginally over the last decade. Researchers have not investigated how diversity has been managed in the HRM area and what HRM approaches are appropriate to manage diversity effectively.

Our extensive introduction outlined the objectives of our review. In this paper, we examine the most important diversity issues in the area of Human Resource Management. We develop a conceptual framework which will help organizations develop HRM strategies and policies to manage diversity effectively. Our framework will also help researchers identify key areas for future research and guide practitioners to formulate policies on managing diversity and implement appropriately.

Literature Review

The Concept of Diversity

Diversity covers a wide range of personality distinctiveness, it is the difference in people, and this means differences in age, physical abilities, religious beliefs, gender, and ethnicity and so on. We are not born the same; individuals are different in all forms. Diversity, according to Thomas (1991), means more than race and gender in the workplace. Diversity can be defined as acknowledging, understanding, accepting,



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and valuing differences among people with respect to age, class, race, ethnicity, gender and disabilities [Esty *et al.*, 1995]. Diversity embodies much more than race and gender as people sometimes view it. Diversity can refer to lifestyle tenure, position in the organization, age, sexual preference, functional specialty or geographic location. It is the human differences that play an important role in the culture and operation of organization [Brazzel, 1991]. These definitions show that diversity is not a specific topic but a wide range of topic. Also, according to some writers, diversity can be divided into two forms. The first is a primary dimension, primary dimension being age, ethnicity, gender, physical abilities/qualities, race and sexual orientation. The primary dimensions shape our basic self-image as well as our fundamental worldview. In addition, they have the most impact on groups in the workplace and societies [Loden and Rosener, 1991]. This dimension cannot be controlled or influenced, it is just who we are and the second is secondary dimension which includes educational background, geographic location, income, marital status, religious beliefs and work experience [Loden & Rosener, 1991]. This secondary dimension affects our self-esteem and self-definition and this second form of diversity can be influenced but still it makes us all different and unique in our own ways.

Diversity means difference and acknowledging that everyone is different is the beauty of it, some people believe that we are all the same and they do not see colour or race or religion but this is not really true at the moment; when see people we psychologically tend to classify them either into their age group, or place they come from or gender, so acknowledging this fact and been ready to work with it fosters good diversity in the workplace.

Cultural Diversity in the Workplace

As we have discussed what diversity is, we then have to narrow our minds to understand what cultural diversity is and what it has to do with an organization. Culture is usually defined as shared beliefs, values and customs of people which are usually transmitted from generation to generation. Culture is not developed in a day and it takes years to develop, when these habits are being embraced by the people around it, then it becomes a culture, culture makes us unique and different from all others, for example, it is a culture in Japan to slurp on your noodles while eating and this is considered rude in the western world as it is bad table etiquette, also in Africa and in some parts of Asia, it is considered rude to shake with the left hand. Another definition of culture is that it is a belief that has been used for a space of time to solve



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problems and which is distinct to a set of people then passed to the next generation which then becomes a way of life. One unique characteristic of culture is that it is learned. Therefore, it is evident at this stage that culture is unique and not uniform, it is the traditions and perceptions of life in general [Tervonen, 2012; Celebioglu, 2017]. Cultural diversity can also be “scrutinized within a specific organization or community by taking into account also the racial and religious differences, languages spoken, different nationalities and ethnic groups” [Reisinger, 2009]. Cultural diversity in the workplace is having workers of different backgrounds and ethnicity working together in a workplace; it is also the difference in tradition of workers of an organization. For example, Chinese working together with a European and an American working together with an African man, all this are forms of a cultural diverse group in an organization and this can either bring benefits or create problems in productivity if they do not get along well.

Benefits of Cultural Diversity

Cox and Blake (1991) established six factors that can be used to bring advantage to the company through diversity management; this includes cost, creativity, marketing, problem-solving, resource acquisition and organisational flexibility. These are competitive advantages companies with diverse cultural workforce can achieve, while companies with homogenous workforce might not necessarily achieve.

Cost: Studies have revealed that turnover rates, absenteeism and low productivity are often times related to lack of career growth and these traits can often be found among cultural groups with minority representation. The higher the turnover, the higher the cost incurred by the organization. This being said, if the HR manager is able to control these behaviours from the minority group, a lot of cost will be saved and productivity will be increased. If workers with different cultural backgrounds are able to work together in harmony and this group is satisfied with the organization, then turnover will be reduced to a large extent hereby saving a lot of cost that would have been used to recruit new staffs and train employees.

Marketing: It has been said by some expert that once an organization is able to catch a market, profits are likely to increase. A culturally diverse group is a big advantage in the sense that they can represent different parts of the market and the organization can easily key into this instead of hiring experts to research on what various people need in the market. For example, pork is used to make sausages and



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the likes and this pork is illegal in Muslim countries. A cultural diverse group that has employees from Muslim countries will be able to get this message easily and know what is allowed in Muslim countries and what is not instead of hiring people to research. Also, an organization with a multicultural group are more likely to know what type of marketing and advertisement an organisation can use in other to capture different customer group and also know how to develop this products to fit different markets.

Creativity: Organizations with multicultural teams are more likely to come up with different ideas and skills. Different cultures come with different ideas and people in this group are more likely to think outside the box and also to use their skills in solving problems. Diversity encourages creativity and innovativeness and this can be used as good way to meet up with customers need and wants. A diverse group knows what different section of the market needs and they are able to bring ideas together in other to capture the needs of different markets. For example, Muslims love to eat “helalmeat” (meat produced in a Muslim way); an eatery that has this form of information from its employees can decide to segment a part of its eatery for “helal” meat hereby catching the Muslim market in that region. This is a form of creativity.

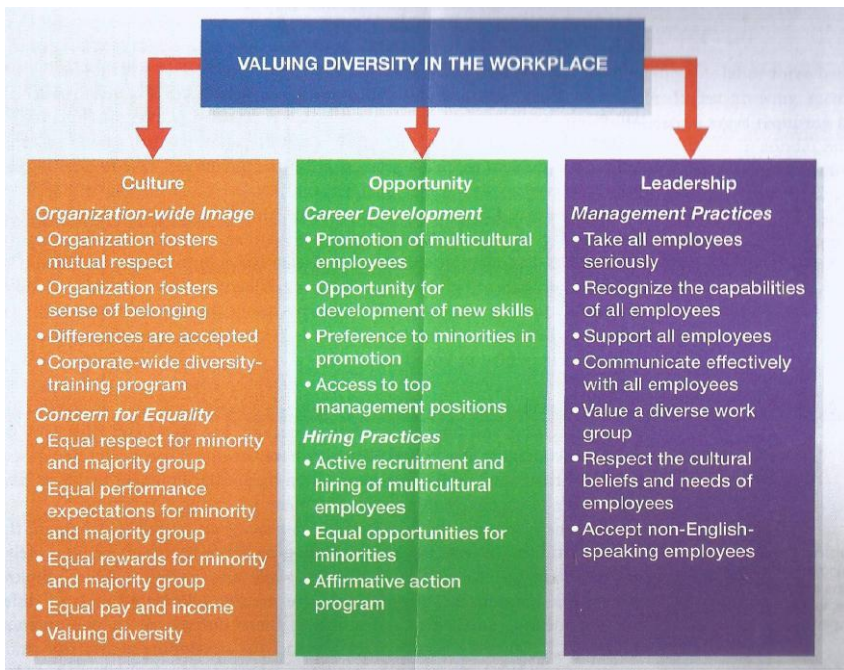
Problem-Solving: The world is getting more complex and unpredictable due to technology and demographic change; it will take experience and good problem-solving skills to break into this type of environment. An organisation with multicultural workforce is at a greater advantage because it gathers ideas from different parts of the world and different people. Due to diverse work communities, problem-solving and decision-making become more effective, as there are various perspectives and aspects, but also a richer base of experiences from which to scrutinize the dilemmas [Tervonnen, 2012].

Organizational Flexibility: Diversity management in the organization already changed some methods of operation into a more flexible and tolerant direction, because of this, it is more likely for the company to adjust to changes later in the business environment. Also research has shown that cultural minorities can accomplish multilateral and ambiguous jobs easily because of their flexible nature whereas the homogenous cultural group might not be able to achieve this.

Good Brand Image: It is every organization’s wish to have a good brand image in order to attract and retain customers. One of the ways of getting a good brand image is to create a diverse workforce; this will earn trust among its employees and also increase its reputation and increase its growth [Donnelly, 2015].

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Therefore, managing diversity is a concept that recognizes the benefits to be gained from differences as shown in the diagram below.



Source: Kathleen Iversen, 2000 cited in G. Bohlander & S. Snell (2007). *Managing human resources. United States: Cengage Learning*

Challenges of Cultural Diversity

There is always an opposite side of the coin, this means as there are benefits, there are also challenges associated with having a diverse cultural team, misunderstandings and problems can occur as there is lack of understanding of the different cultures and lack of communication. These problems, if not addressed on time, can affect the growth of the organization and can also cause conflict within the organization. The following are challenges that can occur as a result of a multicultural teams working together:



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Internal Conflict: Internal conflicts are conflicts that occur within the boundaries of an organization and in most times are influenced by the workers. A lack of communication among multicultural group can result in this conflict and thereby affect the other management functions of the organization.

Cost: Extra cost will be incurred on recruiting and training individuals as a result of high turnover by the multicultural teams. Multicultural teams might feel unsatisfied by their work and because of this, they search for better career life in another organization, this turnover will lead to extra cost for the organization as they will have to recruit and train new personnel.

Low Productivity: In the advent of an internal conflict or unsatisfied cultural workforce, there could be low productivity, motivation decreases, will power also reduces and the willingness to work will also reduce, all this combined together can result into low productivity. The key to managing a high productivity level with the employees is to understand this diverse group and make them work together. With this, high productivity and satisfaction can be achieved.

Negative Behaviours: This can affect the growth of the organisation. Some workers feel bad if they notice there are minority workers in their organization and this is only a human trait that can be changed. This human trait can cause negative behaviours with the workers and therefore escalates to conflict. It is a big challenge if not properly managed. And finally, lack of communication between multicultural groups can slow work process and waste time. If information is not understood well by the various groups, it can result in slow processing of administrative work and thereby cause a reduction in profit margin [Abidi *et al.*, 2017].

Hofstede' Model of National Cultural Differences

Geert Hofstede, a Dutch researcher, conducted a study, which Luthians (1998) describes as the largest organizationally-based study ever done. Based on this study, he categorized culture into four dimensions, which are: Power Distance, Uncertainty Avoidance, Individualism Collectivism and Masculinity-Feminity.

Power Distance: This is about inequality in power in a society, in families, at school, and particular at work. It is the extent to which less powerful members of organization accept the unequal distribution of power; that is, the degree to which subordinates accept that their boss has more power than they do. While explaining the work of Hofstede on national culture, Gatley *et al.* (1996) asserts that subordinates feel dependent on the superior and are afraid to express disagreement.

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The result will either be a preference for autocratic, a paternalistic boss or an outright rejection, but there is little indifference since the relationship is morally-based. In contrast, within low-scoring PDI countries (i.e., the U.K.), there is less of dependence and more of a contractual relationship between subordinates and superiors, resulting in a preference for significant influence of Power Distance on organization and work in its effects on the degree of centralization in an organization and the number of hierarchical levels present.

Table 1. Consequences of National PDI Score differences for Work and Organizations

Low PDI (e.g. the U.K.) Decentralization Lower concentration of authority	High PDI (e.g. Hong Kong) Centralization Higher concentration of authority
Flatter organizational pyramids	Taylor organizational pyramids
Hierarchy involves inequality of roles, established for convenience. Smaller proportion of supervisors in workforce	Hierarchy reflects existential inequality between superiors subordinates. Higher proportion of supervisors in workforce
Narrow salary range between top and bottom. Lower differential in qualification and status	Wide salary range between top and bottom. Higher differential in qualification and status
Consultative relationships between superior and subordinates. Ideal boss is resourceful and democratic	Autocratic style of management ideal boss is benevolent/paternal
Mixed feelings about employee participation in management	Ideological support for employee in management participation
Informal employee consultation possible without formal participation	Formal employee participation possible without informal consultation

Source: Gatley, S., Lessem, R., and Altman, Y. (1996), *Comparative Management: A Transcultural Odyssey*, McGraw-Hill International Organization, McGraw-Hill London, and Hofstede, G. (1984), *Culture's Consequences*, Sage, Beverly Hills, CA

Uncertainty Avoidance: This dimension of cultural difference identified by Hofstede relates to the extent to which members of a culture feel threatened by ambiguous situations and the degree to which they try to avoid these situations by engaging in the following:

- establish more formal rules;

- providing greater career stability;
- rejecting deviant behaviour;
- accepting the possibility of absolute truths and the attainment of expertise.

In countries with high scores on the Uncertainty Avoidance Index (UAI), there is a greater willingness of employees to stay working for the company, reflecting a cautious approach to risk and a high degree of angst in the face of likelihood of bureaucracy as a means of structuring activities. In low UAI countries, there is less anxiety about the future and as a result, bureaucracy will be less apparent and job mobility will be higher [Adler, 1986; Bana, 2019].

A related example is noticed in Japan where lifetime employment usually exists; at least in the large organizations, there is high uncertainty avoidance. On the other hand, in the United States where usually there is relatively high job mobility, there is low uncertainty avoidance.

Table 2. The Summary of Hofstede’s Proposed Consequences for Collectivist and Individualist

Collectivist (e.g. Hong Kong)	Individualist (e.g. the U.K.)
Particularistic relationships based on personal trust are basis for moral nature of work and business life	Universalist contractual transactions determine work and business activities
Promotion usually on inscriptive criteria	Promotion on merit as defined by market criteria
Private and work life diffusely related	Private and work life specific and separate
Organizations protest well-being and long-term interest of members; policies and sense of duty	Organizations not intensively involved with long-term welfare of members; policies and practices based on loyalty and practices based on promotion of individual initiative
Underlying philosophy is traditionalism	Underlying philosophy is modernism
Management of individuals. Task prevails	Management of groups relationship prevail

Source: Gatley, S., Lessem, R., and Altman, Y. (1996), *Comparative Management: A Transcultural Odyssey*, McGraw-Hill International Organization, McGraw-Hill London, and Hofstede, G. (1984), *Culture’s Consequences*, Sage, Beverly Hills, CA

Masculinity Feminity: The masculinity-feminity dimension of Hofstede’s model of national cultural differences is about the extent to which the dominant values of a

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society are more masculine and emphasize assertiveness, competitiveness, toughness, and so on, compared with the femininity which refers to the extent to which the dominant values in a society are more masculine. Emphasise relationships among people, concern for others, and interest in quality of work-life. Hofstede (1991) argues that the fundamental consequence for the workplace is in attitudes to work centrality, in that the work ethos in ‘masculine’ cultures tends towards ‘live in order to work’ rather than in ‘feminine’ cultures where the ethos is more incline ‘work in order to live’. The basic consequences proposed by Hofstede for work and organizations of differences in national scores on the (Masculinity) index are highlighted in table 4.

Table 3: Consequences for Work and Organizations of Difference in UAI Scores

Low UAI	High UAI
Less structuring	More structuring of activities
Emotional need for fewer written rules relativism empiricism	Emotion need for more written rules. Absolutism, theoretical purity.
More generalists	More specialists and experts
Organizations can be uniform, managers more involved in strategy, style, interpersonally-oriented and flexible in managers more willing to make individual and risky decisions. High labour turnover	Organizations standardized, managers more involved in details, operations, tasks and consistent in style. Managers less willing to make individual and risky decisions, lower labour turnover
Less ritual behaviour	More ritual behaviour
Smaller organizations motivation by achievement	Larger organization motivation by security
High need for achievement determine in terms of recognition ‘Hope of success’	Achievement determined in terms of security ‘Fear of failure’
Less emotional resistance to change	More emotional resistance to change

Source: Gatley, S., Lessem, R., and Altman, Y. (1996), *Comparative Management: A Transcultural Odyssey*, McGraw-Hill International Organization, McGraw-Hill London, and Hofsted, G. (1984), *Culture’s Consequences*, Sage, Beverly Hills, CA

Individualism-Collectivism: In the definition of Hofstede (1991), ‘individualism pertains to societies in which the ties between individual are loose; everyone is expecting to look after himself or herself and his or her immediate family, collectivism, as its opposite, pertains to societies in which people from birth onwards

continue to protect them in exchange for unquestioning loyalty’. The findings of Hofstede are that wealthy countries have higher individualism scores and poorer countries have higher collectivism scores, see table 4.

Table 4. Consequences of Differences in MAS Scores for Work

High MAS	Low MAS
Managers have leadership, independence and self-realization ideals	Managers are relatively less interested in leadership, independence, etc.
Managers expected to be decisive	More of a service ideal prevails managers use intuition to strive for consensus
Beliefs in individual decisions, equity and competition	Belief in group decisions, equality and solidarity
Appeal of job restructuring permitting individual achievement	Appeal of job restructuring permitting group integration
Strong achievement motivation	Weak achievement motivation
Achievement defined in terms of wealth and recognition	Achievement defined in terms of service, human contracts and living environment
Company interference in private lives accepted for legitimate reasons	Company interference in private lives rejected
Higher job stress	Lower job stress
Move industrial conflicts	Less industrial conflicts
Conflict resolve by ‘combat’ gender-based occupational segregation	Conflict resolved by compromise less gender-based occupational segregation
Big is beautiful Growth more important	Small is beautiful conservation more important
Fewer women in qualified jobs. Women in such jobs highly assertive	More women in qualified jobs and not particularly assertive.

Source: Gately, S.R., Lessem and Y. Altman, (1996), Comparative Management: A Transcultural Odyssey, McGraw-Hill International Organization, McGraw-Hill London, and Hofstede, G. (1984), Culture’s Consequences, Sage, Beverly Hills, CA.

Managing Diversity

In this literature we have discussed what diversity is and the roles HR plays in the organization in relation to diversity. It is also important to discuss how best to manage a group of people from different cultural backgrounds in an organization.



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Issues are bound to happen between employees of different cultures because the employees might not understand themselves and this issue if escalated can result into low productivity for the company, it is the role of the HR department to organise key into managing these workers of different cultural background and help them to contribute and achieve unity. The following are the ways in which diversity can be managed:

Managers must understand discrimination and its consequences: This is the first step for managing diversity; the human resource managers should understand and feel how it is to be discriminated. Understanding of this helps to recognise the minority culture in the organization and be ready to listen and speak up for them at the best time and also the implication of not recognising this group. Therefore, understanding is the key to managing diversity.

Helping workers to recognise their biases: Humans have the tendency to be biased, it is just part of our trait as human, the role of the HR in this regards is to help educate the workers and inform them that truly we are all different, but we are unique in our own ways. Workers should not be criticized because of their backgrounds and cultures, but they should recognise that we are all different based on our personal choices and our work in the organization is done based on how we want it to be done individually.

Setting good examples: The workers are more likely to follow examples than instructions. The true meaning of encouraging diversity should be seen in the daily life of the HR managers, in the way they encourage work among all groups in the organization, the way all groups are appreciated and treated equally. These examples will be felt by workers and once they see it as a culture of the organization, they will most likely follow suit and work peacefully with one another.

Diversity should be encouraged as early as on-boarding: On-boarding is the process a new staff is introduced to a workplace and co-workers. During this period, the worker familiarizes himself/herself with the duties expected of him/her. This is usually the best place to inform the new worker of the company's policies toward diversity and how diversity is encouraged in the workplace. The new employee should be informed about the benefits of diversity in the workplace and encouraged to embrace it.

Introduce training programmes for employees: Training programmes are created to instil knowledge into the employees and position them to fit into the organizational policies. There are two types of training which is common: that is

awareness and skill-building [Cox, 1994]. Awareness training inspire diversity into the mind of the workers and introduces them into the meaning of diversity, information on diversity in the organization and gives them exercise on how to encourage diversity while skill building on different cultural behaviours and how these behaviours can affect their work.

Actively seek input from minority group: Asking for the opinions of minority groups in decision-making exercise encourages diversity. This move makes them feel important and have a sense of belonging in the organization, this also give minority group a voice to be heard in the organization. In the long run, the majority group will tend to listen and welcome ideas from minority groups and this fosters peace and improves productivity [Edewo, 1991].

The primary business reasons for diversity management include . . .



Source: G. Robinson and K. Dechant, 1997 cited in G. Bohlander & S. Snell (2007).
Managing human resources. United States: Cengage Learning

Assigning important roles to minority group: Workers with a different cultural background and in a minority group will feel more welcomed if important roles in the organization are given to them. This will improve trust and create a good feeling within the organization; through this, everyone is made to understand that everyone in the organization has a say no matter the cultural difference and background.

Change organizational structure: Changing organizational structure deals with revising the practice and polices which affects or discourages diversity among



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cultural groups. The policies and work life in the organization should reflect an interest in cultural groups and examples of this includes reviewing the recruiting process, reviewing vacation policies, job sharing and team work among diverse cultural groups.

Job sharing: This is the process by which assignments and projects are shared among workers in the organization. A good way to manage diversity is to share projects among the different groups of different cultural backgrounds. This will encourage a relationship and bring a friendly atmosphere towards all workers and by this everyone will be able to appreciate themselves.

In summary, HR managers must create a good atmosphere for employees to interact. This will go a long way to promote diversity. Also HR manager involving himself in every role should give minority groups an opportunity to relate and share their problems and experiences with the manager.

Diversity Management and Recruitment and Selection

The key to diversity management hinges on strategic thinking and people centred policies. Diversity management is an approach which revolves around employees, the HRM function is the custodian of the people management processes. These functions have considerable overlap. First, both HRM and diversity management are mainly concerned with the contribution of the human resource function to competitive strategy. Second, both HRM (especially soft HRM) and diversity management are concerned with individual differences, the development and well being of each and every individual [Truss *et al.*, 1997; Storey, 2014]. Using the HRM toolkits addressing inequality in recruitment, appraisal, advancement and reward can enhance equal employment opportunity, improve inclusiveness and enhance creativity in a diverse workforce. HRM strategies are regarded as critical in overcoming individual and group process problems while improving the triple bottom line. Effective HR strategies focus on increasing organizational learning, flexibility, knowledge creation and the development of a work environment which is conducive to diversity management. The Ford Foundation study of non-profit boards shows a cascading effect from hiring practices [Burbridge *et al.*, 2002]. Hiring more male than female or minority board members resulted in greater diversity in recruitment. These diverse board members made subsequent recruitment easier through their access to networks and talent pools.

For any organisation to be successful in achieving its goals it requires the best employees; therefore recruitment and selection is the most important part of an



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organizational success. Recruitment and selection is the process of attracting, screening and selecting qualified candidates to fill in available positions in the organization. This can be done internally or externally. Internal recruitment is sourcing for individuals to fill in vacant positions from within the organization, while external recruitment is sourcing for individuals to fill in vacant positions from outside the organization. To many employees and managers, diversity management is equal to having an equal chance for any person to enter the organization. Many world class organizations have been effective in hiring women and minorities to access the increasingly diverse markets and win over new customers [Perlman, 1992]. Managerial attention to increased workforce diversity has been mandated in IBM, Xerox and J. C. Penney [Ted, 2005]. Digital, Esso and Westpac all set EEO targets in their HR practices [Kramar, 1998]. Alcoa recruits and retains high calibre people through harnessing the creative capacity of its people, creating a work environment and culture where this creativity will flourish [DIMIA, 2000]. Allen, Dawson, Wheatley and White (2004) conducted a survey of 396 employees from a wide variety of companies in Australia to examine thirteen separate diversity practices. Ninety-three percent of the companies reported a zero tolerance level of workplace discrimination. South Africa had a long history of being apartheid state. EEO for blacks has dominated South African employment relations. Before the 1979 amendments to Industrial Conciliation Act (ICA), recruitment, employment level and access to skilled positions were virtually controlled by established white trade unions in South Africa.

Over the past three decades, due to the wide adoption of tripartite negotiations, the percentage of blacks and other minorities in management has been considerably increased [Horwitz *et al.*, 1996]. However, despite several decades of equality legislation and declared commitment to equal opportunities, there still exists a systematic discrimination in the recruitment and selection process. Morrison (1992) conducted a survey of managers in 16 “model” US organizations. He found that most organizations introduced just one approach to equity, instead of an array of measures intended to make the organizational climate more supportive, and ensuring employment policies and practices provide developmental opportunities, career planning, reduction of work-family conflict, and mentoring for disadvantaged groups. Therefore, Morrison (1992) proposed that managing diversity can complement affirmative action strategies and new employment policies and practices to address the failure of organizations to promote women and racial and ethnic minorities into



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higher levels of management. Bennington and Wein (2000) found that there is widespread discrimination in employment in Australia. Holly (1998) and Equal Opportunities Review (1995) presented the evidence of discrimination in recruitment and selection in the U.K. public sector. Abugu and Eno (2018) also presented the evidence of discrimination in recruitment and selection in Nigeria. Walsh (1995) argued that the increasingly competitive environment makes it difficult for public sector managers to maintain the levels of organizational commitment required for equal employment opportunity to be truly meaningful. Worldwide, only fifty four percent of working-age women are in the workforce compared to eighty percent of men [Kossek *et al.*, 2005].

Conclusion

Diversity management means not just tolerating or accommodating all sorts of differences, but supporting, nurturing and utilizing these differences to the organization's advantage. The concept of 'diversity management' is founded on the premise that harnessing these differences will create a productive environment in which everyone will feel valued, where their talents are fully utilized and in which organizational goals and objectives are met. In conclusion, it can be seen that it is important for human resource managers to understand the impact of cultural diversity in the workplace. As migration increases and diversity increases in the organisation, cultural and diverse challenges are likely to occur. The human resource managers are to realize the opportunities and benefits this trend can bring and use it as a competitive advantage in the business environment. Therefore, HR managers should acknowledge cultural and individual differences in the workplace, focus attention on individual differences rather than group differences and emphasize the need to eliminate bias in such areas as recruitment and selection, training and development opportunities, employees' compensation, promotion and performance assessment.

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AN ASSESSMENT OF NON-OIL TAXATION INFLOW ON ECONOMIC GROWTH: VERDICT FROM WEST AFRICAN COUNTRIES

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Abstract

This study examined the impact of non-oil taxation inflow on economic growth in selected West African countries using World Bank panel data from 1999 to 2018. Ten (10) West African countries were purposefully selected from 1999 to 2018. Specifically, five Francophone and five Anglophone countries were selected for this study. Panel data analysis was employed to articulate the effect of independent variables (company income tax, value added tax, education tax, and custom and excise duties) inflow on dependent variable (economic growth (GDP)). The results showed that corporate income tax, value added tax, education tax and custom and excise duties had positive significant effect on economic growth of West African countries. In conclusion, non-oil taxation inflow impacted economic growth significantly and positively in selected West African countries. This predicated that money realized as taxation income has been utilized effectively, productively and efficiently on economic enhancement in terms of employment creation, roads construction, income distribution, provision of infrastructural facilities and economic stability. This study postulated that West African countries should lay much emphasis on the collection of non-oil taxation effectively, especially VAT and CIT, and expend much of this revenue prudently for the augmentation and enrichment of the populace.



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Keywords: *economic growth; inflow; vat; CIT; custom and excise duties; education tax; panel data; correlation.*

JEL Classification: O400; H270; H250; C11

Introduction

One of the pertinent requirements to the development process of every nation is revenue mobilization. African countries are battling with several challenges in generating enough revenue to facilitate fiscal fulfilment which gives rise to revenue lost. This loss of revenue hinders government capacity to provide social service to help the populace. Low income emanated from any sector has rendered the government incapacitated on the provision of infrastructural facilities, employment opportunities, economic stabilities, price stabilities and economic growth. According to Franzsen (2012), a developing nation is perceived as not able to achieve equitable economic progress and infrastructural development due to the inflow of informal sectors, low levels of literacy and corruption, inadequate salary structure for public servants, inadequate communications, deficient judicial systems, and firmly held interests against radical reforms among others which were ignited by insufficient revenue generation. Kayaga (2007) asserted that while the less developed countries are facing numerous tax policy challenges in their attempt to establishing efficient tax systems, their developed counter-parts have made a tremendous gain in improving their tax policy systems over the years. A typical developing economy collects just 15 per cent of GDP in taxes, compared with the 40 per cent collected by a typical advanced economy.

The ability to collect taxes is central to a country's capacity to finance social services such as health and education, critical infrastructure such as electricity and roads, and other public goods. Considering the vast needs of poor countries, this low level of tax collection is putting economic development at risk. This may have shown why the African government has recently developed new tax policies. In Nigeria, valued added tax was recently increased on alcoholic drinks and tobacco, and others from 5% to 20% and 5% to 7.5% respectively in order to skyrocket the revenue generated from this tax. Ghana introduced VAT in 1998 at an initial rate of 10% to replace sales and service taxes charged at the rate of 15% at the time. Since then it witnessed some increments from 10% to 12.5% to 15% and currently 17.5% among



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other indirect taxes such as import levy, and custom duties. In the 2015, budget statement presented to the Ghanaian Parliament by the Minister of Finance and Economic Planning, on November 19th, 2014, a bill to impose a general petroleum tax of 17.5% on selected petroleum product, which was also introduced and passed that same day. This new tax policy took effect the following day 20th of November 2014. Indirect taxes have been seen as effective and efficient means of raising revenue and it is expected to yield more if properly monitored.

The main focuses of all these taxation policies are to enhance economic growth, human and infrastructure development, rural and urban development, and ensure enabling business environment or raising the needed revenue domestically for development activities and poverty reduction. This study therefore examined the impact of taxation on economic growth in West African countries from 1999 to 2018.

Based on the objective of this study, the following hypotheses stated were tested:

HO₁: Non-oil taxation has no significant effect on economic growth in West African countries.

HO₂: Non-oil taxation has no significant relationship with economic growth in West African countries.

Literature Review

Taxation and Economic Growth in West African Countries

Taxation is a means by which governments finance their expenditure by imposing charges on citizens and corporate entities. According to Adegbite (2019), taxation is also referred to as a way by which government forcefully shares a fractional part of income of individual and private organization with the disposition of fulfilling fiscal responsibilities. The main purpose of taxation is to accumulate funds for the functioning of the government machineries. All governments in the world cannot run its administrative office without funds and it has no such system incorporated in itself to generate profit from its functioning. In other words, a government can run its administrative set up only through public funding, which is collected in the form of tax. Therefore, it can be well understood that the purpose of taxation is very simple and obvious for the proper functioning of a state. Taxes are charges levied against a citizen's personal income or on property or for some specified activity for the betterment of the populace. One of the purposes of taxation is to increase in effectiveness and productivity of the nation as government is able to implement



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various socio-economic development projects such as the construction of roads and bridges, schools, health facilities and provision of social services.

Taxation further assists in reducing consumption of unwanted goods. Taxes as such can be used as an effective tool to reduce the consumption of unwanted goods such as alcohol. Higher taxes on such goods reduce the consumption, but increase the price of the product for the consumers. Government also uses taxes as a way to protect local industries and as such make them more profitable. Increasing tariffs on imports and charging lower taxes to local products may boost the demand for goods and services produced by domestic industry. Taxes on imports, which are called tariffs, can be used by government to correct an unfavourable balance of payment situation by increasing the tariffs. This resulted in imports becoming expensive and will cause a fall in demand for the imported goods.

According to Almfraji and Almsafi (2014), economic growth is the growth of potential output that is production at full employment of available assets, which is caused by growth in aggregate demand or observed output. The real gross domestic product growth rate (GDPG) is presumed to be the most efficient proxy for economic growth. Anyanwu and Yameogo (2015) described the real GDP growth rate as a measure of a country's track record; while it also serves as an indicator to show potential investors the existence of profitable investment opportunities, as well as the attractiveness of the host country's market [Asiedu, 2013].

The tax system in any country is made up of the tax policy, the tax laws and the tax administration. All of these are expected to work together in order to enhance the economic growth of the nation. According to the Presidential Committee on National tax policy (2008), the central objective of the tax system is to contribute to the well-being of populace directly through improved policy formulation and indirectly through appropriate utilization of tax revenue generated for the benefit of the people. In generating revenue to achieve this goal, the tax system is expected to minimise distortion in the economy. Other expectations of the tax system according to the Presidential Committee on National tax policy (2008) include:

- i. Encourage economic growth and development.
- ii. Generate stable revenue or resources needed by government to accomplish loadable projects and or investment for the benefit of the people.
- iii. Provide economic stabilization.
- iv. To pursue fairness and distributive equity
- v. Correction of market failure and imperfection.



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Njoku and Chigbu (2015) argue that the principal aim of taxation is usually to generate revenue capable of funding government expenditure irrespective of any levels of government, which absolutely ignites economic growth.

Role of Taxation in Financing Economic Development

Tax policy plays two important roles in financing economic development. One is to maintain an economy at a higher employment level so that the saving capacity of the people is raised with an increase in income per head. The second is to raise the marginal propensity to save of the community as far above the average propensity to the maximum extent possible without discouraging work effort or violating canons of equity. Savings can be generated in two ways: by increasing real output or by a reduction in real consumption. There is considerable disagreement among economists and policymakers about the usefulness, or necessity of taxation in raising resources for financing economic development in developing countries such as India. At the early stage of development, when the rate of raising is low, there is need for compulsion in forcing people to consume less and save more. Only through taxation it is possible to generate forced saving which is so essential for accelerating the rate of capital formation which is the sine qua non of high rate of per capita income growth.

Empirical Review of Related Literature

Adegbite (2016) examined the effect of education tax on human capital development both in the short run and in long run in Nigeria. The study also investigated the direction of causality for education tax, petroleum profit tax, company income tax, and human capital development employing the method of Johansen co-integration and the Granger causality tests using data spanning the period between 2000 and 2015. Findings revealed that education tax has positive significant impact on human capital development in Nigeria both in the short and in the long run. The study concluded that education tax has positive significant impact on human capital development both in the short run and in the long run. However, the scope of this study only limited to 2015, which did not extend to 2018, therefore the result of this study is not translated to 2018.

Abiola and Asiweh (2012) looked at the Nigeria Tax administration and its capacity to reduce tax evasion and generate revenue for development desire of the populace. The study made use of 121 online survey questionnaires containing 25



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relevant questions. Descriptive statistics were used to analyse 93 usable responses. The study found among other things that increasing tax revenue is a function of effective enforcement strategy which is the pure responsibility of tax administration. According to this study, Nigeria lacks enforcement machineries which include among other things, adequate manpower, computers and an effective postal and communication system. However, this result of this study is confined to Nigeria alone, which did not create vacuum for West African countries because it was conducted in Nigeria.

Adukonu and Ofori-Abebrese (2016) investigated the effect of Ghana's tax policies on poverty. The study employed the Johansen co-integration estimation techniques using annual time series data from the 1984 to 2013 period. The results showed that increase in indirect tax policies worsen poverty level in Ghana. However, direct tax policies and remittances have mitigating effect on poverty. Considering the agrarian structure of the economy, reducing export taxes will promote activities in the export subsector. However, this study was on the effect of Ghana's tax policies on poverty but not on economic growth in West Africa, therefore, the result is not translated to entire West African countries.

Nyamadi (2014) explored the impact of tax policy measures on economic growth using time series data for the 1970 to 2013 period to devise a reasonably accurate estimation of Ghana's sustainable revenue profile in a general Autoregressive Distributed-Lag model. This further leads in the design of an appropriate expenditure profile as a means of averting the persistent non-sustainable fiscal deficit in Ghana. The findings depicted that economic growth benefits from increases in import taxes more than the other types of taxes both in the short and long run. Meanwhile, this study was limited to Ghana but not extended to two or more countries in West Africa, therefore, the outcome of the study cannot be meaningful to West African countries.

Marozva1 and Makoni (2018) explored the relationship between FDI, infrastructural development and economic growth using a panel of nine African countries, over the 2009 to 2016 period. There is no single economic theory, which explains the effect of infrastructure on economic growth. Using panel data analysis, the results from Fixed Effects model show that economic growth is positively related to both infrastructure development and FDI. However, the relationship is not significant. Furthermore, government spending and domestic credit to the private sector are positively related to economic growth and the relationship is significant. The study postulated that the Governments of these African countries intervene and



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put policies in place to develop their local infrastructure so that it can further grow its economy, thereby increasing employment and trade opportunities, especially if it wishes to attract foreign investors. However, this study was limited to the relationship between FDI, infrastructural development and economic growth using a panel of nine African countries, therefore the results were not aligned with West African countries.

Primož and Suzana (2018) examined whether tax wedge affects employment growth in the EU. The descriptive empirical estimates show that the level of labour taxation varies greatly across EU Member States, by which the tax wedge tends to be higher among New Member States (excluding Cyprus and Malta). Furthermore, the panel regression analyses confirm statistically significant negative relationship between tax wedge and employment growth in the EU as a whole. Therefore, the empirical analysis suggested that the EU-27 should continue with the trend of reducing tax wedge, as this would have favourable effects on labour market performance, especially among New Member States. But the study was conducted in EU and the findings may not be generalized in wider perspectives.

Adegbite and Ajagbe (2018) empirically analysed the impact of value added tax (VAT) and excise duties on economic growth in Nigeria. Secondary data were obtained from Central Bank of Nigeria statistical bulletin from 1990 to 2017. Multiple regressions were employed to analyse the data. The study concluded that value added tax has positive significant impact on economic growth and revenue generation while excise duties has negative significant impact on economic growth and revenue generation in Nigeria.

Adegbite and Agboola (2019) examined the effect of taxation on government expenditure in Nigeria from 1994 to 2015. It also analysed the significant components of taxation on government expenditure, and investigated the relationship between taxation on government expenditure in Nigeria. Secondary data were used in this study. The relevant data for the study were obtained from Central Bank of Nigeria (CBN) Statistical Bulletins and Federal Inland Revenue Services Bulletin from 1994 to 2016. Regression analysis technique was used to measure the effect of components of taxation on Public expenditure. Pearson Product Moment correlation was used to measure the relationship between the taxation on public expenditure. Results showed that petroleum profit tax, value added tax and corporate income tax had positive significant effect on public expenditure. The study concluded that taxation had positive significant impact on public expenditure. Also, taxation had positive



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significant relationship with public expenditure in Nigeria. The study therefore recommended that government should be properly monitored the income realized from taxation, and it should be judiciously utilized for the betterment of the populace.

Yahaya and Yusuf (2019) examined the impact of non-oil tax revenue on economic growth in Nigeria. few work have covered non-oil taxation and the relationship of company income tax (CIT), value added tax (VAT) and custom and excise duties tax on Real Gross Domestic Product of Nigeria. The study adopted ex-post facto research design, and data were drawn from the annual reports of Central Bank of Nigeria and Federal Inland Revenue Services publications. Auto Regressive Distributive Lag (ARDL) was employed to analyse the data collected after subjecting the series to unit root test and co-integration test. The result of the study showed that CIT had a positive significant relationship with economic growth. Nevertheless, the results generated are limited to Nigeria, which cannot be extended to West African countries.

Therefore, this study is able to create gaps in terms of scope and methodology. The extant studies reviewed were majorly conducted in Nigeria and Ghana which were limited to 2012 but not elongated to 2018. Also, Abiola and Asiweh (2012) confined their study to primary data (questionnaires), and other reviewed empirical studies employed econometric analysis like ARDL and time series data to analyse the data which absolutely are limited to single country of their studies. But this study contributes to existing knowledge by employing panel data analysis to examine the impact of taxation on economic growth but not limited to a single country but extended to selected West African countries which embedded with five Francophone countries and five Anglophone countries.

Underpinning Theory

Taxation theory may be derived on the postulation that there must be bond between tax paid and benefits received by the taxpayers from the state [Ogbonna & Appah, 2012]. With this postulation, there are three theories, namely, socio-political theory, expediency theory and benefit received theory. This study is built on benefit received theory which postulated that there is fundamentally an exchange bond between taxpayers and the state. This theory proceeds on the postulation that there is fundamentally an exchange or pledged connection between taxpayers and the state. The state offers certain goods and services to the members of the society and they contribute to the government purse inform of taxes in proportion to the benefits

received, which invariably can be expended for the provision of basic infrastructural facilities. The benefits received are taken to represent the basis for distributing the tax burden in a specific manner.

Methodology

This study examined the interrelationship between taxation inflows and economic growth using World Bank panel data for selected West African countries from 1999 to 2018. Ten (10) West African countries were purposefully selected from 1999 to 2018. Specifically, five Francophone and five Anglophone countries were selected for this study. These years were chosen because in these years the crude oil has crashed in world market which invariably ignited global economic recession which is significant and more important to the level of revenue generated by the government. Panel data analysis was employed to articulate the effect of independent variables (company income tax, value added tax, education tax, and custom and excise duties) inflow on dependent variable (economic growth (GDP)).

Model Specification

Economic growth is the explained variable in this model, while the explanatory variables are company income tax (CIT), value added tax (VAT), education tax (EDUCT), and custom and excise duties (CAEDUT). Ten (10) West African countries were purposefully selected from 1999 to 2018.

$$GDP = f (VAT, CIT, EDT, CAEDUT) \tag{1}$$

$$\sum_{i=1}^n GDP = \alpha_0 + \sum_{i=1}^n \alpha_1 CIT + \sum_{i=1}^n \alpha_2 VAT + \sum_{i=1}^n \alpha_3 EDUCT + \sum_{i=1}^n \alpha_4 CAEDUT + \mu_1 \tag{2}$$

Transforming equation (2) to the natural logarithm it changed to

$$\sum_{i=1}^n LOGGDP = \alpha_0 + \sum_{i=1}^n \alpha_1 LOGCIT + \sum_{i=1}^n \alpha_2 LOGVAT + \sum_{i=1}^n \alpha_3 LOGEDUCT + \sum_{i=1}^n \alpha_4 LOGCAEDUT + \mu_3 \tag{3}$$

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Results and Discussion

Table 1. Pooled Effect Model on Effect of Taxation Inflow on Economic Growth in Selected West African Countries

Dependent variable	Independent variables	Coefficient	Standard error	t	p>/t/	(95% conf. Interval)
GDP	CIT	2.821717	0.4060025	6.95	0.000	2.022197 3.623636
	VAT	0.4179794	0.0858274	4.87	0.001	-0.0949251 0.243613
	EDUCT	0.5602142	0.1697605	3.30	0.005	-0.8958419 -0.226237
	CAEDUT	0.2939833	0.0924476	3.18	0.011	-0.1985493 .1661017
	CONSTANT	5.46E+08	7.10e+07	7.69	0.000	-9.07e+07 1.89e+08
R-squared = 0.6146		Adj R-squared = 0.5935		Prob > F = 0.0000		
		Root MSE = 8.4e + 08		F(4, 195) = 133.32		

Source: Researcher’s Computation (2019)

Table 1 showed the effect of taxation inflow on economic growth in selected West African countries. 1% increase in CIT increases GDP by 2.8%, it shows that there is a positive significant effect of CIT on GDP ($\beta = 2.821717$ $t = 0.000 < 0.05$). 1% increase in VAT increases GDP by 0.41%, it shows that there is a positive significant effect of VAT on GDP ($\beta = .4179794$, $t = 0.001 < 0.05$). 1% increase in EDUCT increases GDP by 0.56%, it shows that there is a positive significant effect of EDUCT on GDP ($\beta = 0.5602142$, $t = 0.005 < 0.05$). In addition, 1% increase in CAEDUT increases GDP by 0.291%, it shows that there is also a positive significant effect of LEASE on GDP ($\beta = .2939833$, $t = 0.011 < 0.05$).

Given the coefficient of determination (R^2) as 0.6146 which is 61% supported by high value of adjusted R^2 as 59%, it is presumed that the independent variables incorporated into this model have been able to explain the effect of taxation inflow

on economic growth to 59 %. The remaining 41% are for Error terms. That is, there is a significant effect of independent variables (CIT, VAT, EDUCT and CAEDUT) on GDP dependent variable. The F Probability statistic also confirms the significance of this model. The adjusted R² of 0.5935 indicates that about 59% of the total variation in the dependent variable is accounted for by the explanatory variables at 0.05 level of significance.

Table 2. Fixed Effect Model on Effect of Taxation Inflow on Economic Growth in Selected West African Countries

Dependent variable	Independent variables	Coefficient	Standard error	t	p>/t/	(95% conf. Interval)
GDP	CIT	2.437648	0.4761594	5.12	0.000	1.49828 3.377015
	VAT	0.387454	0.0892752	4.34	0.000	-0.1011489 0.2510953
	EDUCT	0.4490077	0.1905775	2.36	0.020	-0.8249791 -0.0730363
	CAEDUT	0.297099	0.0967748	3.07	0.009	-0.1949718 0.1868627
	CONSTANT	4.95E+08	7.45e+07	6.65	0.000	-1.03e+08 1.91e+08
R-sq: within = 0.1348 between = 0.9412 overall = 0.2123		Adj R-squared = 0.1985			Prob > F = 0.0000	
		sigma_u 1.453e+08 sigma_e 8.503e+08 rho .02837382 (fraction of variance due to u_i)			F(4,186) = 7.25 corr(u_i, Xb) = 0.4169	

Source: Researcher’s Computation (2019)

Fixed effect needs to be tested because of the doubt that may arise with pooled result. Table 3 showed the effect of Taxation inflow on economic growth in selected West African countries. 1% increase in CIT increases GDP by 2.4%, it shows that there is a positive significant effect of CIT on GDP ($\beta = 2.437648$ $t = 0.000 < 0.05$). 1% increase in VAT increases GDP by 0.38%, it shows that there is a positive significant effect of VAT on GDP ($\beta = 0.387454$, $t = 0.000 < 0.05$). 1% increase in

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EDUCT increases GDP by 0.44%, it shows that there is a positive significant effect of EDUCT on GDP ($\beta = 0.4490077$, $t = 0.020 < 0.05$). In addition, 1% increase in CAEDUT increases GDP by 0.297%, it shows that there is also a positive significant effect of CAEDUT on GDP ($\beta = 0.297099$, $t = 0.009 < 0.05$).

Table 3. Random Effect of Taxation Inflow on Economic Growth in Selected West African Countries

Dependent variable	Independent variables	Coefficient	Standard error	t	p>/t/	(95% conf. Interval)
GDP	CIT	2.822917	0.4060025	6.95	0.000	1.49828 3.377015
	VAT	0.3621924	0.0858274	4.22	0.001	-0.1011489 0.2510953
	EDUCT	0.5602145	0.1697605	3.30	0.004	-0.8249791 -0.0730363
	CAEDUT	0.2810414	0.0924476	3.04	0.006	-0.1949718 0.1868627
	CONSTANT	4.68E+08	7.10e+07	6.59	0.000	-1.03e+08 1.91e+08
R-sq: within = 0.1334 between = 0.9672 overall = 0.2146		sigma_u 0 sigma_e 8.503e + 08 rho 0 (fraction of variance due to u_i)			Wald chi2(4) = 353.29 Prob > chi2 = 0.0000	

Source: Researcher’s Computation (2019)

Random effect was also tested to scrap spurious and cloudy notion with pooled effect model. Table 3 showed the effect of taxation inflow on economic growth in selected West African countries. 1% increase in CIT increases GDP by 2.8%, it shows that there is a positive significant effect of CIT on GDP ($\beta = 2.822917$ $t = 0.000 < 0.05$). 1% increase in VAT also increases GDP by 0.36%, it shows that there is a positive significant effect of VAT on GDP ($\beta = 0.3621924$, $t = 0.001 < 0.05$). 1% increase in EDUCT increases GDP by 0.56% which articulates that there is a positive significant effect of EDUCT on GDP ($\beta = 0.5602145$, $t = 0.020 < 0.05$). Also, 1%

increase in CAEDUT increases GDP by 0.028%, it opines that there is also a positive significant effect of CAEDUT on GDP ($\beta = 0.2810414$, $t = 0.006 < 0.05$).

Table 4. Hausman Test on the Effect of Non-Oil Taxation Inflow on Economic Growth in Selected West African Countries

Dependent variable	Independent variables	Coefficient (b)	Coefficient (B)	(b-B) Difference	Sqrt (diag (v-b-v-B)) S.E
GDP	CIT	2.437648	2.82292	-0.385269	0.2487764
	VAT	0.387454	0.362192	0.0252616	0.0245708
	EDUCT	0.4490077	0.560215	-0.1112068	0.0866092
	CAEDUT	0.297099	0.281041	0.0160576	0.0286147
b = consistent under Ho and Ha;	B = inconsistent under Ha, efficient under Ho	Ho: difference in coefficients not systematic $\chi^2(4) = (b-B)'[(V_b-V_B)^{-1}](b-B) = 3.04$ Prob > $\chi^2 = 0.5504$			

Source: Researcher’s Computation (2019)

To decide between fixed or random effects, Hausman test basically tests whether the unique (ui) are correlated with the regressors, the null hypothesis is they are not. If $\chi^2 > 0$ is greater than 0.05 (i.e. significant), fixed effects should be considered, therefore the null hypothesis is accepted because Prob > χ^2 (0.5504) is greater than 0.05.

Correlation Results

The correlation result of Pearson pairwise in the table 5 showed that there is a positive significant correlation between GDP and components of taxation (CIT, VAT, EDUCT, and CAEDUT). GDP had positive significant relationship with CIT, VAT, EDUCT, and CAEDUT. (0.3387*, 0.0731*, 0.2545* and 0.4597* respectively). The results confirmed that GDP is positively and significantly linked with the company corporate income tax, value added tax, education tax and custom and excise duties. This predicated that selected countries employed the proceeds

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from corporate income tax, value added tax, education tax and custom and excise duties effectively for the betterment of their economies.

Table 5. The Relationship among Economic Growth, Corporate Income Tax, Value Added Tax, Education Tax, and Custom and Excise Duties

	GDP	CIT	VAT	EDUCT	CAEDUT
GDP	1.0000				
CIT	0.3387*	1.0000			
VAT	0.0731*	0.4408*	1.0000		
EDUCT	0.2545 *	0.5845*	0.5721*	1.0000	
CAEDUT	0.4597 *	0.4478*	0.4606*	0.7968*	1.0000

Source: Researcher’s Computation (2019)

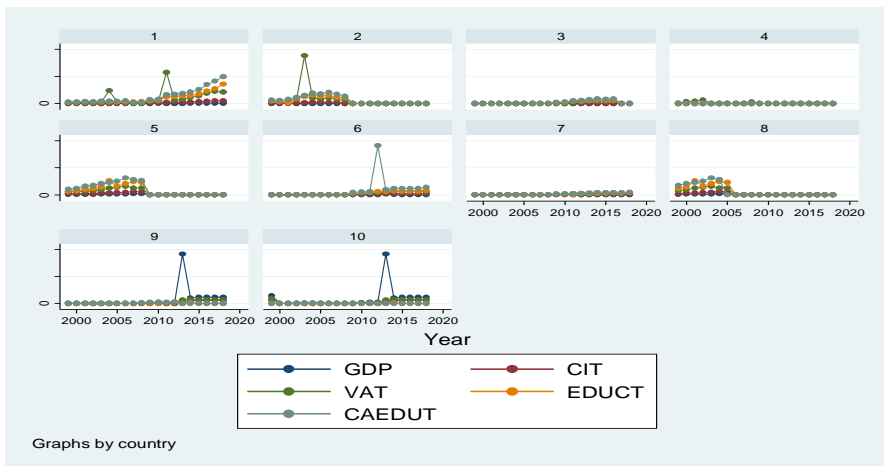


Fig. 1. Panel Analysis Plots on the Effect of Non-Oil Taxation Inflow on Economic Growth in Selected West African Countries

Source: Author’s Draft (2019)



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Discussion of Findings

The results from the analysis articulated that there is a positive significant effect of corporate income tax on economic growth of selected West African countries. This translated that the money realized from this component of tax is utilized judiciously for the wellbeing of the populace. This supported the view of Yahaya and Yusuf (2019). Also, it was revealed from the analysis that value added tax, which is one of the components of taxation employed by the selected countries to jack up their revenue, enhanced economic growth favourably as advocated by Yahaya and Yusuf (2019). Moreover, education tax increases GDP positively which is an indication that this type of tax is utilized for the human capital development through basic education training as concurred by Adegbite (2016). The provision of education is seen as a productive investment in human capital, an investment which the proponents of human capital theory considers to be equally or even more equally worthwhile than that in physical capital. In addition, custom and excise duties have positive significant effect on economic growth. This outcome agreed with Adegbite and Ajagbe (2018) which showed that custom and excise duties displayed positive changes on economic growth of any nation.

Conclusion

This study examined the impact of taxation inflow on economic growth in selected West African countries. Secondary data were obtained from World Bank panel data from 1999 to 2018. The panel data analysis results showed that corporate income tax, value added tax, education tax and custom and excise duties had positive significant effect on economic growth of West African countries. In conclusion, non-oil taxation inflow impacted economic growth significantly and positively in selected West African Countries. This predicated that money realized as taxation income has been utilized effectively, productively and efficiently on economic enhancement in terms of creation of employment, construction of roads, income distribution, investment involvement, provision of infrastructural facilities and economic stability. This study postulated that West African countries should lay much emphasis on the collection of non-oil taxation effectively especially VAT and CIT, and expend much of this revenue prudently for the augmentation and enrichment of the populace. In order to meet some objectives of the sustainable development goals by achieving economic growth, there is need to proactively re-strategize taxation policy in West African countries which will invariably stimulate economic growth.



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**IMPACT OF DIGITALIZATION IN MANAGEMENT
OF INTERNATIONAL BUSINESS IN ORGANIC
AGRICULTURE. WAYS TO RESPOND
TO CHALLENGES. USH PRO BUSINESS, INTER-BIO,
WALLACHIA HUB STUDY CASE**

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Abstract

Digital technologies are used increasingly in everyday life, in any aspects of human activities. Pandemics like coronavirus imposed stricter rules for health, and people, most probably, will prefer to be safer with organic products.

Even before the crises, organic agriculture especially was on the path to digitalization. Now we realize better that Digitally Conducted Organic Agri-food (DCOA) solutions will emerge even faster. This paper is investigating the



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trends of evolution of digital transformation in organic agri-food industry and their impact on trade flows with food products. We look at the new emerging business models triggered by the DCOA solutions and the managerial challenges this will require especially for innovative start-ups, farmers and SMEs in agri-food sector.

Finally, we argue that university led innovation ecosystem, like the study case presented, may offer knowledge hubs for farmers, processors and sector branch organizations in the organic sector.

Keywords: *digital technologies; organic agri-food industry; emerging business models; innovation ecosystem.*

JEL Classification: F23, Q55, Q57

Romanian Organic Farming in the International Context

Romania is part of EU market and organic agriculture policy. “Organic farming” is a term protected and assigned by the EU to Romania for defining this farming system and is similar to the terms “ecological farming” used in other Member States. “*Organic farming is a mode of production characterized by the use of plant cultivation and animal husbandry techniques that respect the natural balance by excluding the use of synthetic chemicals, promoting and enhancing biodiversity, promoting and stimulating biological cycles and limiting the use of inputs*”. In recent years, in Romania as in most European states, there is a growing interest for products harvested from organic farming, but smaller than other states. Unlike conventional agriculture, organic farming is a system of agricultural management but also of food production, which brings together the most effective practices on the environment, climate, biodiversity, animal welfare and conservation of natural resources. The use of such a production and processing system can bring multiple social benefits. These include: environmental protection and feeding the population with food treated with substances and through natural processes.

Romania has the necessary resources and could become one of the most developed countries in terms of conversion to organic farming, mainly due to the large areas of agricultural land it owns and have not gone through this process. The growing interest of people in the consumption of organic products, but also the involvement of the European Commission on this subject, in order to protect the



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environment on the one hand and to make the population aware of the benefits on human health on the other hand, draws future lines in the whole agricultural field. Thus, national and especially international trade will focus in the coming years on organic agricultural products. Farmers, who choose in advance the conversion of crops to the organic system, will be able to enjoy after obtaining certifications and substantially improved earnings. Specifically, the objectives of organic production policy are an integral part of the objectives of the CAP, by ensuring that farmers receive a fair return in exchange for compliance with organic production rules. In addition, the growing consumer demand for organic products creates the conditions for the further development and expansion of the market for those products and, therefore, for the increase in farmers' earnings involved in organic production. Romanian farmers must quickly adapt to changes adopted at the international level, in order to capitalize on Romania's potential and become competitive in both national and international markets.

However, there is still a fairly large segment of the population that does not consume organically made and processed products due to a lack of confidence in the quality and superior properties of these products, taking into account their higher costs.

In this sense, Romanian farmers who have already completed the conversion period or are in the process could benefit from increased visibility and confidence from domestic and international consumers, if they have a certification of the superior quality of harvested and processed products, based on rules adapted to the climate, soil and biodiversity conditions specific to Romania.

With an agricultural area of 14.630 mil. ha out of which the arable surface is of 9.24 mil. ha (64.2% of the total) and with pastures and meadows of 4.82 mil. ha (33% of the total) and vineyards and orchards of 0.405 mil. ha (2.8% of the total), Romania has a large agricultural potential. Only a small part of the potential is dedicated so far to the organic farming.

Romania is the new largest producer of organic products and is among the top ten producers with increases in bio-production according to the latest FiBL 2019 report. Thus, the report indicates an ecological area increase of 14.2%, the 6th place in Europe regarding pace of increase of organic land. This demonstrates that there is an increased interest of the Romanian producers to produce bio compared to other countries in Europe.

This growth dynamics in recent years however has not lead to a higher place in the share of organic land in total agricultural land (only 2% in Romania, much lower



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compared to other countries: Hungary – 4.3%, Poland – 3.4%, Bulgaria – 2.9%, Germany – 8.2%, Lithuania – 8.1%, Slovakia – 10%, Czech Republic – 12.2%, Estonia – 20.5%).

A disadvantage of the Romanian bio-sector is the low number of consumers of organic products linked to the underdeveloped character of the domestic market. Moreover, there is a lack in the permanent collection of statistical data on the sale and purchase of bio-products on the domestic market.

Another area where Romania is better, in international comparison, is the collection of ecological honey in wild areas, the 4th place in the world as collection areas (1.8 million ha in 2014). FiBL reports are the most appreciated and accurate in the world in the field of organic farming, and the 2019 report is based on international comparable national statistics up to the level of 2017.

Statistics shows us clearly where Romania is in the international comparison in the field of organic products: modest developments compared to others, high potential as production and surface but low domestic demand, modest weight of ecological areas in total, small number of processors and processed products export less capitalized. A still undeveloped market but with a great potential.

Competent authority for the organic sector in Romania, the Ministry of Agriculture and Rural Development (MARD), in conformity with the provisions of art. 27 R(CE) no. 834/200, is responsible for implementing policies in the organic farming sector. At the MARD level, the implementation unit is General Directorate for Agricultural Policies – Directorate for Policies in the Vegetable Sector – Organic Farming Compartment. At territorial level there are Directions for County Agriculture.

Technical inspections are carried at the MADR level through the Directorate-General for Control, Anti-Fraud and Inspection, Inspection Monitoring Directorate, Check and Control Inspection Unit, verification and technical inspection service. At territorial level, inspection is carried through/by – Directions for County Agriculture, Monitoring Inspection, Technical Inspection, Verification and Control in Agriculture/Organic Farming.

In terms of policy instruments, one may notice the compensatory payment granted through different schemes which could be cumulated under various forms for organic farming and environment protection: investments in physical assets; support for investments in the processing/marketing and promotion of agricultural products; support for the setting-up and operation of Operational Groups (GOs) for the development of pilot projects, development of new products, support for horizontal and vertical cooperation between actors in the supply chain.



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Perspectives of the development of the organic sector in Romania are: increasing the organic land surface; better market organization of producers, processors, traders on sector branches; more market transparency and promotion of good practices; inclusion of organic farming in broader concept of sustainability, awareness and assessment at the level of market operators and branch organizations; raising consumer awareness about organic products and their traceability; promotion of exports and R&D in organic agriculture.

The Romanian export of organic products will be greatly stimulated by this brand-focused and manufacturing-focused participation to Biofach China, but also by the contribution of export research and innovation. *Spiru Haret* University shows its involvement in both innovative export and innovative product research. Moreover, one can say that for the first time there were 3 exclusive clusters of organic products from Romania, Bio Danubius, Bio Concept Valea Prahovei and Bio Nest. The creation of the Inter-Bio association and the clusters that struggle to organize product lines are qualitative elements whose results we will see in the future.

Organic farming benefits farms by creating a natural balance in the water and nutrient circuit, controlling pests and weeds, increasing soil fertility by stimulating microorganisms and using green manure, which leads to reduced erosion and wider coverage of the soil for cultivation. This culture system supports the environment, being a good solution in reducing in the medium and long term some problems such as: acid rain, global warming, biodiversity reduction and desertification. *“By not using synthetic chemical fertilizers, pesticides and other synthetic chemicals, by rational and balanced use of resources, especially renewable ones, by caring for nature and by specific methods and techniques, organic farming ensures good protection of soil, water and air resources.”*

Studies conducted by specialists in soil science, climatology and environment have shown that there is no palm of cultivated land that does not suffer, more or less, due to one or more phenomena such as: water and wind erosion, landslides, compaction, crust formation, acidification, alkalization, salting, humus content decrease, poor and very poor supply of phosphorus and assailable potassium, chemical pollution etc. Unfortunately, lately, this situation has become worse due to the cultivation “by ear” of the land, as well as the expansion of agricultural systems in which land is taken by force and through which is exploited until exhaustion and then abandoned. The generalization of the drought and the increase of the frequency of acid rains contribute even more to the collapse of agriculture and, implicitly, to the disappearance of villages and communes.



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Literature Review

One of the hypotheses we started from was the cooperation between economic actors which is a form of adaptation to changing market conditions for all categories of market players. At present, as the dynamics have intensified, business networks that operate or will operate in the new economic contexts will have to restructure, in order to have access to new resources and capacities, to new markets, new logistics and communication corridors, the use of promotion and communication platforms. At the same time, strategic alliances have the role of boosting partners by facilitating the risk-sharing process, increasing technological intensity and exchanging good practices.

Another analytical and methodological hypothesis is along the lines drawn by Jeffrey D. Sachs who highlighted the impact of artificial intelligence and its disruptions and other advanced digital technologies (automation, cyber surveillance, use of technology platforms in international business transactions) that lead to a reduction in labour demand, especially unskilled labour, such as the textile industry, and thus to a decrease in export earnings.

Other authors argue in their paper that developing ecological value chains for processed products and targeting foreign markets is a chance for Romanian small producers in this field but challenges they are facing need consistent support given in a coherent manner. By comparing good international practices in the field with the way the product lines are organized in Romania, their study identifies the main shortcomings in the organization of local processing value chains and several critical export factors such as certification, branding and how the association of producers can become a catalyst for the sector's competitiveness in the context of bio-economy.

Also, Lianu, Rădulescu and Gudei agreed that a rapid shift of paradigm from healthcare community to planetary health and more awareness of the severe public health impacts of global environmental change and bringing together clinical communities with other communities are necessary. This will help us all to understand how global environmental change impacts our health and to promote together bottom-up environmental action through patient education, awareness, new business models and responsible action.

The literature review indicates that digitalization of organic agriculture is in the central debate of IFOAM, FIBL etc. Food and Agriculture Organization (FAO) and the International Telecommunication Union (ITU) have developed the e-Agriculture Strategy Guide to assist countries in designing and implementing digital agriculture



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strategies. The guide aims to: ensuring an enabling environment for e-agriculture to flourish; addressing the required national digital environment overall; and leveraging on the potential of digital technology adoption by other sectors. FAO has developed applications, databases and platforms to support the work being carried out in countries around the world. These digital services increase access to useful data, information, maps and statistics. This FAO Digital Services Portfolio includes four apps that bring agricultural services closer to farmers, providing real-time information on weather and crop calendars, livestock care, markets, and nutrition-related aspects of food production.

The legislative framework of organic agriculture clearly indicates adapting of the sectors to the requirements regulated by the Regulation of the European Council. There are already rules at the national level for the conversion from conventional to organic farming. In Romania, organic agriculture was officially recognized by the Emergency Ordinance on organic agri-food products no. 34/17 April 2000, followed by other specific normative acts such as: H.G. no. 913 of September 13, 2001 on “*Methodological norms for applying the provisions of O.U.G. no. 34/2000*”; the M.A.P.D.R. no. 417 of September 13, 2002 on “*Specific rules on the labelling of organic agri-food products*”; the M.A.P.D.R. no. 527 of August 13, 2003 for the approval of the *Rules regarding the Inspection and Certification system and the accreditation conditions of the inspection and certification bodies in ecological agriculture*; the M.A.P.D.R. no. 721 of September 26, 2003 for the approval of the *Rules on Import and Export of organic agri-food products*; Order no. 190 of June 28, 2006 on amending and supplementing the annex to the Order of the Minister of Agriculture, Food and Forests and of the President of the National Authority for Consumer Protection no. 417/110/2002 for the approval of the specific Rules on the labelling of organic agri-food products.

Methodology

In this article we analysed statistical data related to production and trade of organic product from reliable sources such as IFOAM and FiBL. In parallel, we analysed and described business models of organic farmers, producers and traders. Finally, we investigated best practices and made study cases.



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New Digital Technologies in the Organic Farming and Their Impact on Trade. Implementation of the New Organic Trade System

There will be many ways through which new digital technologies will impact the international trade. We may see at least two developments:

- New patterns of trade with organic products;
- New flows of trade in technology related services for sustainable agriculture such as Solutions in IoT, GIS, blockchain and precision agriculture.

The trade system for organic farming and for agricultural products is under international scrutiny. Changes in the organic trade system proposed in the new organic Regulation of EU will be applicable to the international trade of organic products and to organic farmers from third world countries. In the same time, other countries and group of countries such as USA, China and others will come with their own proposals. The result will be a new system for imports of organic products and the implementing proposal establishing two import regimes based on equivalence or compliance, depending on the third world country where the organic good has been produced. This will bring more need for digitalization since a big amount of date will have to be managed. For example, the equivalence system will maintain current equivalence agreements (currently with 13 non-EU countries) that will have to be renegotiated in the frameworks of EU bilateral trade agreements. For the countries without this equivalence recognition, only control bodies recognized by the EU can certify organic products for export to the EU. In these countries, after a 5-year transition period when the new regulation enters into force, farmers will have to fully comply with the EU regulation. This change affects organic farmers in third countries without a trade agreement with the EU.

The digital agenda of these new trade regulations will have to focus on assessing the impact of the compliance system on existing organic trade flows, especially on the behaviour of non-EU-equivalent third world countries farmers and on the behaviour of other actors of the organic supply chain (including control bodies, importers and retailers).

Another scope for digitalization will be examining the impact on certification costs for farmers in countries as well as the dynamics of the organic certification market, including competition with other relevant global organic standards and on domestic organic production.

In EU, digitalization may look into regions where agri-environmental conditions might create new opportunities for EU farmers; analysing existing statistical data on



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trade flows and the connection with domestic organic sector dynamics; providing recommendations for policy-makers to develop a power-balanced structure in the design of organic trade policies, regulations and agreements which support the democratization of access to markets.

By emphasizing the importance of natural resources and limiting the use of invasive techniques and substances, organic farming will move the agenda of the international trade towards conservation biodiversity and natural landscapes, restore and conserve traditional material and spiritual values. Trade will be, in this way, focused towards higher standards of living in rural areas, by creating jobs and contributing to human health by obtaining products that are superior in quality to those resulting from conventional agriculture. Here, we see also the growing role of digitalization, since higher standards and quality control at world level cannot be manage without technologies such as IoT, GIS or blockchain.

The consumer's behaviour will be more focused on new approach for human health as a holistic science related to animal health, health of the earth and environment protection. A new concept of "*One Health*" has emerged. From the angle of organic farming, new correlations between the health of humans and the health of soils, air and water will be identified and put at the disposal of the consumers all over the world through IT&C applications and services. The crisis of confidence in conventional agriculture, fuelled by new serious cases of poisoning, mad cow disease, foot-and-mouth disease, swine fever, bird flu, genetically modified organisms (GMOs), e-coli will trigger new innovative solutions which will be trade worldwide. A recent initiative of the European Commission to organize between 24 and 26 of April the most impressive Hackaton dedicated to applied research and boost to the international market of new solutions to combat COVID 19 epidemics is a clear indication of the new tradable services and products related to health care.

Strict cultivation rules should be laid down, including details of plant, animal and aquaculture production specific to certain areas, including rules for wild and crop harvesting. Moreover, these rules are also urgently needed with regard to the production of processed food, feed, wine production and yeast which are used as food or feed, all in order to ensure harmonization and compliance objectives and principles of organic production and once the certification is received, to provide more confidence to citizens. When new rules are applied, they both restrict trade with older non complied products and boost trade with new products and services. Digitalization again will make the difference in application of these new rules.



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Organic plant production focuses on feeding plants mainly through the soil ecosystem may impact international trade. The principle of cultivating soil-related crops and feeding plants mainly through the soil ecosystem was established by Regulation (EC) no. 834/2007. However, certain operators have developed an economic activity by cultivating plants in “raised layers” and have been certified as environmentally friendly under Regulation (EC) No. 1234/2007, 834/2007 by their national authorities. On June 28, 2017, an ordinary legislative procedure reached an agreement that organic production should be based on plant nutrition mainly through the soil ecosystem and be soil-related, and the cultivation of plants in “high layers” should no longer be allowed from that date. In order to enable operators who have developed such an economic activity to date to adapt, they should be allowed to maintain their production areas if they have been certified as environmentally friendly by that date by their national authorities, pursuant to Regulation (EC) No. 834/2007, for an additional period of 10 years starting with the date of application of this regulation. Based on the information provided to the Commission by the Member States, this activity was authorized in the Union, before June 28, 2017 only in Finland, Sweden and Denmark. The use of uplifts in organic farming should be the subject of a report from the Commission to be published five years after the date of application of this Regulation.

According to our assessments, these new standards requirements regarding the observance of pedoclimatic conditions will impact the international trade. New ways to manage international business in organic agriculture will be needed and new challenges are ahead.

Management of International Businesses in Organic Agriculture. Ways to Respond to Challenges. Challenges for Managers Related to International Business in Organic Sector

Since digitalization will impact international trade, as we have demonstrated before, the management skills must be adapted. According to our assessment based IFOAM and FiBL evaluations, management of sustainable precision agri-food industry will be the key challenge for managers.

According to FAO guidelines, the managers in organic farming will have to take into consideration the indicators below regarding their international business (see fig. 1). Looking into the complex dimension of the international standards, one may notice as major challenges the following ones:

- Identification of non-compliance areas;
- Supply chain and traceability;
- Risk management and quality control;
- Trust, reputation and branding management;
- Identification of still internationally under negotiations areas which are under dispute.

GOOD GOVERNANCE				
CORPORATE ETHICS	Mission Statement		Due Diligence	
ACCOUNTABILITY	Holistic Audits		Responsibility	Transparency
PARTICIPATION	Stakeholder Dialogue		Grievance Procedures	
RULE OF LAW	Legitimacy	Remedy, Restoration & Prevention	Civic Responsibility	Resource Appropriation
HOLISTIC MANAGEMENT	Sustainability Management Plan			Full-Cost Accounting

ENVIRONMENTAL INTEGRITY				
ATMOSPHERE	Greenhouse Gases		Air Quality	
WATER	Water Withdrawal		Water Quality	
LAND	Soil Quality		Land Degradation	
BIODIVERSITY	Ecosystem Diversity	Species Diversity		Genetic Diversity
MATERIALS & ENERGY	Material Use	Energy Use	Waste Reduction & Disposal	
ANIMAL WELFARE	Animal Health		Freedom from Stress	

ECONOMIC RESILIENCE				
INVESTMENT	Internal Investment	Community Investment	Long-Ranging Investment	Profitability
VULNERABILITY	Stability of Production	Stability of Supply	Stability of Market	Liquidity
PRODUCT QUALITY & INFORMATION	Food Safety		Food Quality	Product Information
LOCAL ECONOMY	Value Creation		Local Procurement	

SOCIAL WELL-BEING				
DECENT LIVELIHOOD	Quality of Life		Capacity Development	Fair Access to Means of Production
FAIR TRADING PRACTICES	Responsible Buyers		Rights of Suppliers	
LABOUR RIGHTS	Employment Relations	Forced Labour	Child Labour	Freedom of Association & Right to Bargaining
EQUITY	Non-Discrimination		Gender Equality	Support to Vulnerable People
HUMAN SAFETY & HEALTH	Workplace Safety and Health Provisions			Public Health
CULTURAL DIVERSITY	Indigenous Knowledge		Food Sovereignty	

Fig. 1. FAO Indicators Applied in International Business

Source: FAO/SAFA guidelines, FIBL interpretation

Regarding this last aspect, some of the challenges are also focused on horizontal regulation on labelling of origin and the organic labelling of origin applicable which



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is still matter of international dispute. The labelling of flavourings for example, on the label of an organic product will create international disputes. Any modifications will trigger international negotiations about how they should mention the flavours. If a producer uses five different flavours in a product, they should all be mentioned separately.

When a supermarket sells organic next to conventional products it packs the organic products to prevent the mixing of the organic and the conventional products. In order to prevent unnecessary packaging, the exporters will want to use as little as possible packaging. What would be accepted as packaging? A sticker, a banderol, the crate in which the apples are stored? There does not seem to be a general interpretation yet.

An importer of products from third world countries is confronted with the demand from a client to place the production date of the products on the 25 kg packages. Is this a legal obligation? The participants of the workshop agree that it is not an obligation that comes from the organic regulation and questioning whether it is a legal obligation at all. But it may be part of the quality control system of the supplier.

New technologies should be used by managers such as GIS, big data, satellite images, blockchain technologies or others to have a good traceability of goods and mass-balance checks. But the use of these new technologies in the organic environment must be properly assessed. Regarding the integrity of international supply chains, the importance of a fast, harmonized and efficient exchange of information between all the actors, control bodies, competent authorities and operators will be a major challenge. From a managerial perspective, using online systems to facilitate the exchange of information will be fundamental. Data management will be of a growing importance since there is a lot of data that can be used to improve the integrity of the supply chain. It is crucial to share data, but attention should be given to rights to access and ownership.

Regarding certification and control, this will be not the only issues for control bodies. Operators and importers in particular need to take their part of responsibility in guaranteeing the integrity of the supply chain. Since 2012, the EU Competent Authorities are less involved in the import and more responsibility is given to control bodies and operators. In many cases, the importer is the one that can carry out the best risk analysis. Also, in the new organic regulation, the responsibility clearly shifts to the operator, for example in the management of detected and confirmed non-conformities. This applies also within the EU.



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The new regulation (EC/848/2018) introduces many specific rules that the organic sector will have to comply with. This includes, among others, the possibility of trade with heterogeneous plant material for organic farmers, a non-equivalence organic trade regime and the possibility of group certification for European operators.

These changes will have implications for organic farmers, processors, retailers, traders, and certification bodies. There are still many open questions about how the new regulation will be implemented. During this period of change, it is important to maintain trust of European consumers, as their behaviour will remain an important driver for the future growth of the organic market.

Organic Inputs and Circular Economy: Increasing the Circularity of Agricultural Production

Specific challenge – The Circular Economy Action Plan adopted in 2015 sets ambitious targets to make the EU's economy more resource efficient and to develop appropriate incentives for “closing the loop”. Organic agriculture adopts a “circular” approach applying ecological and recycling/reusing principles to production. The practices of crop rotation, nutrient recycling and biological fixation of nitrogen through legumes, composting integrating animal and crop production, concern for the health of the soil have been the circular solutions for closing the loop in agriculture.

This less input-intensive strategy of the organic sector, combining new technologies and methods with scientifically sound, positive environmental outputs, has great potential for increasing the resource efficiency of European agriculture as a whole. This potential becomes apparent when addressing nutrient availability, with increasing prices on synthetic fertilizers, and reduced availability of non-renewable resources (e.g. phosphates).

Scope-research should focus on: scaling up different inputs available for organic agriculture; more effective natural plant protection products and the development of new fertilizers, their production and use in the light of both the EU organic regulation and organic principles; assessing the use of contentious waste products for critical and scarce resources in agriculture; investigating other feed inputs (e.g. concentrates, protein feed) and feed additives; better use of available by-products and alternative inputs (e.g. feather meal, oil cakes, okra as protein feed for fish and pigs) that could reduce the dependency on imported protein feed and increase the local feed sufficiency; further development of integrated animal-plant production systems to



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increase their adoption among EU farmers; socio-economic factors that impact on the adoption of these circular methods by farmers and consumers' attitude to these new production methods.

European Market Observatory for Organic Food & Farming

Specific challenge – Market transparency in the organic food market remains a challenge, especially the collection, analysis and pooling of data at the European level. This includes electronic data on product volumes and values, product flows in the internal market, estimates of the retail sales markets, import/export data, price data, data on certificates, practices for fraud prevention, and data on contamination in organic farming. There is also very limited information on farm-gate and retail prices, the differences in structure of the supply chains and on added value and the farmer share in value chains.

Research also needs to address the integrity and reliability of the organic certification and control systems including organic imports, in view of rapidly increasing number of operators and how they adapt to the new rules. Further, there is a specific need for pooling consumer survey data related to organic markets to overcome the current lack of harmonization of procedures and indicators.

Data need to be pooled, exchanged and analysed for an EU-wide market perspective which also identifies changes in trends over time. There is also a need to gather statistical information about agro-ecological initiatives in order to understand the scale of agro-ecology and to overcome the lack of any statistical data on it.

Scope-research should: build on the outcomes of the Organic Data Network (ODN) and other projects (e.g., LIVESEED) to ensure design and use of national databases for the availability of organic seeds and transplants; include all data categories identified by the ODN, such as primary production (area and livestock, production volume and value), prices (farm level, retail), national retail sales volume and value (including the importance of specific outlets, direct sales and procurement, product categories) and data on international and intra-European trade; develop recommendations for standardization and broadening of existing surveys on consumer attitudes, demand for organic products and cultural preferences across the EU and EFTA; collect better data about certification, control and the integrity of the organic sector for a more reliable and efficient control system and fraud prevention; gather data to understand the scale of agro-ecological initiatives at European level.



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Boosting Organic Breeding and the Production of Organic Cultivars

Specific challenge – To preserve agrobiodiversity, the organic regulation provides new tools, such as the definition of organic heterogeneous material (OHM), and permission to market such materials. A temporary experiment for improving the release of organic varieties suited for organic production is foreseen in the regulation. To reach 100% organic seed of adapted cultivars by 2036 for all crops and in all Member States is an important political goal.

The new regulation will also open the door for the revival of different traditional and local crops and breeds. It will pose new problems for adequate and timely up scaling of organic breeding and seed production meeting the demand of fast-growing markets and climate change challenges. To capitalize on the new organic regulation and the temporary experiment on organic varieties to start in 2021, implementation should be accompanied by coordinated European research which includes a broad range of crops taking into account the diversity of the European seed systems.

Scope-research should: identify and develop additional governance and financial models to support organic plant breeding; include the whole value chain and strengthen capacity building and collaboration with existing actors of the breeding and seed business to achieve the required breeding gains; implement the cultivar testing under organic conditions in collaboration with examination committees, consisting of public and private actors from on-farm and on-station networks for pedo-climatic regions; develop governance models and common marketing strategies for introducing improved cultivars and breeds as well as seed multiplication and treatment; investigate seed, root and gut micro biome to improve resilience of cultivars and breeds; focus on several crop categories including fodder and horticultural crops and/or animal species including aquaculture.

New Genetic Engineering Technologies and Their Implications for Organic Farming

Specific challenge – The development of new genetic engineering techniques in plant breeding represents a challenge to the organic sector. In the EU, these methods are currently not permitted in organic farming. However, a possible future exemption or change in the regulatory framework poses an existential threat to the organic sector regarding transparency and traceability. The new gene technologies are controversial within the European public, intensively promoted by some scientists and actors of the agricultural industry and currently rejected by the sector. At the



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same time, new gene technologies in plant breeding could potentially contribute to agricultural sustainability, when embedded in a comprehensive approach to farming and food production, where plant protection relies on a variety of measures from crop genetic diversity to measures to increase local biodiversity.

However, ethical values such as freedom of choice and the precautionary principle have a relevant role on the acceptance of new technologies in general and, more specifically, in genetics, biology, and agriculture and food production. Limited scientific knowledge is available about values and beliefs that are relevant in the organic sector. Therefore, it is necessary to better understand the values, boundaries and principles that shape both plant breeding based on genetic engineering and organic plant breeding. It is also necessary to ensure that detection methods and strategies are developed to identify products obtained by new genetic engineering techniques and that both the organic sector and the conventional GMO-free sector have the technical means to identify and avoid the unintended presence of GMOs in their products.

Scope – In order to i) safeguard the integrity of organic food, ii) ensure access to crop genetic resources for organic breeders, iii) allow farmers autonomy with regard to seeds, iv) produce organically and meet the highest consumer expectations, and v) ascertain that value based approaches to plant breeding are in line with agricultural sustainability, research needs to focus on the following: gaining a better understanding of the role of values, principles and aims of organic farmers and breeders on the compatibility of technologies for organic production and breeding; assessing and quantifying the contribution of seeds of different provenance to the sustainability and resilience of organic farms; comparing the efficiency of different breeding approaches for organic farming; developing detection methods and strategies to identify products obtained by new genetic engineering techniques; identifying the current market authorization of plants and animals associated with new genetic engineering methods.

Dealing with Contamination in Organic Products

Specific challenge – A great variety of synthetic substances of agricultural and other origin are present in the environment polluting natural resources as well as agricultural crops. This is particularly evident in organic farming, where synthetic pesticides may not be used, but traces can be found due to contamination. This poses multiple challenges for the organic sector: (1) minimizing the levels of contamination



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in organic products is essential to maintain consumer trust in organic food; (2) the presence of unauthorized substances in organic production requires investigating by control bodies and operators. Not only does this incur labour and analytical costs to the individual operator, it can also delay delivery of the commodity, which may affect the entire downstream supply chain. The non-harmonized approach of different EU Member States poses additional difficulties when organic food is traded internationally.

Scope-research should focus on the following: identifying critical contamination points of organic agricultural products in the organic value chain to increase the understanding of the main sources and extent of contamination by non-authorized substances; identifying and developing effective and efficient methods and practices for the reduction of the contamination of products; increasing the detection of fraud in cases of intentional use of synthetic substances; developing better guidance for the organic sector on dealing with contamination, leading to better international harmonization in the field; data sharing among relevant stakeholders to allow a more coordinated approach to contamination sources.

USH Pro Business, Inter-Bio, and Wallachia Hub Study Case

USH Pro Business is specialized in activities dedicated to the entrepreneurial environment such as: research, development, innovation and technology transfer; entrepreneurial development; business education; establishment and development of innovative clusters; internationalization; establishment and development of start-ups. It is a dedicated centre for entrepreneurial activities, designed to support companies and provide solutions to sustain competitiveness throughout the business life cycle.

The centre offers support and consultancy services in the formation, development and collaboration of intra and inter-clusters at regional, national and international level in order to promote, revive and develop the cluster members and for interprofessional organizations.

USH Pro Business is a member in several bioeconomy clusters (Bio Danubius, Prahova Valley Bio Concept), Green Energy (Cerman), IT&C and Engineering (Danube Engineering Hub and Smart Alliance), the Romanian Textile Concept and Construction Industry (CCIO). Due to its activity, USH Pro Business became the specialized part of the managerial unit of the clusters in issues such as internationalization and R&D. The centre takes an active role in promoting the clusters in EUSDR and is leading the team related to project collaboration in the EUSDR.



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USH Pro Business actively contributed to the creation of Inter-Bio inter-professional association for organic farming producers. Inter-Bio is an inter-professional organization for organic agro-food products which aims at promoting, representing, protecting and facilitating the common interests of founding members and of all the other members of the organization in their relations with the central administration bodies, other domestic or international associations or federations.

The organization aims to develop concrete plans to adapt agri-food products to the European legislation and standards for the development of economic agents, involved in the Community's competitive environment. The members decided to associate in order to contribute to the sustainable development of the agri-food sector in Romania, by providing specialized consultancy. The interprofessional organization has three founding members, as follows. The BIOTERRA Association has over 3,000 members, with a considerable experience and a solid network of collaborators. The Association is an important voice of the Romanian farmers and supports members, collaborators and actors that are eager to embrace organic farming. Bio Romania Association Tulcea Branch is involved in educating and informing the population on the benefits of organic farming products for human health and on the importance of nature protection. Members of this branch participate in the promotion of Romanian organic certified food, on domestic and international markets. Spiru Haret University is a private educational institution in Romania, with a tradition of 28 years, which provides students with a variety of educational programs and opportunities for personal and professional development. USH Pro Business is an entrepreneurial centre, a structure linked to Spiru Haret University and three adherent members. BIO DANUBIUS is a cluster from the South East Region concerned with increasing the potential of innovation in the organic farming sector through research and increasing the competitiveness of the member companies. Bio Catina Cooperative has 11 members and many partnerships. The core business of the cooperative members is focused on ecological sea buckthorn plantations. At present, the cultivated area is 155 ha and all plantations are organic certified or in ecological conversion, treated with certified and high-tech materials. Bio Carpathia Cooperative is made up of 52 members active in the production of organic milk. This cooperative has made significant progress, and in 2018, farmers have stepped from milk production to milk processing and have created their own Bio Carpathia brand. The quantities of milk collected are enough to provide the required amounts for Covalact, half of the raw material used by Napolact and for selling under its own brand in the Carrefour stores.



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Inter-Bio interprofessional association, together with the USH Pro Business Center, is involved in organizing informational events in the agro-food sector, economic missions to promote and support its members in order to access to domestic and foreign markets.

Inter-Bio and USH Pro Business Association together with Bio Danubius Clusters, Bio Concept Valea Prahovei, BioNEst and ACEX analysed the results of the participation of the Romanian companies from the bio sector at the BIOFACH Nuremberg fair 2019 and prospects for the participation of the ecological clusters in Romania at BIOFACH 2020.

During the international conference “*The business environment and One Health. Food security and food certification. Organic and ecological products, disruptive technologies*”, the debate focused on the way the business community, producers, traders, suppliers, processors and certification bodies are forging branch cooperation in order to develop new markets and new value chains closer to the holistic approach of human health. Practitioners, companies, clusters, standardization and certification bodies as well as authorities, branch associations, were invited, from a wide range of activities: organic farming and processing units, ecological products – food and non-food –, engineering and equipment producers, environment protection, e-health, R&D institutes, manufacturing industries, certification and standards bodies.

Walachia Hub is an ecosystem of innovative clusters comprising different industries such as engineering, GIS and sensors technologies, energy, smart localities, organic and bio technologies. Bringing together managers from organic agriculture with other sectors is one important objective the consortium is targeting. During several meetings, the managers are learning the way to cooperate through communities of practice. One important area of cooperation is considered to be precision and sustainable agriculture. Another topic is related to standards and the use of digital technologies to improve traceability of the products. Walachia Hub consortium intends also to launch an ecological brand of the region.

Conclusion

Digitally Conducted Organic Agri-food (DCOA) solutions are a reality for the managers in organic farming. They will have to obey stricter rules and guidelines to conduct business nationally and internationally and, as the analyses shows, these rules will converge towards enhanced sustainability. Digital transformation in organic agri-food industry is already a robust process with high impact on trade



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flows with food products but also with IT&C services related to this sector. The new emerging business models triggered by the DCOA solutions should be assessed and managers trained or put to exchange knowledge. Also, they must learn to cooperate. USH Pro Business may offer knowledge to hubs for farmers, processors and sector branch organizations in the organic sector if the universities learn also to adapt and to cooperate, not only with farmers and clusters, or business associations such as Inter Bio, but also among themselves at regional level like in the case of Wallachia Hub, a consortium of clusters and universities where both organic clusters and IT&C clusters are joining forces for smart specialization.

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COVID-19 – THE MOST FATAL PANDEMIC OUTBREAK: AN ANALYSIS OF ECONOMIC CONSEQUENCES

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Abstract

The novel (new) coronavirus (CoV) fatal disease (COVID-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-COV-2 or 2019-nCoV). It has been identified as the causative agent of the viral pneumonia outbreak in Wuhan, China, at the end of 2019. It is now becoming a major concern for global public health, as well as the cause of a possible global economic crisis. The International Monetary Fund (IMF) estimates that the outbreak of COVID-19 has cost the world economy up to \$ 9 trillion. After COVID-19 outbreak, home quarantines, lockdown, widespread restrictions on labour mobility and travel, border closings and closing of economic activities has affected the global supply chains, oil prices, travel and tourism, restaurants, conferences, sporting events, government budget, etc. The amount of the global economic damage is very uncertain at present, but it is estimated that it will be larger depending on the length of COVID-19. The paper discusses the social, economic, and health impacts on the world's poorest countries. The purpose of this study is to examine the economic impacts due to COVID-19 pandemic outbreak. An attempt has been made here to discuss the current economic situation of the world and analyses the potential consequences on global economy in future.



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Keywords: SARS-CoV-2; COVID-19 outbreak; pandemic; lockdown; economic consequences.

JEL Classification: I100, I120, I150, I180

1. Introduction

The 2019 novel coronavirus (SARS-CoV-2) is a new human coronavirus which emerged at the end of December 2019 in Wuhan, Hubei Province, China. The disease spread outward from Hubei Province at the late December 2019 [Li *et al.*, 2020]. The outbreak of COVID-19 has spread quickly all over the world [Zhu *et al.*, 2020]. It affects lungs, with severe acute respiratory illness that develops fever, dry cough, fatigue, and shortness of breath. The epidemic has spread very quickly taking only 30 days to expand from Hubei to the rest of Mainland China [WHO, 2020a]. On 30th of January, WHO declared the outbreak a “*Public-Health Emergency of International Concern (PHEIC)*” as the outbreak could spread to countries with fragile health systems. [Callaway, 2020] On 11th of March 2020, WHO declared the global outbreak as a pandemic to minimize the infection and mortality rate. The COVID-19 has become a significant global public health threat. [WHO, 2020b] On 8th of April 2020, a total of 209 countries and territories around the world were affected; globally, the total number of infections reached 1,455,987; a total of 310,108 have recovered, and 83,687 have died. The infections are moving to new locations and new countries of the world. As of June 2, 2020, the total death toll in the world reached 377,000 and the total number of infected people exceeded 6.2 million, of which 2.6 million have recovered [Worldometer, 2020]. The public health responses to SARS-CoV-2 are isolation, quarantine, travel restriction, cessation of work at the workplace and the closure of educational institutions and ultimately lockdown [Rothan & Byrareddy, 2020].

The outbreak of COVID-19 has significant short- and long-term economic consequences. But there is a great uncertainty about what economic effects it will have due to many unknown factors, such as the severity of the virus, lockdown, closing of education institutions, length of the pandemic and economic disruption, government monetary and fiscal policies to combat the economic consequences of the health crisis, etc. [McKibbin & Fernando, 2020].

From February 2020, manufacturing and service sector activities declined dramatically in China, which is the start of the global financial crisis [Gopinath,



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2020]. The COVID-19 outbreak creates macroeconomic impacts on investments, growth, production, prices, supply chain, travel, trade, finances, banking, exchange rates, and cross-border cooperation. It also creates a shortage of medicines and healthcare equipments [Baldwin & di Mauro, 2020].

The COVID-19 has attacked the industrial giants or economically developed countries, such as the USA, the UK, Brazil, Spain, Italy, France, Japan, Germany, China, Russia, India, etc. These countries supply raw materials and as well as final products globally. China exports an enormous amount of industrial goods worldwide. Global supply has reduced due to closing borders, but demand has remained unchanged. Demand of some newly essential items, such as hand sanitizers, soap, bleaching powder, mask, gloves, personal protection equipments (PPEs) have increased; consequently, the prices of various commodities have increased. As a result, the global economy becomes sloth. Economies are connected globally by cross-border flows of goods, services, financial capital, foreign direct investment, international banking, and exchange rates. Some of these face severe economic shocks [Baldwin & di Mauro, 2020]. African countries will need additional \$10.6 billion health spending on the pandemic [African Economy, 2020].

As the epidemic situation is evolving by the day, it is more difficult to project the economic outlook. China is a major source of demand in the world economy and many core European industries are highly dependent on the Chinese market. China accounts for 17% of the global GDP, 11% of the world trade, 9% of the global tourism, and more than 40% of the global demand for some commodities. The International Air Transport Association (IATA) estimates that the aviation industry could face a loss of 29 billion of passenger revenues and cause a loss of about \$113 billion. The average global GDP decline is expected to be somewhere around 1.5 % [Boone *et al.*, 2020; di Mauro, 2020].

After the COVID-19 outbreak, significant disruptions in the global supply chain, factory closures, cutbacks in many service sector activities, a decline in business travel and tourism, declines in education services, a decline in entertainment and leisure services occurred. Global trade has declined by 1.4% in the first half of 2020 and by 0.9% in the whole year [Boone *et al.*, 2020].

The International Energy Agency (IEA) expects the global demand for oil to fall by 435,000 barrels per day in the first quarter of 2020 and by 365,000 barrels per day in the whole year. OPEC countries decided to reduce the production of 600,000 barrels a day as an emergency measure on top of the 1.7 million barrels a day



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already pledged [IEA, 2020]. The price of Brent oil dropped from \$68.90 a barrel on 1st of January to \$50.5 a barrel as of 28th of February 2020 for the negative impact on oil demand from COVID-19 [Arezki & Nguyen, 2020]. Most severely COVID-19 hit countries' exports will fall if supply shock extends, and imports will fall if demand shock extends [Baldwin & Tomiura, 2020].

During the FY 2019, in Illinois, Medicaid expenditures of the USA crested to \$19 billion. The COVID-19 emergency annual Medicaid expenditures could easily increase by \$4 to \$5 billion (21% to 26%); state public health expenditures jump to \$450 million in FY 2020-21; human services for needy, disabled, and vulnerable populations, such as assistance with child care, employment, daily life, housing, and food expect to reach \$5.5 billion in FY 2020-21 [Kass *et al.*, 2020].

2. Literature Review

Muhammad Adnan Shereen, Suliman Khan, Abeer Kazmi, Nadia Bashir, and Rabeea Siddique have discussed origin, transmission, and characteristics of the COVID-19 disease. They state that SARS-CoV-2 is phylogenetically related to SARS-like bat viruses; therefore bats could be the possible primary reservoir. There is no clinically approved antiviral drug or vaccine to cure COVID-19 [Shereen *et al.*, 2020]. Stefan E. Pambuccian provides an assessment of the current state of knowledge about the COVID-19 disease and its pathology, and the potential presence of the virus in cytology specimens. He also discusses the measures that cytology laboratories can take to function during the pandemic, and minimize the risk to their personnel, trainees, and pathologists [Pambuccian, 2020]. Hussin A. Rothan and Siddappa N. Byrareddy highlight the symptoms, epidemiology, transmission, pathogenesis, phylogenetic analysis and future directions to control the spread of COVID-19 [Rothan & Byrareddy, 2020].

Richard Baldwin and Beatrice Weder di Mauro, in their editorial report, indicate that global supply chains have been disrupted when the COVID-19 outbreak was triggered in December 2019 in the city of Wuhan, Hubei province of China. The COVID-19 is most definitely spreading economic suffering worldwide and global economic activities have slowed down. Every country of the world will face both short-term and long-term economic impacts; global GDP will decrease remarkably. They estimate that the USA, China, Japan, Germany, Britain, France and Italy together account for 60% of world GDP, 65% of world manufacturing, and 41% of world manufacturing exports will be affected by the COVID-19 outbreak [Baldwin



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& di Mauro, 2020]. International Labour Organization (ILO) shows the COVID-19 will affect the global labour markets. It indicates the vulnerabilities and key policies to mitigate the impacts [ILO, 2020].

Joseph B. Sobieralski analyzes the effects of uncertainty shocks on airline employees caused by travel restrictions during the global COVID-19 pandemic. The estimated job loss is about 7% of the airline workforce with an upper bound of over 13%. The recovery from the uncertainty shocks is estimated to take 4 to 6 years [Sobieralski, 2020]. The African Economy indicates that COVID-19 is disrupting an interconnected world economy through the global value chains. After the COVID-19 attack, abrupt falls in global commodity prices, fiscal revenues, foreign exchange receipts, foreign financial flows, travel restrictions, declines of tourism and hotels, frozen labour market, etc. have occurred [African Economy, 2020]. Oxfam estimates that more than half a billion people worldwide (most of them living in Africa and Asia) who were above the poverty line before COVID-19 pandemic outbreak will be poor. Oxfam hopes Governments and international organizations would take four actions to form powerful economies, a safe society and reduce the global poverty due to COVID-19: 1) immediate debt cancellation, 2) the creation of new international reserves by the IMF, 3) the adoption of emergency progressive taxes, and 4) a massive injection of aid funds [Oxfam, 2020b].

Stephen G. Cecchetti and Kermit L. Schoenholtz argue that banks are highly vulnerable to the economic shocks and they compare the challenge with that of stemming a bank run [Cecchetti & Schoenholtz, 2020]. Stefano Ramelli and Alexander Wagner show the stock returns, by industry, in China and the USA from January to February 2020 after the COVID-19 outbreak. They have observed that the semiconductor sector gained sharply in China, but lost in the USA; utilities lost in China, but gained strongly in the USA [Ramelli & Wagner, 2020b]. Joseph B. Sobieralski analyzes the effects of uncertainty shocks on airline employment in the light of the current global COVID-19 pandemic outbreak. He shows that the airline industry has faced many threats throughout history, but none quite as rapid and severe as the spread of COVID-19 [Sobieralski, 2020].

Inoue Hiroyasu and Todo Yasuyuki try to quantify the economic effect of a possible lockdown of Tokyo to prevent the spread of COVID-19. The negative effect of such a lockdown leads to supply and demand shortages. They discovered that Tokyo's locked down for a month lead to a total production loss of 27 trillion yen in Japan, which is 5.3% of its annual GDP (after the earthquake or tsunamis from 2011,



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the production loss was 11 trillion yen, or 2.3% of GDP of Japan) [Hiroyasu & Yasuyuki, 2020]. Warwick J. McKibbin and Roshen Fernando estimate that the spread of COVID-19 would reduce GDP of China, Japan, UK, and USA by 6.2%, 9.9%, 6.0%, and 8.4%, respectively [McKibbin & Fernando, 2020]. Amanda Kass, Kenneth Kriz, and David Merriman stated that the COVID-19 pandemic has caused disorder in the US economy but there is great uncertainty about the depth and duration of the disruption. The COVID-19 pandemic will increase the need for state expenditures to protect vulnerable populations from the health and economic consequences. They estimate that tax revenue will drop, local tax collections will shortfalls, Medicaid expenditures will increase, etc. [Kass *et al.*, 2020].

3. *Methodology of the Study*

Research indicates a careful, systematic, patient study and investigation in some fields of knowledge, undertaken to establish facts or principles [Grinnell, 1993]. So ‘research’ means a systematic investigation or activity to gain new knowledge of the already existing facts. Research is also considered as the application of scientific method in solving the problems efficiently. Therefore, research is an essential and powerful tool in leading a researcher towards progress [Pandey & Pandey, 2015]. In research, ‘method’ is a strategy and technique employed to acquire knowledge and categorizes to study, and manipulates data. Therefore, a research method is a way of conducting and implementing research efficiently [Punch, 2013].

Methodology is the guidelines to approach and perform activities. Research methodology provides us the principles for organizing, planning, designing and conducting a good research. Therefore, we consider that it is the science and philosophy behind all researches [Legesse, 2014]. The methodology of this article is to discuss the global economic consequences due to pandemic outbreak of COVID-19. In the study, we have observed that the disease is spreading in every country, and both infection and deaths are increasing in a geometrical rate. This study is of descriptive nature having quantitative as well as qualitative merits. We tried to discuss the global pandemic COVID-19, along with the impact on global economy. Reliability and validity are essential parts for a good research. In this study, reliability and validity are maintained in a concise, but precise manner [Mohajan, 2017; 2018]. This study is a review work. In this study we have used the secondary data. The data are collected from books of famous authors, published, submitted and preprint articles, websites, theses, conference papers, case studies, and various research reports.



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Since December 2019 to 8th of May 2020, more than 3.85 million people worldwide are infected from this disease, more than 1.28 million have recovered, and more than 270,000 have died. On 2th of June 2020, the total death toll in the world reached 377,000 and the total number of infected people reached over 6.2 million, 2.6 million of them recovering. Both the infection and deaths are fluctuating every day and there is no sign of control of the disease [Worldometer, 2020]. In this study we have tried to enrich the research of global pandemic of disease COVID-19.

4. *Objective of the Study*

The main objective of this study is to discuss the global economic consequences of ongoing pandemic outbreak of the COVID-19 virus. The other specific objectives due to the effects of COVID-19 are as follows:

- to highlight the fatality of this disease;
- to show the global economic losses; and
- to analyze the economic recovery.

5. *Economic Consequences*

The COVID-19 has already brought considerable human suffering and jeopardized global economies. According to the International Monetary Fund (IMF), the COVID-19 pandemic will cost the world economy up to \$9 trillion, which is the combined GDP of Japan and Germany, or roughly half that of the USA. It is estimated that global lose could be up to 18% of the usual output. Small and medium sized enterprises (SMEs) are completely closed during COVID-19 infections. China deals more than 18 million SMEs. About 80% of enterprise jobs and 50% of private companies' exports are partially or completely closed. It has affected workplaces throughout the world. It affects both the supply and demand for goods and services that have an effect on the economy [Yang *et al.*, 2020]. The EU, the USA and Japan account for half of the world's GDP, the Chinese economy accounts for about 16% of global GDP, and these economies are based on trade, services and industries. Closing borders, lockdown, and home quarantine drastically reduce global economic activities [African Economy, 2020].

The COVID-19 will create both short-term and long-term global economic losses. Home quarantine, lockdown, widespread restrictions on labour mobility and travel, border closings and closing of economic activities, such as closing of shops, business companies and industries make the global economy shamble and less healthy [Haider



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et al., 2020]. The lockdown and home quarantine have stuck production and service supply chains both nationally and internationally, which cause significant job losses [Organisation for Economic Co-operation and Development, or OECD, 2020].

5.1. Tourism and Travel Sector

The top tourism destinations in the World are France with about 89 million tourist arrivals per annum, Spain with about 83 million; the USA (80 million), China (63 million), Italy (62 million), Turkey (46 million), Mexico (41 million), Germany (39 million), Thailand (38 million), the UK (36 million), etc. Tourism together with travel supports one in 10 jobs (319 million) in the world and generates 10.4% of world GDP [African Economy, 2020].

The airline industry always faces many threats, such as oil embargo, airline deregulation, terrorist attacks, storm, and rough weather. For example, the attacks on 9/11 caused a significant reduction in air travel [Franke & John, 2011]. But none quite as rapid and severe as the one posed by the pandemic outbreak of COVID-19. Since the spread of COVID-19 to May 2020, about 7-13% workers lost their jobs in the airline workforce. Air travel restrictions have created negative impacts to numerous industries [Sobieralski, 2020]. Reduction of international tourism and travels is, of course, an economic implication of the infectious COVID-19 pandemics. About 20-80% of international flights are remaining closed due to this pandemic [Wanjala, 2020].

From the spread of COVID-19 national and international airlines remain partially or fully closed. Global tourism and travel are reduced for the COVID-19 outbreak. The airline industry has experienced a decrease in capacity of roughly 60–80% at major carriers. The International Air Transport Association (IATA) estimated \$30 billion loss of revenue for airline and tourist companies [Josephs, 2020].

According to the United Nations World Tourism Organization (UNWTO) latest estimate, there will be a decline in international tourism exports of \$300-450 billion. The international tourist arrivals will fall by 20% to 30% in 2020 when compared with 2019 figures. The Hotel and Hospitality Industry would lose 20% of its turnover and this percentage can be as high as 40% to 60% [African Economy, 2020].

The top five African economies (Nigeria, South Africa, Egypt, Algeria, and Morocco) account more than 60% of Africa's GDP. The tourism and petroleum sectors represent on average a quarter (25%) of the economy of these countries. Top tourism destinations in Africa include Morocco with around 11 million tourist



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arrivals per annum, Egypt (11.35 million), South Africa (10.47 million), Tunisia (8.3 million) and Zimbabwe (2.57 million). IATA estimates the economic contribution of the air transport industry in Africa at \$55.8 billion, supporting 6.2 million jobs and contributing 2.6% to the African GDP. African airlines have already lost \$4.4 billion in revenue by 11 March 2020 and expect more loss in rest of the year [IATA, 2020].

5.2. Business Sector

Business disruptions have lowered both production and consumption that create economic shocks in nations. Disruptions increase business costs and create a negative productivity shock that reduce economic activity. Lockdowns and quarantines drop in capacity of utilization. Domestic and international companies which rely on supply chains may be unable to get the parts they need. For example, China is an important supplier of intermediate goods, mainly electronics, automobiles, and machinery and equipment, to the rest of the world [Gopinath, 2020].

Companies are unable to pay their salaries to the jobless workers for loss of income which affects severely some sectors, such as tourism and hospitality. Commercial companies that are burdened with debt due to Covid-19 go bankrupt. These companies compel to reduce the cash flows. The bankruptcy of one company can place other companies in danger [Baldwin & di Mauro, 2020].

5.3. Stock Markets

COVID-19 creates a substantial adverse impact on financial stock markets globally. Major stock market indexes have fallen by an average of 10% in most of the countries. The IMF has announced that investors have withdrawn \$83 billion from emerging markets since the start of the crisis [African Economy, 2020].

The stock markets are tumbling, central banks are slashing interest rate, and industrial production is almost zero resulting into massive job loss and a financial crisis; a clear sign that disaster for the poor will be extreme [Haider *et al.*, 2020]. After the Black Monday episode (March 9), the main stock markets indices have just experienced one of the worst developments in their history in decades. The Dow Jones lost almost 3,000 points in one day. FTSE plunged by about 5% and losses are estimated at over \$90 billion [African Economy, 2020].

In the USA, the stock markets revolve 5 to 10% a day, sometimes up but mostly down. For example, airline stock prices have been hit disproportionately in the USA [Gopinath, 2020]. Investors in stock market have started to discount the liquidity risk



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in stock prices. Since the COVID-19 outbreak to April about \$23 trillion value has been destroyed in global stock market [Ramelli & Wagner, 2020a].

6. *Global Economic Effects*

After COVID-19 attack, economy of China shrinks to 6.8%, Eurozone economies shrink to 14.8%, and the US economy shrinks to 4.8%. As transport and production in the most countries are postponed, demand of oil decreased and global oil prices have declined sharply. The shortage of production will result into the shortage of supply and consequently will end as loss of jobs and employment for millions of people around the world. Short-term economic impacts fall on the most sensitive sectors, such as manufacturing supply chains; transportation, tourism and services relationships; retail and entertainment; and energy and commodity demand and prices [Barrero *et al.*, 2020]. Disruptions to production have now spread to supply chains across the world. Some affected economic sectors are rail system, e-commerce industry, automobile sector, restaurants industry, information technology and software services, travels and tourism industry, etc. All businesses, regardless of size, are facing serious challenges that lead to a potential global economic recession [OECD, 2020]. Any state gets most of its tax revenue from three sources: i) individual income tax, ii) corporate income tax, and iii) sales tax; account for over three-fourths of total tax revenues and almost half of all state revenues. In every nation, tax revenues will decrease dramatically. The size of the loss will depend on the severity and length of the pandemic and economic disruption [McKibbin & Fernando, 2020].

Because of COVID-19, a nation on average will experience a 6% decline in consumption and an 8% decline in GDP [Barro *et al.*, 2020]. ILO estimates that global unemployment may increase from 5.3 million (low scenario) to 24.7 million (high scenario) people; with mid scenario of 13 million. Global GDP may drop 2-8%. Overall losses in labour sector are expected around \$860-3,440 billion depending on the length of lockdown [ILO, 2020]. More than 1.2 billion people worldwide will be extremely poor, with a per capita income of \$ 1.90 a day or less. The number of people living below poverty line on \$5.50 a day or less will be 4 billion. The situation will worsen if the pandemic situation will be longer [Oxfam, 2020a].

Experts and pundits estimated that in 2020 the US GDP will decrease 3.8-6.3% (\$0.81-1.45 trillion) from 2019 depending on the length of lockdown. The US



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Senate passes \$2.2 trillion aid package to fight COVID-19 to meet the liquidity needs of the credit market and to support markets [McKibbin & Fernando, 2020]. It is expected that the USA, the EU and China would see GDP shrink by 2.6%, 3.2% and 0.9%, respectively in 2020 [Oxford Economics, 2020].

The direct economic impacts of COVID-19 can be seen as increase in the unemployment rate, decline of the future economic growth, investment fall, fall of consumption, decline foreign direct investment (DFI), and decline in the assets price. It affected supply chains, oil prices, travel and tourism, restaurants, conferences, sporting events, and government budget. About \$23 trillion in global market value has been destroyed since the outbreak [Morath, 2020]. United Nations Conference on Trade and Development (UNCTAD) suggests that DFI flows could fall 30-40% during 2020-2021 [UNCTAD, 2020]. Saudi Arabia suspended entry of pilgrims to the holy sites due to severely infection of COVID-19 in the country [Arezki & Nguyen, 2020].

In the US, the federal deficit is projected to remain at \$1 trillion in fiscal year (FY) 2021 (short-term) and steadily increase to \$1.7 trillion in FY 2030 (long-term). Within 10 years, the US debt owed to the public is projected to increase by 76% [CBO, 2020]. It is estimated that the US GDP will decline up to 6% in 2020 and quick recovery and returning to trend growth of 2% per year by 2022 [McKibbin & Fernando, 2020]. Just in three weeks of lockdown, the statistics on 4 April shows that the USA unemployment increased to 6.6 million and total unemployment reached 17 million. But about 28 million persons filed new claims for unemployment benefits over the six-week period ending 25th of April 2020 [US Department of Labor, 2020]. Due to the global nature and severity of the shock of COVID-19, it is estimated that the airline workforce may suffer a reduction of over 13% [Sobieralski, 2020].

The COVID-19 imposes long-term impacts in school and university closures. It also imposes long-term impacts in the society, such as infant and maternal mortality, under-nutrition and malnourishment, and in school and university closures will create restriction on educational development. The World Food Programme (WFP) has warned that 265 million people could be pushed into acute food insecurity due to Covid-19. As a result, the number of undernourished people in net food importing countries, majority in low-income countries, would increase by 14.4 million reaching 80.3 million [FAO, 2020]. The World Trade Organization (WTO) expects world merchandise trade to drop by 13-32% in 2020 [WTO, 2020].



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7. *Economic Recovery Steps*

The economic loss globally is estimated to be \$3-6 trillion [World Bank, 2020a]. The UN is calling for \$500 billion in aid to help low- and middle-income countries to face the pandemic. This aid must be used for supporting prevention measures, health systems, social protection, and food security [UN, 2020]. Oxfam calculates that OECD countries' fair share of this response would be closed to \$300 billion, which is also less than the combined wealth of the world's three richest men. Donors must urgently respond to food insecurity caused by coronavirus and provide food directly to low- and middle-income countries mostly in Africa and Asia. Donors must uphold humanitarian principles; provide feminist humanitarian assistance; protect refugees, migrants and internally displaced persons; and work towards protecting civic space for the vulnerable people. They must continue humanitarian aid to protect future famine; help to keep gender equality and women's rights in the low- and middle-income countries [Oxfam, 2020b]. The Food Crisis Prevention Network (RPCA) expects that, between June and August 2020, food insecurity and malnutrition will affect 17 to 50 million people in West Africa alone [RPCA, 2020].

In March, the European Central Bank, added €120 billion and later €750 billion to its bond-buying program. EU leaders proposed for a possible European recovery fund for transfers of €1.5 trillion. In the USA, real consumer spending drops by 20% and household labour income falls by 16%. In response to the crisis, the US Government declared \$2.2 trillion stimulus package under the Coronavirus Aid, Relief, and Economic Security (CARES) Act, and signed it into law on 27th of March 2020 [Muellbauer, 2020]. In March, the United States Federal Reserve System also announced a similar \$700 billion program. In the second week of April, it announced new loan facilities of \$2.3 trillion to deliver credit to small businesses and municipalities [FAO, 2020]. In March 2020, the Spanish Government has announced a €200 billion package, which is equivalent to about 20% of GDP [Baldwin & di Mauro, 2020]. On 27th of March 2020, the G20 countries pledged \$5 trillion to defend the global economy against COVID-19 [G20, 2020].

8. *Financing for SARS-CoV-2*

There are some major sources of money for the epidemic response activities. These could be used to support pandemic outbreak. UN releases \$15 million from the Central Emergency Response Fund (CERF) to help fund global efforts to contain the



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COVID-19 virus. The WHO has called for \$675 million to fund the fight against COVID-19. Some such sources of funding are as follows [Centre for Health Security, 2020b]:

8.1. The World Bank

The World Bank Group's Pandemic Emergency Financing Facility (PEF) has a fund to respond during pandemics. It has a cash window and an insurance window. The cash window provided about \$50 million for Ebola epidemic in the Democratic Republic of the Congo (DRC) [World Bank, 2019]. The COVID-19 pandemic that killed more than 21,500 people would trigger a full payout of the Class B notes, raising \$95 million. It would also trigger a 16.67% payout of the Class A notes, raising an additional \$37.5 million [IBRD, 2017]. The World Bank has announced \$160 billion in long-term financial support over the next 15 months [World Bank, 2020b].

8.2. IDA Crisis Response Windows

The International Development Association (IDA) is the part of the World Bank that gives loans (credits) to low resource countries for development. For IDA credits, a country must have a per capita annual income of less than \$1,145. IDA meets every 3 years to raise money and decide how the funds will be spent; these are called Replenishment meetings. The 18th Replenishment (IDA18) finances projects from 1st of July 2017 to 30th of June 2020. Most IDA money is used for long-term development projects [IDA, 2017]. The Crisis Response Window (CRW) is a special pool of money devoted to help countries respond to disasters. It spent \$420 million to fight the 2014-2016 West Africa Ebola outbreaks. The IDA18 replenishment raised \$3 billion for crisis response, and as of early 2020, \$2 billion was still unspent and available for immediate use. The IDA19 allocated \$2.5 billion to the CRW, to become available on 1st of July 2020 [IDA, 2019].

8.3. IMF

The International Monetary Fund (IMF) has about \$1 trillion fund to lend, which are not for aid. If any country borrows any amount from this fund with negotiation, after a stipulated period must be repaid with interest [IMF, 2019].



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8.4. Private Charity

The total endowment of the top forty wealthiest charitable foundations is currently about \$500 billion but many of these are not involved in health. In certain circumstances, part of this fund might be used for pandemic [Wikipedia, 2020b].

8.5. National Governments

Total international development aid from governments is about \$200 billion per year. A partial amount of it could be used for a pandemic. But with a sufficient global coordination, the total amount might be used for a pandemic [Wikipedia, 2020a].

9. *Conclusions and Recommendations*

In this study we have tried to discuss aspects of economic consequences of the COVID-19 pandemic outbreak. On 25th of May 2020, the total number of deaths in the world reached 344,760, and the total number of infected people is over 5,400,608, of which 2,165,782 have totally recovered. On 2nd of June 2020, the total number of infected people reached over 6.2 million, the total number of deaths reached 377,000, and the total number of people cured is 2.6 million. It is uncertain when the infections and deaths due to COVID-19 will stop. New locations and countries are severely infected. Timely diagnosis, isolation, quarantine, reduced travelling, etc. can reduce both infections and deaths. Hand washing, maintaining healthy habits, masks use, and supportive treatments can reduce the fatality of this disease. Distribution of more PCR-fluorescent probe kits and PPEs among healthcare providers can control the outbreak. Invention of COVID-19 vaccine can prevent the disease in the future and the developed countries in medicine can take bold steps in this regard.

The outbreak of the COVID-19 is spreading fear around the globe and is severely disrupting the global economy. It creates many serious challenges at national, regional, and global levels. Global economics decline remarkably during the pandemic COVID-19. Most people are under quarantine and isolation, and much of the rest of the populace has been told not to go to work and to stay in their homes. Most business companies and industries of the world remain closed for months. Closing of the aviation, tourism and hospitality industries, and Small and Medium Enterprises (SMEs) create threat of significant declines in revenue. Some countries



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are in fully or partially lockdown. It is estimated that global GDP will decrease significantly. Also, the public tax will be decreasing and the foreign exchange reserves will be negatively affected. The developing and lower developing countries will suffer greatly from this. As a result, global economic loss will become a large amount. It is estimated that more than 2 billion people (addition of new half a billion) of the world will be extremely poor (whose income is \$1.90 a day) due to the COVID-19 pandemic. The governments, civil societies and employers must take necessary actions to minimize the economic losses and mitigate the economic damages caused by the COVID-19 outbreak.

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