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Contents

MACROECONOMIC ANALYSIS OF THE FINANCING OF EDUCATION SYSTEM IN THE REPUBLIC OF SERBIA

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Abstract: *Knowledge is one of the key factors of economic growth, as well as of sources of competitiveness in the global marketplace. Educational policy directly shapes and creates human capital that is the backbone of the future development of each country. Therefore, there is a need for planning, good design and comprehensive financing this important social field. The purpose of this article is to determine the trends of public expenditures on education in the Republic of Serbia (RS), as well as their impact on the development of Serbian society. The article first provides a detailed analysis of the higher education system in Serbia, monitoring the trends in the share of education expenditures in gross domestic product (GDP) and total public expenditures in the country. The paper applies the desk research methodology as it analysis the professional literature, articles, relevant reports and databases of leading international institutions such as the European Union, OECD, Statistical Office of RS, UNESCO, World Bank, UNDP and Eurostat. The article studies the evolution, values and Human Development Index (HDI) ranks of Serbia, Gross Expenditure on Research and Development (GERD) in the Serbian higher education sector, as well as their correlations with Serbian public expenditures for education, in the period from 2009 to 2019. The article also applies linear regression analysis between the observed variables. Finally, it concludes that public expenditures on education could not contribute to social development in Serbia due to the small regression coefficients and weak correlations among these indicators. Therefore, Serbia should invest continuously and more intensively in its higher education if it wants to prosper. This article is useful for policy makers, but also for a wider readership who want to be acquainted with the education and social development trends in Serbia.*

Keywords: knowledge, higher education in Serbia, education financing, social development, Human Development Index (HDI), Gross Expenditure for Research and Development (GERD).

JEL classification: H52, I22, O30.

1. Introduction

Economic development changes the structure of the economy and society, which is the reason it encompasses a wide range of economic, humanistic, social, political, environmental, educational and other goals. These goals primarily relate to the growth of social welfare and living standards, reduction of economic and social inequalities, eradication of poverty, ensuring equal access to education, reducing unemployment (Dimitrijevic, and Mijailovic, 2021: 173), curbing inflation, stabilizing balance of payments,

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raising the quality of education, etc. The economic system and the dynamics of its development are essentially connected with the educational system because knowledge is one of the key factors of economic growth. Education policy directly shapes and creates human capital, which appears as the cornerstone of each country`s future development. Therefore, there is a need for its harmonization with the needs of the economy and the labour market, as well as all sectorial policies relevant to the development of the economy and society. Knowledge, training and the education system also appear as one of the key determinants of economic performance, as well as the sources of competitive advantage in the global marketplace. Education is a very complex system, both because of its mission and size, and because of the formal rules on which it basis, the diversity of educational practices, long-term perspectives, and often conflicting goals. It is a bureaucratic and hierarchical system, with many participants, aims and strategies, which is way there is a need for its carefully planning and management (Bogdanovic and Pozega, 2014: 124-126). The Sustainable Development Goal 4 is also dedicated to the importance of education, which insists on providing inclusive, equitable, accessible and quality education, as well as on encouraging the concept of lifelong learning for all (UNESCO, 2021).

Experience points to the fact that no country has achieved steady and sustainable economic growth without investing in its education and human capital. Ozturk (2001: 39-40) states that education increases productivity, economic efficiency, trade, creativity and social consistency, it encourages entrepreneurship and innovations, and reduces poverty and social inequalities. Therefore, it improves people`s quality of life and social wealth, at the same time leading to wider individual and social benefits. Societies with higher education rates have a longer life expectancy of their population, healthier individuals, higher rates of economic stability and growth, lower crime rates and higher equality (Argyle, 2021). Finally, Dimitrijevic and Mijailovic (2021: 173) highlight that the role of higher education reflects in the acquisition of new theoretical and practical knowledge, while at the same time contributing to social cohesion, poverty eradication, and the essential overall development of the economy and society. Therefore, a planned, well-designed and comprehensive approach to financing this important area is crucial for the further development of the economy, science and society as a whole.

The aim of this article is to determine trends and the impact of public expenditures for education on the development of Serbian society. The next section describes the used research methodology in detail, while the third section is dedicated to the analysis of the higher education system in the Republic of Serbia (RS), as well as the accompanying problems of financing the national education. The fourth section of the article considers the results of the evaluation of the Serbian Human Development Index (HDI) and its ranks, while the fifth one presents the results of correlation and multiple linear regression analysis of the relation between the HDI values and the general educational and research and development (R&D) expenditures in the Serbian higher education sector. The last section provides conclusions on the necessity of further growth of financing of this important social field, as an elementary precondition for the further development of the Serbian economy and society as a whole.

2. Research Methodology
The research methodology of this article bases on desk research, i.e. on the analysis of professional literature, articles and reports of the European Union (EU), OECD, Statistical Office of RS, UNESCO, World Bank and UNDP, as well as on the quantitative evaluation of statistical data from Eurostat, World Bank, OECD and UNDP databases. This article uses methods of trend analysis, comparison, study and research of professional articles, reports and relevant websites related to the development of public expenditures on education,

evolution of components and values of the Human Development Index (HDI) and Gross Domestic Expenditure on Research and Development (GERD) in Serbian higher education sector. After that, induction and deduction methods were applied in drawing conclusions. While the article investigates the trend of public education expenditures and HDI values in the period from 2007 to 2019, the trend of GERD is only covered from 2009 to 2019, because 2009 was the first year in which R&D expenditures began to be statistically monitored in Serbia. It should also be noted that for 2013 there are no available data on the share of public education expenditures in GDP and in total public expenditures of the country, which is way this year was omitted from the analysis of relevant indicators, as well as of Pearson`s correlation coefficients` and standard multiple linear regression calculation.

The OECD`s Frascati Manual for collecting and reporting data on R&D defines GERD as the total intramural, i.e. internal expenditures on R&D activities incurred in the territory of a country during a certain reference period. GERD is a main aggregate statistical indicator used to describe a country`s R&D activities, covering all R&D expenditures made in its economy (OECD, 2015:111). This article analyses GERD in the higher education sector, which also appears as the basic and most important indicator used for international comparisons of R&D activities in the field of education.

The HDI was first published in 1990 with the aim of becoming a more comprehensive indicator of human development in comparison with common measures of economic progress such as GDP or Gorss National Income (GNI). HDI is a synthetic statistical indicator used to assess and measure a county`s overall economic and social achievements. As a unique indicator of the level of the country`s economic and social development, HDI is a composite indicator of long-term progress in assessment of contemporary human development three basic pillars (UNDP, 2020b: 2): a) healthy and long life, b) access to knowledge and c) decent standard of living. By measuring the life expectancy of a country`s population, level of knowledge, access to learning and knowledge, as well as its standard of living, the calculated HDI values enable the ranking of 189 countries and recognized territories by the UN around the world.

The Pearson`s correlation coefficient (r) describes the strength and direction of the linear relationship between the two variables. While this coefficient can take values only in the range of -1 to $+1$, its sign indicates the direction of correlation. Its positive sign indicates that the variables are moving in the same direction, while its negative sign indicates that the given variables are flowing in the opposite direction. While its values around the number of ± 1 indicate an almost perfectly correlated relationship, its values around the number 0 show the absence of correlation between the observed variables (Pallant, 2010: 128).

Finally, the last part of this study uses a standard multiple linear regression model to determine the impact of GERD in the higher education sector (in millions of EUR) and Total public expenditure on education (in % of GDP) on HDI values in Serbia. Therefore, this section starts from the following defined hypotheses:

H_0: GERD in the higher education sector and Total public expenditure on education have no impact on the HDI values` trend in Serbia and
H_1: GERD in the higher education sector and Total public expenditure on education affect the HDI values` trend in Serbia.

The linear interdependence among these variables can be described by the following regression equation:

$$HDI = \alpha + \beta_1 GERD + \beta_2 Exp + \varepsilon_t \tag{1}$$

Where α is an intercept, β_1 and β_2 are the regression coefficients; Exp are Total public expenditures on education in Serbia and ε_t is a random error term.

3. Financing Higher Education System in Serbia

The Republic of Serbia is the country of Southeast Europe and the Western Balkans region, home to about 6.9 million of inhabitants. In 2020, Serbia had a gross domestic product (GDP) of $52.96 billion, a real annual growth rate of -0.1% (World Development Indicators Database, 2021) and an official unemployment rate of 11.1% (Republicki zavod za statistiku, 2021). The last census from 2011 indicated that there is a little more than 10% of highly educated population in the country. Serbia is a higher-middle income country with many public and private higher education institutions. The functioning of the country`s higher education system is under the direct jurisdiction of the relevant RS Ministry of Education, Science and Technological Development. While private higher education institutions are financed from student tuitions fees and while their funding is completely independent of the state, the Ministry is directly responsible for funding the state higher education institutions in the country. Serbian higher education institutions are independent in managing the spending of their funds. In addition to funds from the state budget, public higher education institutions may have other sources of funding such as tuition fees, donations, gifts, projects, contracts for consulting and research services, etc. Finally, the financing of the public higher education system is input based, meaning that the distribution of financial resources is implemented bases on the institutions` real costs in relation to the expected number of enrolled students in the next school year, as well as the expected number and structure of teaching staff (Eurydice, 2021). While in the RS higher education sector there are the following three study levels: a) Bachelor studies, b) Master and specialist studies, and c) Doctoral (PhD) studies, this system at the same time consists of: a) academic studies, which are mainly realized at universities and some colleges, and b) vocational, i.e. applied studies that are realized at some higher schools, faculties and at several universities (European Union, 2018). According the quality of their teaching and educational outcomes` performance, state higher education institutions are still in an advantage over private ones, while a far smaller number of students attend private universities than public ones.

Despite the fact that Serbian education has a long and rich tradition, the absence of market mechanism and adequate strategies of its financing reflect in its weak position in European education area. The financing of state higher education institutions (HEI) is in the competence of RS Government, while the available funds for their financing are not evenly distributed among universities and faculties. In the Serbian education system, the state provides funds from its budget for the running of its public HEIs in accordance with their operating program, planned number of students and staff structure. HEIs have full autonomy in managing the funds received by the state, primarily for covering operating costs, staff salaries, equipment, scientific research, scientific and professional training, publishing, international cooperation costs, etc. In addition to budget funds, public HEIs earn their own, extra-budgetary revenues based on collected tuition fees, but also on other sources of funding such as received gifts, donations, sponsorships, implemented projects, providing services to third parties, cooperation with business and public sector, etc. In addition, state HEIs independently make decisions about their tuition fees (Official Gazette of RS, 2016). Due to their different attractiveness to students, state universities and colleges differ from each other in their financial position and earnings. In short, the main shortcomings of the current model of financing higher education in Serbia are reflected in (Lutovac and Lutovac, 2012: 381): a) large gap between budget and self-financing students, b) non-compliance of graduates' competences with labour market needs, c) insufficient transparency of funding HEIs, d) expanding the scope of business to the detriment of the quality of teaching processes and content, and e) less access to education for students of lower financial status. In contrast, private HEIs in the country are largely funded from the equity stake of owners and student tuition, and to a much lesser extent from project and other funding sources.

Besides, private HEIs do not have the right to enrol budget students, nor to receive government support funds, which is why their tuition fees are generally higher than the state ones, putting them in a far more difficult position at the domestic education market. Overall, the current system of financing higher education is characterized by inequality in financing and its unequal availability to students, inefficiency of studding process, as well as insufficient harmonization of educational offer with the needs of the economy and society. In addition, it should be noted that the state directly finances its secondary schools and gymnasiums from its budget, while state secondary education is currently facing problems of unfavourable demographic trends, low fertility rates and consequent reduction of student population (by about 10% in the last decade). Compared to neighbouring and other European countries, Serbia's public expenditure on secondary education is still very low, while in the period from 2007 to 2015 alone there was a 1.7% drop in public spending per student in secondary education (OECD, 2020). As Serbia allocates significantly less funds to finance its secondary education both in absolute terms and as a percentage of GDP compared to EU and OECD countries, this area could be the subject of some future consideration and research.

Historically, the public expenditures on education in Serbia have always been at low level, while recently there has been an increase in public spending per student in tertiary education (by 8%). This trend can be explained by the decrease in the country`s population due to the low fertility rates, as well as by the wave of mass emigration of young people abroad. According to the World Banka Data (2021a), the level of public spending in the country on education in 2019 was only 3.62% GDP, which is lower than the OECD countries` average of about 5.3% (OECD, 2020). In the same year, the share of total expenditures for education in total public expenditures was also small, amounting to only 8.61% (The World Bank Data, 2021b). According to OECD (2020), spending on education in Serbia is also lower than the United Nations (UN) benchmark, i.e. the reference value that ranges from 15% to 20% of total government expenditures on education. The following Figure 1 indicates a gradual, continuous and slight decline in the share of education expenditures in Serbian GDP and total government public expenditures in the period from 2007 to 2019, with the exception of 2011 in which the share of this indicator in GDP experienced a drastic decline of 2.24%.
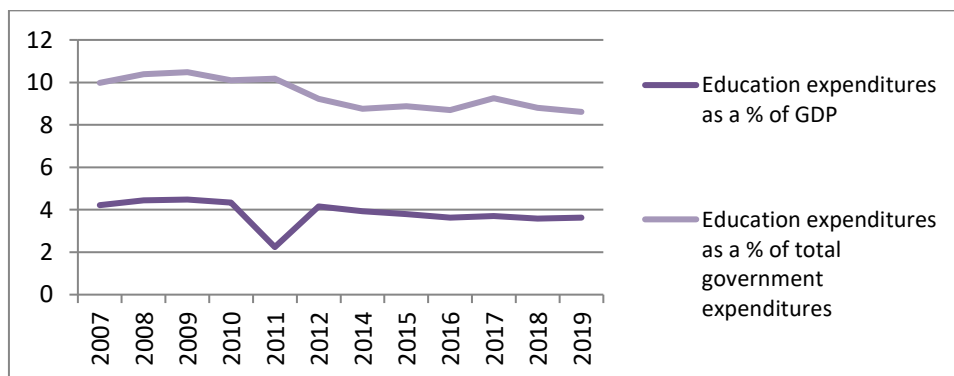
Figure 1: The trend of public expenditures for education in Serbia in the period from 2007 to 2019
Sources: The World Bank Data (2021a and 2021b)

The World Bank`s available data also show that in the period from 2007 to 2019, the share of total public education expenditures in GDP decreased from 4.21% in 2007 to only 3.62% in 2019. We can explain this trend by the fact that despite the growth of Serbian GDP in that period, the absolute government expenditures for education remained at their constant level,

which all influenced their relative decline. In addition, in the observed period, the share of public education expenditures in total public spending decreased from 9.98% in 2007 to 8.61% in 2019 (The World Bank Data, 2021b).

4. The Evolution of HDI Values and the Ranks of Serbia

The HDI indicates the progress or setback of a country in achieving the effects measured by this indicator and its components. Although the achievement of high HDI values indicates high levels of income and living standards, Oprean and Stan (2015: 64) point out that this indicator more relates to the quality of social and fiscal policy, i.e. to the direction of public expenditures for the efficient development of the social sector. The idea of human development goes far beyond the traditional economic indicators, indicators of improving the human resources` quality and the degree of meeting basic population needs, while it is a more comprehensive measure of human progress, assessing some additional elements such as freedom and dignity of individuals as a part of contemporary society functioning.

The value of HDI of Serbia for 2019 was 0.806, which made it a country with very high human development. According to this indicator, in 2019 Serbia was on the 64th place out of 189 analysed countries and territories, sharing this rank with Kuwait. In the period from 1990 to 2019, the value of the county`s HDI increased from 0.722 to 0.806, which unequivocally represents an increase of 11.6%. Table 1 shows the country`s progress in almost each of the HDI components in the observed period. In this period, life expectancy at birth increased by 4.5 years, the average duration of schooling expressed in years increased by 3.2 years, while the expected duration of schooling increased by 2.3 years. However, at the same time, the Serbian GNI per capita fell by about 0.6% (UNDP, 2020b: 2) due to the wars on the territory of the former Yugoslavia, bombing and the then economic crisis caused by the imposed sanctions of the International Community to Serbia.

Table 1: HDI trends in Serbia

Years	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI per capita (in 2017 PPP$)	HDI value	HDI ranks
1990	71.5	12.4	8.0	17,296	0.722	41
1995	71.8	12.8	8.8	7,975	0.699	52
2000	72.0	13.1	9.4	8,871	0.716	60
2005	72.8	13.4	10.2	12,100	0.749	60
2010	74.1	13.5	10.4	14,155	0.766	64
2015	75.3	14.4	11.0	14,798	0.789	66
2016	75.5	14.6	11.1	15,231	0.795	64
2017	75.7	14.6	11.1	15,450	0.798	65
2018	75.8	14.8	11.2	16,472	0.803	65
2019	76.0	14.7	11.2	17,192	0.806	64

Source: UNDP (2020b: 3)

As can be seen from the Table 1, the trend of the HDI ranks in Serbia from the end of the last century has gradually improving, while in recent years this indicator has remained at a relatively stable level. Serbia still has a considerably lower position in the overall ranking compared to its neighbours and Central and Eastern European countries, such as Slovenia, the Czech Republic, Slovakia, Hungary, Croatia, Montenegro, Romania and Bulgaria (UNDP, 2021a).

5. Results and Discussions

5.1 Correlation Analysis

Further analysis bases on the calculation of Pearson`s correlation coefficients among Total public expenditure on education as a % of GDP, GERD in the higher education sector and the level of human development of Serbia, measured by the HDI in the period from 2009 to 2019 (Table 2).

Table 2: HDI values, educational and R&D expenditures in the Serbian higher education sector (from 2009 to 2019)

Indicators	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Education spending as a % of GDP	4.48	4.33	2.24	4.16	-	3.93	3.79	3.63	3.71	3.58	3.62
GERD in higher education (in million EUR)	145.46	114.54	137.31	132.79	132.84	117.61	118.12	111.92	123.96	128.95	141.46
HDI values	0.766	0.766	0.776	0.775	0.778	0.784	0.789	0.795	0.798	0.803	0.806

Sources: The World Bank Data, (2021a), Eurostat, (2021) and UNDP (2021c)

The analysis of the impact of educational public expenditures, as well as of R&D expenditures in the higher education sector on the value of Serbian HDI, i.e. of the pattern and intensity of the relationship between each of these indicators was calculated based on Pearson`s correlation coefficients (Table 3).

Table 3: Pearson`s correlation coefficients

		Total public expenditures for education as a % of GDP	GERD in higher education sector	HDI values
Total public expenditures for education as a % of GDP	Pearson`s correlation	1	-0.142	-0.281
	Sig. (2-tailed)		0.696	0.432
GERD in higher education sector	Pearson`s correlation	-0.142	1	-0.092
	Sig. (2-tailed)	0.696		0.800
HDI values	Pearson`s correlation	-0.281	-0.092	1
	Sig. (2-tailed)	0.432	0.800	

Source: Author`s computed

From the analysis of Pearson`s correlation coefficients, it clearly follows that there was a weak negative correlation between the share of Total public expenditures on education in GDP and HDI value, which further means that educational spending could not affect the growth of HDI values for Serbia. This research also suggests that there was an even weaker negative correlation between GERD in the higher education sector and HDI, indicating that even R&D expenditure in education could not contribute to the growth of the Human

development index of Serbia. The situation was similar with GERD in all sectors, whose Pearson`s correlation coefficient with HDI was also only r=-0.092. Therefore, most likely some other educational indicators contributed to the growth of HDI, such as expected years of schooling, average years of schooling, population growth with at least completed secondary education, solid results on the PISA test and the like.

5.2 Regression Analysis
The last step in this research is based on a regression analysis of the predictors` impact, i.e. GERD in the higher education sector and Total public expenditure on education on the dependent variable HDI values of Serbia. Regression analysis is performed with the aim of deepening the obtained results of the conducted correlation analysis. After the extreme point for 2011 was excluded from analyses, preliminary analyses have shown that the assumptions of normality, linearity, multicollinearity and homogeneity of variance were not violated.

Standard multiple linear regression was applied with the aim to assess the possible impact of these two predictors on the HDI values in Serbia. The model as a whole explained the variance of HDI value well and was statistically significant, Adjusted R Square=98.7%, $F_{(2,6)}$=306.095, and Sig.=p=0.000<0.001. In the final model, the Total public expenditure on education had a negligibly small, namely slightly different from zero contribution to the explanation of the Serbian HDI value (99% of HDI variance), and it was statistically significant, β_2=-0.047, Sig.=0.000<0.001. On the other hand, GERD in the higher education sector had no contribution to the prediction of HDI value, while its coefficient was also statistically significant, β_1=0.000, Sig. = 0.002<0.05 (Table 4).

Table 4: Results of the regression analysis

Model	B	Std. error	t-value	Sig.
Constant	0.934	0.009	107.571	0.000
GERD in higher education sector	0.000	0.000	5.371	0.002
Total public expenditure on education (as a % of GDP)	-0.047	0.002	-24.736	0.000

Source: Author`s computed

The following standard regression equation arose from the obtained results:

$$HDI = 0.934 - 0.047 Exp + \varepsilon_t \qquad (2)$$

Applied standard multiple linear regression showed that almost no predictor contributed to the prediction of the dependent variable HDI value, with the small exception of the predictor Total public expenditure on education whose regression coefficient was β_2=-0.047, slightly differing from zero. The analysis also found that the influence of GERD on the explanation of HDI values was completely lacking. From the research follows that it is almost impossible to reject the null hypothesis H_0 on the absence of the predictors` influence on the HDI values` trend in Serbia. These findings are consistent with the results of the performed correlation analysis that indicated a weak negative relationship between education expenditures and HDI values, as well as an even weaker negative correlation between GERD in the higher education sector and the dependent variable. Therefore, these findings also support the claim that some other factors had to contribute to the growth of HDI values of Serbia.

6. Concluding Remarks

A quality system of higher and other educational levels, in which continuous investments are made, enables the availability, progress and adequate use of new knowledge, as well as the essential progress of the economy and society. Such public benefits present a sufficient argument for Serbia to support this sector far more actively and intense in the financial and wider sense. From this research, we can unequivocally conclude that in the observed period there was a decline in public expenditure on education, as well as that this indicator could not contribute to the growth of HDI values in Serbia. This is especially true for GERD whose regression coefficient was equal to zero, indicating the complete absence of its any impact on the country`s HDI trend. All of the above definitely and undoubtedly points to the conclusion that it is necessary to increase continuously investments in Serbian education as one of the basic and leading factors of economic growth. In order for the country to further develop and progress in the long-run, it is necessary to abandon the prevailing practice of saving on education because only those countries that invest in acquiring new knowledge, skills and technological know-how have real chances to develop, gain comparative advantages and create added value in sophisticated and technologically supported industries.

Serbia should look for new approaches and mechanisms for funding its higher education system, as well as more rationale ways and forms of allocating its budget funds in order to increase the efficiency and transparency of its public spending. In light of negative demographic trends, the massive wave of students going abroad, the declining number of domestic students and limited budget funds, the country should not reduce its resources for financing educational needs. Given that the financing of higher education is very expensive, Serbia should recognize the advantages of the market mechanism in relation to the administrative managing of educational processes and the means of their financing. In that sense, it could shift from the current system of budget financing, which is focused on the projected educational needs, to a more inventive model of flexible financing of HEIs that would focus on results obtained, as well as strengthening the financial autonomy of HEIs. This results-based funding model would imply their participation in competitions for state funds depending on the number of enrolled students in the first year, the number of graduates, the results of students' knowledge and grades, the complexity of curricula, the number of defended doctoral dissertations (Leshanych, Miahkykh and Shkoda, 2018: 149), the number of interdisciplinary courses implemented, number of international curricula and students, implementation of short-term vocational training courses, etc. The RS Government could also consider the development of certain forms and methods of attracting extra-budgetary funds, as well as to encourage HEIs to become more entrepreneurial-oriented, shift on intensively project financing and, to enhance connections with the private sector. The state could also consider developing the concept of international education as a key factor in actively attracting students from abroad who would pay tuition and contribute to the HEIs budgets. It is necessary to ensure the strengthening of the public HEIs financial autonomy with the aim of more efficient use of their financial resources and assets, as well as spending of state funds. In addition to strengthening administrative, personnel, scientific and program independency, all the proposed solutions would unequivocally contribute to increasing the quality of educational content and learning outcomes. It is also necessary to point out the fact that there were recently initiatives involving budget subsidising the private HEIs, but they were abandoned due to dissatisfaction and opposition of public opinion.

Only a contemporary and comprehensive approach to the financing of Serbian education can figure as an important factor in the development of its science, national economy and the society as a whole, which is way the Government of RS should give much more attention to financing this important social area in the future. Serbia is also facing massive waves of

emigration, as well as declining birth rates that threaten it with a serious risk of losing human capital. One of the possible ways to solve this problem is to nurture the concept of lifelong learning, improve living standards, as well as continuously raise the quality of teaching staff and curricula. Serbia could also introduce a compulsory system of secondary education. Only radical changes in education can create other preconditions for the development of other segments of society. However, in order to be successful and efficient enough, it is clear that the country's educational policy itself will also have to be supported by fundamental changes in the domestic economy, the labour market and society itself.

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BUSINESS ECOSYSTEMS, GOVERNANCE STRUCTURES: HOW CAN VALUE CHAIN OF ECONOMY IN RURAL AREAS BE COMMERCIALIZED?

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Abstract: *Both creating and capturing value from a business activity cannot be done by a single firm in a single setting. Instead, firms with different competencies should be aligned to present the focal value and proportionately appropriate value. This study describes the governance structure and proposes the framework that organizes beekeeping actors through the proposed business ecosystem. This qualitative and descriptive action research collected data from 12 actors in the beekeeping industry. Different governance structures were piloted and tested through interpretative data analysis to develop an appropriate model. Two models are proposed: (1) the commercial firm to orchestrate the business ecosystem (2) the beekeeping association/cooperative to collaborate with the commercial firm through the honey collection centre to present a value proposition to customers. Also, ecosystem actors should share value in a fairly and truthful way. The role of an enterprise, which is an ecosystem orchestrator, is to ensure those ecosystem actors, particularly beekeepers, join and stay in the ecosystem. The study technique for data collection provides a valuable empirical ground through which management and business research can rely on the methodology. The study informs policymakers, researchers, and organizations on the crucial steps and measures to build and manage a viable commercial beekeeping ecosystem. The study provides a theoretical contribution to the ecosystems and governance theories and the empirical evidence for the approaches.*

1. Introduction

About 80 percent of people in developing areas reside in rural areas, depending on agriculture (International Food and Agriculture Development [IFAD], 2016) and natural resources (Msamula et al., 2018; Tutuba, 2021). In Tanzania, rural areas have fertile land and natural vegetation, supporting economic activities like agriculture, fishing, and beekeeping. Upsettingly, poverty is more prevalent in rural areas, especially among female-headed households dependent on livestock and food-crop production (IFAD, 2016). The forest resources have not yet fully contributed to the well-being of society. Msamula et al. (2018) argue that *"forest resources do not at present provide a sufficient contribution to the economy"* (p. 188). Likewise, the beekeeping sector, which is part of the forest resources, remained less productive and not well governed (Tutuba et al., 2019). Therefore, promoting

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the value chains of rural economies, creating employment opportunities and improving livelihood in rural areas should be a priority (IFAD, 2016). To achieve this, promoting rural economies should become a vital driver of the transformation process: moving from a low productivity system to a semi-industrialized one in which innovative technologies improve production to support manufacturing activities (Tutuba, 2021). To understand such strategic dynamics, we need to understand how ecosystems are structured and governed (Adner, 2017; Furr and Shipilov, 2018). Therefore, this study which is limited to the beekeeping sector, sets to answer how to organize and manage beekeeping ecosystems in Tanzania to create value and capture more value for beekeepers?

Following this introduction, this study is organized as follows: first, I outline the core concepts of the study. After that, I present the methodology followed by the study's findings. Finally, the interpretation and the main results are summarized.

2. Theoretical Review
This section presents the theoretical review of key concepts and variables used in the study.

2.1. The beekeeping industry in Tanzania
In Tanzania, beekeeping has been practised and governed for many generations and through different structures (Tutuba and Vanhaverbeke, 2018). During the colonial era, government decrees ruled the sector (Ntenga, 1976; Tutuba and Msamula, 2018). After the independence and following the Arusha declaration in 1967, the beekeepers governed the sector through cooperatives (Tutuba et al., 2020). In 1998, a national beekeeping policy was formulated, and the industry was transferred to the Ministry of Natural Resources and Tourism, under the Forests and Beekeeping Department and later, the Tanzania Forest Services (TFS).

Furthermore, different business models and governance structures have been piloted to foster access to other markets. However, unexpectedly, little has been achieved: most beekeeping associations remained fragmented and weak (Tutuba et al., 2020), with limited capacity and resources to create value and capture a sizable value for beekeepers (Tutuba et al., 2019). Therefore, it is difficult to identify what may be termed as best practices in governing the industry and linking beekeepers to markets (Tutuba and Msamula, 2020). In this regard, it is essential to analyze different governance models through which beekeepers can efficiently be organized, managed, and coordinated to deliver value to customers and capture value for both ecosystem actors and society.

2.2. Business ecosystem
Promoting value chains of rural economies cannot be done by a single firm and in a single setting. Also, change in technologies, consumer behaviours, and access to resources have increased business challenges. So, firms should collaborate to share complementary assets and skills (Tidd and Bessant, 2018; Tutuba, 2021), products and components (Teece, 1986), and commercialize innovations. This combination of the value chain and complementary products is called an ecosystem (Moore, 1993).

The term ecosystem refers to a set of interacting organizations that depend on each other's activities and resources (Moore, 1993; Adner, 2017; Kapoor, 2018); and a business ecosystem as a group of interdependent businesses to co-provide value propositions (Amit and Zott, 2001). The success of an ecosystem depends on the business leaders of an industry leader (Moore, 1993) or a focal actor (Kapoor, 2018) that organize and govern other actors to co-create value. The key to a business ecosystem is an orchestrator with a strong influence and governance over the co-evolutionary processes.

Moreover, different similarities (Tsujimoto et al., 2018) and formulations (Adner and Kapoor, 2010; Gawer and Cusumano, 2014) of ecosystems depend on the unit of analysis and the scope of the study. Nevertheless, while the ecosystem perspectives are conceptually distinct, they are mutually consistent, and one does not rule out the other as they relate to each other. Therefore, this study adopts the ecosystem-as-structure approach (Adner, 2017) as a unit of analysis. In this approach, the orchestrator interacts, engages, and defines borders with other ecosystem actors to deliver the value proposition collaboratively. And the governance of ecosystems rests on the explicit considerations of actors who lie off the critical path to the end consumer (Colombo et al., 2019). This study discusses the boundaries towards ecosystem governance and unit of analysis within three pillars: actors/participation (who needs to be included?), structure (who hands off to whom?), and governance (who sets the rules?) of business ecosystems.

2.3. Governance

The term governance has been used to describe various situations with different and sometimes contradictory meanings. Some descriptions have been linked to specific considerations, whereby governance is seen either as a process, structure, system of values, or outcome (Turton et al., 2007; Uludag et al., 2016). For example, in an enterprise, "corporate governance" is used to describe the suite of internal and external relationships, roles, responsibilities, and accountabilities that guide interactions between stakeholders, staff and management (Teece, 2016). In this study, I define governance as a structure of contractual arrangements (Sanchez and Ricart, 2010) between organizations that confer decision rights regarding activities (Teece, 2016), collaborations, policies, and assets like leasing contracts (Cunningham et al., 2017; Colombo et al., 2019). The owned and controlled activity includes the incentives to [structure] align the goals of the [set of actors] participating organizations and the mechanisms to [governance] manage the difference between different opinions of participants. Teece (2016) argues that the 'activity' can range and therefore can be analyzed differently: from a transaction *(transactional governance)* to the whole company *(corporate governance)* and a business ecosystem *(ecosystem governance)*. This study is limited to transactional and ecosystem governance; it defines and examine governance at transactional and ecosystem-level within the beekeeping industry.

2.3.1. Transaction-level governance

Transactional-level, or arms'-length, is a business relationship in which transacting parties have no long-term business relationship; the relationship ends after every transaction (Teece, 2016: Tutuba et al., 2020). When the relationship involves repeated transactions over a long time, transacting parties may build up norms, shared structures, relationship capital to help govern the ongoing relationship. The issue is how the transaction is most likely to be conducted smoothly to capture efficiencies and avoid quarrels. Therefore, we suggest the transaction cost theory (Williamson, 1975, 1985) to achieve this relationship. According to Anin et al., (2016), the governance of business transactions is grounded in the transaction cost theory. Some typical examples are make-or-buy and invest-or-outsource decisions.

In a make-or-buy decision, firms in the beekeeping value chain can decide to make/produce honey or buy honey from producers. Consequently, firms can choose when and how to invest or outsource some activities in the beekeeping value chain in the invest-or-outsource decision. However, to get enough honey, and for sustainability and efficiency purposes, any decision will create a repeated and long time relationship between transacting parties. Also, parties will be required to share skills, assets, and resources (Tutuba et al., 2019; Tutuba and Msamula, 2020), establishing a collaborative relationship through interactive and contractual models.

Interactive and contracting lies somewhere between arm's-length contracts and full-on integration. Trust is critical in building a relational contractual model in the beekeeping industry. If beekeepers are not trusted to deliver quality honey as per the contractual agreement, the ecosystem will not be sustainable. Similarly, if the transacting part will not pay beekeepers as per contract, beekeepers might opt to sell honey to another trader. Therefore, collaborative governance is suggested.

2.3.2. Collaborative governance

In the transaction-level governance, the business relationship ends after every transaction (Teece, 2016). But, from a business perspective, the ecosystem concept has been tied up around value creation, firms' growth, and collaboration (Pisano and Teece, 2007; Ketonen-Oksi and Valkokari, 2019). Beekeeping organizations with different resources, capabilities, and complementary assets interact to create value propositions. However, the interactions between these actors within the ecosystems give rise to governance challenges (Cunningham et al., 2017; Tutuba et al., 2020), including distribution of resources, activities and related costs, and value appropriation. Turton et al. (2007) argue that ecosystem governance is a means for achieving direction, control, and coordination of firms with varying levels of autonomy to advance the interests and objectives to which they jointly contribute. To promote the value chain of rural economies, influence economic gains, and improve business governance, collaboration among value chain participants is essential.

In ecosystem governance, value chains are driven primarily by market requirements: The value proposition. Collaborators work together to present focal value efficiently (Adner, 2017). For example, beekeepers will be aware that if they contaminate honeycombs, processors will not be able to refine and pack quality honey, and thus customers will not get quality products, and, accordingly, value chain actors will not be able to capture value. Therefore, if every collaborator plays their role correctly, existing markets will likely change and create new markets with the right products. And the responsibility of the orchestrator, in this case, goes beyond the ability to link various partners but to find connections among different partners and encourage them to work directly with one another to identify nascent opportunities (Furr and Shipilov, 2018). This way, they can present a new value proposition to the target market.

Ecosystem governance comprises governance structures and activities that try to exert influence or deal with actors and systems in the ecosystem structure (Uludag et al., 2016). Therefore, the business ecosystem governance should be structured around the orchestrator, which must influence and find a deal through bargaining, negotiation, and compromise. Also, interactions among firms should reflect the organization rather than being random. In this regard, ecosystem actors' interconnections will be governed when parameters regarding product, process and logistic qualifications are discussed and agreed upon by all participants.

3. Methodology and approach

This qualitative action research focuses on promoting change within the study area. I adopted the approach because of its strengths to include; focus on change, the recognition that time needs to be devoted to diagnosing, planning, taking action and evaluating (Altrichter et al., 2002; McGrath and O'Toole, 2012), and the involvement of other core actors throughout the process (Greenbank, 2011; Earl-Slater, 2002). The study was conducted in four regions in Tanzania; Kigoma, Singida, Dodoma, and Iringa, which were purposively selected. I selected these regions because they are among areas with considerable beekeeping potentials. In addition, their ecological zones consisted of diverse vegetation, as has been reported by Msamula et al. (2018) and Tutuba and Vanhaverbeke (2018).

The study population contained different organizations in the beekeeping industry in Tanzania, from which 12 firms were purposively selected. The sample includes four cooperatives from Kibondo (1), Uvinza (1), Singida (1,) and Dodoma (1); four companies/enterprises from Dodoma (2) and Iringa (2). Also, three public honey processing centres from Singida (1), Dodoma (1) and Iringa (1); and one exporter from Kigoma.

Data were collected through unstructured interviews and observation techniques (Hair et al., 2007; Yin, 2018). The interview techniques were used to capture information about governance, business relationships, and interactions between firms in the beekeeping value chain. The participants-as-observer method was used while piloting the ecosystem's structure and governance of beekeeping firms, cooperatives, and corporates. According to Saunders et al. (2009), participant observation has been used much less in management and business research. Therefore, using this technique provides a valuable empirical ground through which management and business researchers can rely on the methodology in their research works.

After recording the interviews, data were coded, grouped and interpretatively analyzed to understand how firms interact and collaborate and how they are governed. The findings of the study are presented in the next section.

4. Study findings

Under this section, first, we present the organization of the ecosystem actors in the beekeeping industry, defining both the actors and the structure of the business ecosystem. Secondly, we offer the governance of the ecosystem based on the links in the ecosystem organization.

4.1. The existing beekeeping ecosystem in Tanzania

The interaction of firms in the beekeeping value chain is grounded in the industry architecture of the ecosystem. The arrangement of actors in the value chain depends on the core activities they perform – who does what? We found that the beekeeping ecosystem is organized through suppliers like carpenters, artisans, tailors, and firms selling beekeeping tools; the producer group like beekeepers and honey hunters; honey traders like retail shops, supermarkets, vendors; and customers like households, local brewers, traditional healers, tourists, hotels and restaurants. Unlike the argument by Adner (2017) and Furr and Shipilov (2018) that the alignment structure of partners needs to interact to present a "focal" value proposition, and the orchestrator set the stage for these actors. The findings show that every actor works independently to present their value proposition. Even in cooperatives, beekeepers are not organized through the cooperative as they manage beehives, process and sell honey independently.

I found that beekeepers and honey hunters are the most honey producers regarding honey production and productivity in the beekeeping ecosystem. Most beekeepers produce honey using only traditional means and tools, and the occupancy rate is 48 per cent. Also, honey hunters are found in areas that have natural forest reserves. Regarding the links and structures, we discovered that beekeepers are coordinated and interlinked through cooperatives: the cooperative orchestrates the beekeeping ecosystem in a particular area. We observed that cooperatives operate within the district and have at least 200 members. In this type of ecosystem, the cooperative is in the middle of the structure linking the production side (beekeeper) and the market through the collection centre. Furthermore, the cooperatives owned and managed existing collection centres. Moreover, the cooperatives operate the aggregation, refining and packaging, and channel management to present value delivery to the target customers.

4.2. Governance of the beekeeping ecosystem

The existing governance structure in the beekeeping value chain is transaction-based, as there are no long-term relationships among actors. However, in some areas like Kigoma and Singida, beekeeping ecosystems are governed through cooperatives and community-based organizations (CBO). Also, by working through the collection centre and collaborating with potential secondary actors, beekeepers gain some competitive advantages: (1) They change the working model from a transactional to a collaborative (2) They take part in the ownership of the CC through the cooperative. (3) They do not have to develop and manage channels because cooperatives do that. (4) Beekeepers take part in the association's management, leadership, and operational activities.

Regarding the governance of the beekeeping cooperatives, we found that most cooperatives are not efficiently operating their CC because (1) they have continuous stockouts of honey because either member are not depositing honey or there is not enough honey to bring to the CC. Also, beekeepers sold honey to local traders instead of depositing it to the CC. (2) They don't have enough funds to run the facility, and (3) They delay making decisions because most cooperatives are not organizing annual meetings. (4) Productivity is low as the cooperatives neither invest in assets nor attract organizations with capabilities to join the ecosystem. Therefore, a different governance model is necessary to improve efficiency and value creation in the sector.

5. Discussion of the findings

In this section, we discuss the governance structure of the ecosystem in the beekeeping industry in Tanzania.

5.1. Restructuring the beekeeping industry

The structure of a business ecosystem requires a configuration of different firms to co-create focal value. Unlike natural ecosystems, business ecosystems do not happen automatically but through proper alignment and governance of firms. Therefore, defining the industry architecture is critical; the ecosystem governance should begin by determining who does what to present focal value – changing the business model of the beekeeping industry.

Changing the relationship models changes the way value is created and captured by reversing actors' roles. In the ecosystem, value is created by performing specific activities, reducing the number of actors in the value chain, and sharing complementary skills and assets. This approach will increase the size of the pie by lowering costs, increasing efficiency and improving the quality of honey. For example, specializing in value-adding activities and defining the position in the beekeeping value chain suggests that the business model of beekeepers will change because they have to align their business model to that of the orchestrator. The value proposition of a beekeeper contributes to the focal value of the ecosystem; all actors create value together. The orchestrator becomes the new customer of the beekeepers, and the customer relationship changes from transaction-based to a collaborative relationship. The revenue stream comes from selling refined honey: Beekeepers are paid for the quantity of unadulterated honey extracted from their deposit at the agreed price.

5.2. Structural governance of the beekeeping ecosystem

Commercializing beekeeping activities requires three critical issues: quantity (volume), quality, and sustainability. An ecosystem can achieve these things if firms in the beekeeping industry work together through the collection centre (CC). And the governance of the particular ecosystem is determined by the operations of the CC. The CC can be owned and operated by either a cooperative, hence cooperative centric management, or a private

company, therefore corporate centric governance; or both cooperative and enterprise, hence the hybrid model.

5.2.1. Proposed governance structures of the beekeeping ecosystem
The first proposed governance structure is the cooperative centric governance which the CC is owned and operated by the beekeeping cooperative. This model presents some advantages to beekeepers in the ecosystem. But, the model is not efficient, and beekeepers are disinclined to work through cooperatives. Therefore, for the structure to foster commercialization, it should organize the ecosystem to encourage beekeepers to deposit their produce and transact honestly and effectively with other actors and service providers. In addition, the cooperative should have scope and means to improve productivity and efficiently reach potential regional markets.

The second option is to govern the ecosystem through a commercial enterprise. In this governance structure, the enterprise orchestrates the ecosystem by supporting beekeepers with means and scope in exchange for quality honey. The enterprise buys honey at a relatively higher price than the market price. The enterprise do all these activities to get a steady supply of high-quality honey, which it could sell at a higher price: It increases the pie to take a part of it that is larger in volume than in a purely competitive setting. This finding is grounded in the Ruaha Farm in Iringa (Vanhaverbeke et al., 2021) and the Central Park Company in Dodoma. However, when the enterprise plays the ecosystem competitive, the ecosystem becomes a trader-based business model purely, and the business relationships can take different forms like a tripartite model and contract farming model (Tutuba et al., 2019). This poses a risk to compete mainly by sharing the pie. Instead, they should focus on how to increase the size of the pie. Trust and commitment of the producer group, beekeepers, in this case, is key to the success of this model. The role of the orchestrator should be to enhance access to production inputs, quality management, and effective management of channels in the markets.

The third suggestion is the hybrid model: The business ecosystem model where beekeepers are organized in a cooperative to produce honey and sell to the business enterprise, the orchestrator. The hybrid ecosystem model comprises primary actors: beekeepers, orchestrators (cooperative and corporation), retailers, and consumers.

5.2.2. Ecosystems-as-structure of the hybrid model
Ecosystem-as-structure describes important roles/activities perfumed by the actors in the ecosystems and the interlinkage of actors. In the hybrid model, the CC is owned by the cooperative; machines and working tools are owned by the corporate; the management and operational activities of the CC are the corporate's responsibility.

The hybrid ecosystem model starts with the supply of inputs followed by honey production, which beekeepers perform. The leading roles of beekeepers include collecting honey from bee colonies, bulking, and depositing honey to the CC. In the ecosystem, beekeepers have three primary links: the link to suppliers, which helps them acquire beekeeping inputs, to the CC for reliable access to the market. Finally, the link to cooperatives guarantees the protection of the beekeeper's interest in the beekeeping industry.

The beekeeping cooperative is the third actor in the hybrid ecosystem governance model. The central role of the cooperative is to facilitate linkages between beekeepers, suppliers and business support organizations, and the corporate. In addition, the cooperative protects the interest of beekeepers and deals with legal/regulatory issues for the benefit of beekeepers. Also, it ensures that beekeepers are fairly/smoothly paid. The cooperative get revenue from three sources: rent of the CC, monthly subscription fee of members, and commission from honey sales. Furthermore, the cooperative board should decide all charges and be approved by members in the annual general meeting—again, the

cooperative link with the orchestrator. So, beekeepers, cooperatives, and orchestrators interlink at the CC. The role of the cooperative is (1) to make sure that the building and its infrastructure are in good condition to enhance the smooth operation. (2) To make sure that all beekeeper-members sell their honey through the CC and there is no side selling.

Beekeepers deposit honey which is checked by both the cooperative representative and the orchestrator employee. Then, they record/document and sign the papers: the document is customized depending on the information they want to capture. First, however, some basic information like the depositor's identity, type/category (comb or semi-refined), grade, quantity, and value/price should be captured. Then, after signing, every partner should take a copy of the document for further references. This documentation is crucial as it clears all doubts, complaints, and fraud that may arise concerning quality, quantity, and later payments. In this regard, the role of a beekeeper and a cooperative in handling honey ends at this point. After that, the cooperative can claim or follow-up for payments from the orchestrator and make sure that the depositor [beekeeper] is paid: The orchestrator pays the respective amount of money to the cooperative, which pays the beekeeper accordingly. The orchestrator is the following important link in the ecosystem. It is an enterprise, the commercial company, which oversees all commercial operations of the ecosystem. The orchestrator has two crucial links: the link to the production side through the CC and the link to the market. First, the orchestrator is linked to both the cooperative and beekeepers in the CC. It is the buyer of all honey deposited by beekeepers and manages all CC activities. As a result, the efficiency of the beekeeping ecosystem is improved as the orchestrator owns the machines and working tools and operates the CC's operational activities. The following link is in the channel where the orchestrator is linked with traders in the honey market. The orchestrator decides on the communication mix and the distribution channels to reach customers in the region. Therefore, the market is served with few strong brands, competition is managed, and the collaboration model increases the size of the pie: Creating value together and sharing revenue fairly.

The last but equally important actor in the ecosystem is the customer. All the activities, arrangements or positioning and interlinkage of actors aim to present the value proposition to target customers in the market. For example, in the beekeeping industry in Tanzania, potential customers are individual households, tourists, and hotels and restaurants in the urban market. Therefore, the honey products should be delivered to target customers in urban markets, and the trader should capture revenues. So, the orchestrator is linked with customers through both direct and indirect channels of value delivery and should decide on how customers will pay.

6. Conclusion

The value chain of rural economies can be commercialized by changing the industry architecture from a transactional level to a collaborative model. This transformation should foster the re-arrangement of the industry structure by organizing the ecosystem and its governance around the CC. This re-arrangement will ensure bulking of produces, one voice or negotiation power, shared markets and access of complementary skills and assets. In the end, the collection point performs the aggregation, commercialization, and linkage roles. For example, depending on how the CC is owned and managed, honey is received from depositors (beekeepers), employees check for quality, traceability, and grading.

The centre manages deposits, keeps records, maintains safety, and find markets. Also, it is a link between producers (beekeepers) and buyers or private sector organizations. A well-structured CC creates a good connection such that products are quickly sold and at a reasonable price. However, developing an appropriate commercial structure is a challenge. It is pretty evident that few actors, primarily traders, set the game's rules to promote and

protect their interests. Given the weak organization at the producer level, presumably, beekeepers are not much involved in the governance of the value chain. The government does not yet enforce the policy and guidelines. It leaves the sector at the mercy of some greedy actors. With well-defined activities of the centre: value proposition, customer segments, channels, and relationships can also be well managed. To achieve this, a well-structured partnership model, also called the "hybrid model", between a cooperative and commercial company is necessary.

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Bio-note

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EXPLORING THE DETERMINANTS OF R&D INVESTMENT IN THE ASIAN CONTEXT BEFORE AND AFTER COVID19

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Abstract: *The article aims to study the mechanisms underlying the development of research and development (R&D) through investment in renewable energies and in ICTs before and after the Covid19 pandemic. First, we perform a dynamic panel regression through panel data from 2000 to 2019 for 14 Asian countries. In addition to economic and environmental determinants, the empirical study reveals that variables linked to intellectual property are the drivers of R&D investment in the Asian region. It is interesting to note that while brand requests stimulate R&D, industrial applications hamper this type of investment. Second, we provide an OLS regression of 38 Asian countries to analyze the effect of Covid-19 on research and development. Our empirical results encourage governments to invest more in renewable energies not only to reduce the greenhouse effect, but also to increase investment in R&D. In addition, policymakers are urged to apply more incentives to expand the export of ICT in both services and products.*

1. Introduction

Innovation is one of the main determinants of economic development for countries around the world. Several researchers have analyzed innovation indicators including research and development (Chawla 2019 and patent filings (Crepon and Duguet 1994). A significant number of studies have analyzed the role of innovation mechanisms in companies within the industrial sector (Jegede et al. 2019) and services (Jegede et al. 2013). Although these studies have made important contributions to better understand the dynamics of innovation (Olaoye et al. 2020; Evangelista 2006; Qiu et al. 2020) the question of the determinant of technological development is still limited. Fewer studies have developed the stimulating factors for these research and development (R&D) mechanisms. Or it seems paradoxical, because in recent years, the R&D indicator has accumulated remarkable growth in 2017 like France which has accumulated an increase of 1.5% with an amount of 50.6 billion euros (€).

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In the same year, the OECD countries made strong progress, with an increase of 4.1% compared to 2016. China and South Korea tend to increase their global weight in terms of business research in the sectors of industries such as ICT. Between 2007 and 2015, R&D spending did increase only by 2% in Europe, while it soared by 40% in North America and 60% in Asia. This explains the orientation of the center of gravity of global innovation which is rapidly shifting towards China. According to the consulting firm PwC, Asia dethroned, in 2015, the United States which recorded (33%) of the total expenditure of R&D while European countries realized (28%). For example, in 2018, French public spending on energy, research and development (R&D) reached 1,098 million euros. As a share of GDP, public energy R&D spending puts France in second place among the G7 countries, after Japan.

The scope of this research is motivated by several reasons. Firstly, R&D is one of the major challenges for the economy as a growth factor. From the perspective of Mowery and Rosenberg (1989), research and development facilities play an important role in the innovation process. Secondly, empirical studies on innovation have focused on investigating the impacts of public R&D spending on innovation performance (Sarwar and Maqbool. 2019). However, the determinants of R&D investment have received much less attention (Grafström et al. 2020). More specifically, R&D efforts in renewable energy should be scaled up to meet existing global commitments to climate change mitigation (Del Río.2004). Furthermore, in recent times, it has become increasingly clear that the COVID-19 pandemic has not only fundamentally changed the way many organizations operate, but it also precipitated the acceleration of digitalization, paving the way for changes in lifestyle, work patterns and business strategies (Amankwah-Amoah et al. 2020). The range of measures, including local and national closures, social distancing measures, government-led border closures and quarantines have forced many businesses to adapt their short-term business models (Sostero et al. 2020). However, businesses have yet to realize the full potential of digitization, and the COVID-19 pandemic is driving the adoption of emerging technologies.

Previous research has shown that improving business process skills, new forms of cooperation and customer engagement, as well as a faster pace of innovation are drivers of digitalization (Adomako et al. 2020). Baldwin and Johnson (1995) found that ICT has already had a significant impact on R&D activities, both in terms of operating conditions of operations and research teams and in the management of these activities.

The main contribution of our paper is to provide an econometric analysis the driving factors of R&D investment. The empirical study aims to extend this framework to the Asian region, as a region that includes large industrial countries like China, and also as the Asian countries are characterized by a high level of exports. In fact, Asia is the largest carbon emitter in the world (Tang et al. 2018) and the rapid growth of its exports has largely contributed to the increase in carbon emissions (Zhang and Liu 2015). In addition, strong export growth in the Asian region has exacerbated environmental pollution, which calls on the authorities to strengthen environmental governance. In this research, we present theoretical arguments and empirical results that suggest identifying the complexity of the relationship between research and development through economic and environmental variables. In this context, dynamic regression of panel data was used. This methodology will make it possible to identify more precisely the origin of the stimulation of innovation. The results of the study will allow a reflection on the national innovation policy, which is mainly oriented towards the promotion of R&D spending and therefore the development of technological innovations.

There is evidence from the results of our study that R&D investments are driven by both polluted and renewable sources of energy proving the increased interest to clean energy. Besides, as expected, we find that ICT export is a significant determinant of R&D. Finally, we interestingly prove that trade applications and not industrial ones are drivers of investment in R&D. The overarching goal of the empirical study is to prove that the Asia

region needs to more invest in renewable sources of energy given its beneficial impact on research and development and apply more incentives to ICT export both in products and services to enhance investment in R&D. During the period of Covid-19, we confirm that R&D is increasing while air pollution is reduced. In addition, the industrial export of ICT is reduced while the export of ICT services thrives. We also report a significant reduction in renewable energies and therefore in the use of these natural resources in industries.

The first section presents an introduction while the second one provides an overview of the relevant literature on the topic. Section three presents the methodological framework, highlights and discusses the main empirical findings. Section four concludes and sets up some policy implications.

2. Literature Review

R&D and innovations–technological, environmental, and digital are drivers for development in all societies. Nevertheless, the question of the effect of research and development on market investments and its indirect consequences such as pollution have received considerable attention in the existing literature, but no consensus was reached in theoretical and empirical work, Roda and Perry (2014). From a theoretical standpoint, the literature review intends to examine the ways in which innovations have to be studied and how can they be used for sustainability. From an empirical standpoint, the analysis aims to extend our understanding of the drivers of innovation. Beyond technologies, we will show how Sustainable development constitutes a lever for innovation, ICT is a digital infrastructure for Innovation and intellectual property is a driver of innovation.

Sustainable development, a lever for innovation

For too long, industrial development has had an environmental and social cost. Indeed, rapid changes in technology and lifestyle have led to an increasing energy demand which has become the main cause of environmental deterioration, both in terms of pollution and above all in the intensive use of natural resources such as excessive fuel consumption (Rust and Leslie, 2020; Olivier et al. 2012). From this point of view, environmental economics, environmental pollution and especially air pollution constitute an inevitable problem for economic development during industrialization (Aldakhil et al.2019, Shu et al. 2020). Hence, environmental issues (climate change, scarcity of natural resources) combined with societal pressures represent real opportunities for innovation (Landrigan 2017). In this line of thinking, R&D, innovation and new technologies constitute important accelerators to push forward sustainable development in Asia region, especially for improving energy efficiency and developing renewable energy and related technologies for combating atmosphere pollution and climate change. On these grounds, R&D and innovations must create pathways towards sustainable development. For instance, Destek and Aslan (2020) found that R&D significantly reduces CO2 emissions. This justifies that R&D investments by governments and businesses are both conducive to promoting the level of innovation. Within this context, sustainable development seems to be a vector for innovation.

In this sobering context, it's worth noting that the pandemic crisis has had a significant negative impact on sustainable development efforts in every corner of the world. Digitization also facilitates a greater ease of doing business in the external activities of companies and can enable organizations to improve and improve overall competitiveness (Ritter and Pedersen, 2020). Amankwah-Amoah (2020) found Innovation and its diffusion have already played an important role in the global response to the pandemic; with rapid progress on the development of Covid-19 vaccines and treatments, and more generally through the increased adoption of digital technologies that have allowed businesses and individuals to adapt to social distancing requirements. This makes the adoption of Sustainable Development Goals more relevant, as

they are intended to transform the systemic conditions of our economies. Even though, the human, social and economic impacts of the health crisis could reverse progress made in achieving such goals. In the same line, Amankwah-Amoah (2020) found that sustainable and SDG-aligned recovery requires cross-sectoral actions and mechanisms. The author presents a roadmap for governments policy coherence to guarantee recovery from the pandemic.

ICT, digital infrastructure for Innovation

In this connected world, innovations need a digital infrastructure to innovate on and it would be interesting to investigate its potential for the benefit of innovation. According to KangKi and Kang (2014), a large number of tools developed have transformed research activities, have facilitated certain operations by integrating automated routines and have broadened the scope of accessible information, even if they sometimes present certain limitations. Qi et al. (2020) and Zhang (2019) confirm the positive correlation between the level of high-tech exports and total R&D spending. In this context, Salman et al. (2019) concluded that research and development spending is seen as a comparative advantage for ICT exports but a disadvantage for environmental pollution. Furthermore, the economic recovery and the resumption of sustainable economic growth in Asia, particularly in countries like China, are largely supported by the stimulation of high-tech exports.

Intellectual property: a driver of innovation

In today's economy, the role of intellectual property (IP) has changed considerably, both in developed and developing economies. Nevertheless, the relationship between innovation and IP protection is not yet clear, where the question is whether IP enforces or impedes innovation (Brem et al. 2017). Empirical evidence on the impacts of intellectual property rights (IPR) protection in promoting innovation in developing countries remain sunder explored and inconclusive (Kumar 2002; Brem et al. 2017). West and Gallagher (2006), the primary purpose of IPRs is to secure and promote investment in innovation. These results are confirmed with the studies of Kanwar and Evenson (2003). In Asia, the protection is not only to stimulate short-term R&D investment, but also affords the opportunity to reinvigorate the social and culture value system, which have positive impacts on innovation and competitiveness. A well-performing IP regime appears as a tool to improve the innovative capacity and competitiveness of the economy (United Nations 2011). Currently, some Asian countries have made great progress in IPR protection. In this paper, we will examine the role of intellectual property protection in fostering innovation and whether the likelihood of investing in technological product innovation depends on a country's ability to manage intellectual property.

The COVID-19 pandemic is causing widespread and deep suffering and misery across the world. Measures taken by governments to combat the pandemic, reduce suffering and stop the spread of the virus are also causing, as a necessary side effect, widespread economic disruption, which in turn causes and will cause widespread suffering as businesses stagnate, global value chains cease to function and employees, entrepreneurs and the many participants in the odd-job economy lose their livelihoods (OECD 2020; Chesbrough 2020). Kuckertz et al. (2020) found that the policy measures available in international and national intellectual property law to manage and mitigate emergencies and disasters include the use of exceptions for cultural and educational works to ensure the availability of vital data, information and knowledge for the purposes of combating and containing the virus, reducing the human suffering it causes, and enabling people to disrupt institutions, such as schools and universities, to continue to carry out their missions in remote or virtual conditions.

3. Methodology and sample collection

This section explains the sample and data sources. We then describe the measures of the key variables used in this study and the methodological approach.

a. Sample collection and variables

We collect information from data bases on emissions, telecommunications, technology and environment for 14 Asian countries from 2000 to 2019 and 38 Asian countries during the year 2020. We get information on communications from the International Telecommunication Union (ITU), World Telecommunication/ICT (WT/ICT), Development Report and database, the National Science Foundation, Science and Engineering Indicators and the Netcraft (http://www.netcraft.com/). We also gather information on technology from the World Intellectual Property Organization (WIPO), WIPO Patent Report: Statistics on Worldwide Patent Activity and the UNESCO Institute for Statistics http://uis.unesco.org/) and information about emissions from the Carbon Dioxide Information Analysis Center, Environmental Sciences Division, Oak Ridge National Laboratory, Tennessee, United State and the report of Brauer et al. (2017), for the Global Burden of Disease Study 2017. In addition, we collect information about Economic Policy & Debt from the World Bank national accounts data, and OECD National Accounts data files. Finally, we gather information about Energy production and use from the World Bank, Sustainable Energy for All database from the Global Tracking Framework led jointly by the World Bank, International Energy Agency, and the Energy Sector Management Assistance Program. The variables included in our models and their definitions are summarized in Table 1.

b. Scope and aim of the study

To identify the complexity of the relationship between environment and technology through economic variables, we use dynamic panel data regression (Yang et al. 2004; Qiu et al. 2020). This regression captures the dynamic relationship between the endogenous variables, its lagged value, and the other exogenous variables. Through the studies of Arellano and Bond (1998, 1991), we implement the System-GMM estimator that uses moment conditions. In addition, this approach is more consistent than Difference GMM in the existence of endogenous variables and fixed effects (Bond, 2002). To structure the empirical model, we propose three assumptions namely:

H_1: Renewable energy enters improve investing in R &D.
H_2: Information and communication technology is in favor of investing in R &D.
H_3: The global pandemic COVID-19 intensifies investing in R &D.

Finally, we specify the following pooled panel OLS regression model to investigate the impact of technology and renewable energy and other control variables on investment in research and development.

$$Y_{c,t} = \alpha_c + \beta_1(\Delta Environnement_{c,t}) + \beta_2(RENEW_{c,t}) + \beta_3(CV_{c,t}) + \varepsilon_{c,t}$$

Here, Y measures investment in research and development in county c on day t. α is a constant term and ε is the error term.

Table 1: Variables presentation

Variables	Indication	Definition and measurement
Research and Development	R&D	The gross domestic expenditures on Research & Development expressed as a percent of GDP. In this field, both capital and current expenditures are included mainly in the following sectors: Government, Business enterprise, Private non-profit and Higher education. R&D includes basic research, applied research, as well as experimental development. (https://databank.worldbank.org; http://uis.unesco.org)
ICT industrial exportation	ICT.IND.exp	The annual weighted average of total goods exports. Information and communication technology (ICT) goods exports encompass communication equipment, computers and peripheral equipment, electronic components, consumer electronic equipment and other IT goods. (https://databank.worldbank.org; http://unctadstat.unctad.org).
Atmospheric pollution	ATMOS. poll	The average level of exposure of a population to concentrations of some suspended particulate matter that measure less than 2.5 microns in aerodynamic diameter, which can deeply affect the respiratory tract and even cause serious health damage. (https://databank.worldbank.org).
Renewable energy consumption	RENEW	The share of renewable energy in total final energy consumption.
ICT service exports	ICT.SER.exp	Information and communication technology service exports encompass computer and communication services and some other information services such as news-related service transactions or computer data. (https://databank.worldbank.org).
Industrial design applications	INDUSTRIAL.app	Industrial design applications encompass all applications to register an industrial design with the national or regional IP offices as well as designations received by a relevant office through the Hague System. Moreover, industrial designs could be applied to a great variety of industrial products and handicrafts. They concern the aesthetic or ornamental aspects of a useful product, involving compositions of colors or lines or may be any three-dimensional forms that add a special appearance to a product or handicraft. (www.wipo.int/ipstats; https://www.indexmundi.com).

| Trademark applications | TRADE.app | Trademark applications filed involve all applications to register a trademark with the national or regional IP offices as well as designations received by all relevant offices through the Madrid System. (https://databank.worldbank.org; www.wipo.int/ipstats). |
| Covid | Covid | Number of infected cases accumulated. |

4. Results

The descriptive statistics and correlations for the studied variables are presented in Table 2 and 3before and during COVID-19. Both tables statistics display average values and standard deviations for each variable. Before COVID-19, considering the amount of investment in research and development, we record a value of 75% reflecting the big interest of Asian countries in R&D. We also notice that the standard deviation is almost high for industrial and trade applications reflecting that there is a high dispersion of values among the 14 studied Asian countries. This is explained by the diversified sample consisting of emerging countries and developed ones. For the left variables, the value of standard reflects more homogenous values.

Table 2: Descriptive statistics before Covid19

Variable	Obs	Mean	Std. Dev.	Min	Max
R&D	229	0.7565397	0.8830631	0.00325	3.555854
ATMOS. poll	229	93.62885	18.9162	24.66203	100
INDUSTRIAL.app	229	115071.8	375916.5	105	2153827
TRADE.app	229	14428.85	25168.32	85	156769
ICT.SER.exp	229	1.33	3.07	532819.8	2.87
RENEW	229	30.19779	25.14664	0.3251189	85.47206
ICT.IND.exp	229	12.02443	14.62228	-0.0058052	54.97448

Source: Authors' computation

After COVID-19, we remarkably note that R&D is multiplied while atmospheric pollution is reduced. In fact, faced with the pandemic and the economic difficulties it causes, the entire governments in Asia are mobilized. For example, Singapore is in a position to act on the financing of medical research and development (R&D) and to mobilize its army in the distribution of masks. Considering pollution, this result is quite understandable. When part of the productive tool of the world's leading economic power, China, stops, it's a real breath of fresh air for the atmosphere. The pollution monitoring satellites of NASA and the European Space Agency (ESA) have thus detected significant reductions in nitrogen dioxide (NO2) concentrations over China. Besides, we find that ICT industrial exportation is reduced while ICT service exportation prospers. The World investment report 2021 documented the big reduction in high skill industries especially from 2019 to 2020. The increase of ICT service export is expected. The crisis associated with the COVID-19 pandemic has accelerated the expansion of e-commerce to new categories of businesses, consumers and products. This boom has allowed consumers to access a wide range of products while remaining comfortably and safely at home, and businesses to continue operating despite restrictions

on physical contact and other containment measures. Finally, we report a serious reduction in renewable energy and thus the use of such natural resources in industries.

Table 3: Descriptive statistics after Covid19

Variable	Obs.	Mean	Std. Dev	Min	Max
RD	38	9.93936	5.150566	.0387	24.80659
COVID	38	94.10095	52.31106	7.12548	182.6985
ATMOS. poll	38	26.20683	8.461013	11.53418	42.53086
RENEW	38	22.77799	12.36615	4.177775	57.13312
ICT.IND.exp	38	6.220518	2.503476	4.439544	9.722147
ICT.SER.exp	38	31.39346	18.93342	3.125489	67.82078

Source: Authors' computation

Before running our empirical model, we test for the existence of bi-variate and multivariate correlation through the Pearson matrix and the variance inflation factor (VIF). Examination of the correlation matrix shows that all correlation coefficients are less than 0.9. According to Kennedy (1985), there is no serious problem of multi-collinearity before and during COVID-19.

Table 4: Pairwise correlation matrix before Covid-19

	RD	ATMOS. poll	INDUSTRIAL. App	ICT. SER.exp	RENEW	ICT.IND.exp
RD	1.0000					
ATMOS. Poll	0.4198*	1.0000				
	0.0000					
INDUSTRIAL.app	0.0442*	-0.0758*	1.0000			
	0.0000	0.2535				
ICT. SER.exp	0.4007*	-0.0473	0.5021*	1.0000		
	0.0000	0.4767	0.0000			
RENEW	0.3923	0.2777*	-0.2718*	-0.2803*	1.0000	
	0.0000	0.0000	0.0000	0.0000		
ICT.IND.exp	0.2040*	0.2084*	0.3806*	0.3532*	-0.3232*	1.0000
	0.0019	0.0015	0	0	0	

Source: Authors' computation

Table 5: Pairwise correlation matrix during Covid-19

	RD	covidc~u	ATMOS. poll	RENEW	ICT.IND. exp	ICT.SER. exp	INDUSTRIAL. app
RD	1.0000						
Covidcumu	-0.0036	1.0000					
	0.8827						
ATMOS. Poll	0.3838*	0.8032*	1.0000				
	0.0174	0.0000					
RENEW	0.0896	0.1698	0.6096*	1.0000			
	0.5928	0.3082	0.0000				
ICT.IND. exp	0.3004	-0.8084*	-0.3142	0.3366	* 1.0000		
	0.0669	0.0000	0.0547	0.0388			
ICT.SER. exp	0.3009	0.8311*	0.8524*	0.1249	-0.6478*	1.0000	
	0.0664	0.0000	0.0000	0.4550	0.0000		
INDUSTRIAL. app	0.0485	0.0000	0.0000	0.5247	0.000	0.0000	1.0000

Source: Authors' computation

Considering the possibility of multicollinearity in the regression analysis, the variance inflation factor (VIF-test) was calculated. The variance inflation factors were all lower than the critical value of 10, which indicates that the regression performed in this study, does not present a multicollinearity problem (Aiken and West, 1991).

Table 6: Variance inflation factor

Variable	VIF	1/VIF
RENEW	1.34	0.749035
ICT.IND.exp	1.32	0.757618
ATMOS. poll	1.22	0.822017
INDUSTRIAL.app	1.13	0.881557
ICT.SER.exp	1.11	0.904012
Mean VIF	1.22	

Source: Authors' computation

Next, we test for the determinants of investing in research and development before COVID-19. We interestingly find that both atmospheric pollution and investment in renewable energies enter positive impact on R&D. Our findings join those of Rust (2020), He and Wang (2020) and Olivier et al. (2012). This reflects the fact that economies are still relying on polluted industries while clean energies are gaining more and more importance. Our results are in line with Bertarelli and Lodi (2019) who concludes that small firms adopt polluting technology. On the other hand, Wang et al. (2020) approve the positive link between ICT export and R&D expenditure. In fact, in 2015, Asian governments adopted an inspirational goal of 23% renewable energy by 2025. Besides, the total power generation would double by 2025 to counterpart energy demand growth. Encouragingly, 62% of the world's renewable energy jobs are in Asian countries. It can therefore be concluded that, given the foreseeable

rise in energy prices in Asia over the next 20 years, there is a need to direct industrial innovation efforts and the supply of goods and services towards energy-efficient technologies.

We also find that export of ICT of industrial product and ICT services is in favor of the development of investing in R&D. This result is quite predictable since ICT are related to investment in R&D. In this line of thoughts, Destek and Aslan (2020), He and Wang (2020) confirm the positive correlation between the level of high-tech exports and total R&D spending. According to Huang and Liu (2005), the interaction between firms' innovation capital (R&D rate) and ICT capital (ICT expenditure rate) is positively related to performance, showing a synergy effect. Moreover, ICT tools constitute a new factor in the apprehension of problems and solutions, at the different levels of localization, organization, management and practice of R&D.

In order to improve the robustness of our results, we include as control variables the number of industrial applications and trade applications measuring the applications to register an industrial design or trademark with the regional or national IP office. We empirically find that while TRADE.app enters positive impact on research and development investment, INDUSTRIAL.app has a negative impact. This result may reflect that research and development are more oriented to service and IP plays a key role in driving innovation. Our results are consistent with studies by Whicher et al. (2011) who confirmed that the trademark of a product is a factor that links the development of new products and the commercialization of innovation.

Table 7: Dynamic panel-data estimation before COVID-19, one-step difference GMM

R&D	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval
R&D L1.	0.9667923***	0.0954783	10.13	0.000	0.758763	1.174822
ATMOS. poll	0.022414**	0.0088949	2.52	0.027	0.0030337	0.0417944
INDUSTRIAL.app	-4.10***	1.08	-3.79	0.003	-6.46	-1.74
TRADE.app	0.0000122***	2.16	5.66	0.000	7.54	0.000017
ICT.SER.exp	1.66*	7.69	2.16	0.051	-1.22	3.34
RENEW	0.0268671***	0.0066149	4.06	0.002	0.0124545	0.0412796
ICT.IND.exp	0.0079756***	0.0026022	3.06	0.01	0.0023059	0.0136452

Source: Authors' computation

We can conclude that globally the Asian countries investment in research and development is positively determined by both polluted and renewable source of energies, ICT industrial, service export and trade applications. Nevertheless, industrial design has a negative impact on investment in research and development. The empirical results confirm the first and second hypotheses. These findings show that the use of clean energy is gaining more and more importance compared to polluted energy resources. Also, as expected ICT exportation boost R&D especially in technological services. Our results allow us to draw some managerial implications. In fact, governments are urged to more invest in renewable energies especially in consequence of augmented pressure from civil society and warnings of global health organizations. This decision is beneficial in both senses. In fact, while governments reduce polluted emissions and improve environment quality, they boost investment in research and development. But, after COVID-19, a dramatic change in economy is perceived.

Table 8: Dynamic panel-data estimation during COVID 19 one-step difference GMM

RD	Coef.	Std. Err.	T	P>|t|	[95% Conf.Interval	
COVID	4.86e-06***	1.65e-06	2.96	0.006	1.51e-06	8.21e-06
ATMOS. poll	-2.973464***	3.10e-06	9.6e+05	0.000	2.973457	2.97347
RENEW	-1.172711***	2.99e-06	-3.9e+05	0.000	-1.172717	-1.172705
ICT.SER.exp	0.8007638***	3.45e-06	-2.3e+05	0.000	-.8007708	-.8007568
ICT.IND.exp	1.10***	1.04	2.12	0.001	0.682	1.14
INDUSTRIAL.app	2.08***	1.27	2.85	0.004	1.46	1.14
_cons	-27.34715***	1.6e+05		0.000	-27.3475	-27.34681

Source: Authors' computation

The intense spread of COVID-19 has threatened human lives, disrupted livelihoods and affected trade, the economy and businesses around the world. First, we find that during the global pandemic, the investment of Asian countries in research and development during the pandemic is not determined by renewable and polluted energy sources as we found in our first model before COVID-19. In time of global health crisis, it is more important than ever to protect the health of the billions of people who do not have clean cooking facilities. Clearly, the pandemic is deterministic of the prosper of research and development. This finding confirms the third hypothesis. Besides, both ICT industrial and service export are in favor of research and development. Which is confirmed by the WIPO (2020) which found that the Global Innovation Index in 2020 shows that R&D spending is highly concentrated in a few thousand companies active in this sector around the world - the 2,500 companies that spend the most on R&D are thus responsible for more than 90% of the R&D funded by companies in the world. Most of these companies place innovation at the heart of their business strategy. They noted that the ICT (information and communication technology) and software sectors are expected to experience sustained growth in their revenues and R&D activities. These results are confirmed with United Nation reports.

We conclude that governments, foundations, donors and the private sector must work together to accelerate the transition to clean and sustainable fuels and technologies to protect the health of the most vulnerable populations. In fact, access to reliable energy is of vital importance, especially during mitigated period. It is essential not only to prevent and fight the pandemic, but also to accelerate the return to normalcy and better rebuild by providing everyone with a more sustainable and resilient future. The COVID-19 pandemic has highlighted the deep inequalities that exist in the world in terms of access to modern, affordable and sustainable energy. Electricity is an essential part of the response to the public health emergency in many countries. Second, Asian countries' investment in research and development during the pandemic is determined by industrial and commercial applications of ICTs. This is confirmed by the work of Candelaa et al. (2020) who found that the coronavirus pandemic has made Internet access an essential condition for continued growth. Around the world, digital solutions have become fundamental to protecting supply chains, sustaining public services, and ensuring the continuity of business and education. In short, ICT infrastructure has become essential to the functioning of an economy, alongside water, electricity and food supply networks.

Heart of the matter of this historic transformation, Sein (2020) has confirmed that ICT infrastructure is the main catalyst - along with the right policy - for future competitiveness and innovation. ICT adoption is considerably varying between economies in the region since Internet usage rates array from more than 90% in developed economies to less than 15% in emerging one in the region.

5. Conclusion

This article examines the effect of the mechanisms underlying the development of research and development (R&D) through investment in renewable energy and ICTs before and after the Covid19 pandemic. First, we propose an OLS regression of 38 Asian countries to analyze the effect of this pandemic on research and development we confirm that R&D is increasing while air pollution is reduced. In addition, the industrial export of ICT is reduced while the export of ICT services thrives. We also report a significant reduction in renewable energies and therefore in the use of these natural resources in industries. Second, we perform a second dynamic panel regression using panel data from 2000 to 2019 for 15 Asian countries. We see that before this virus that the variables related to intellectual property were the drivers of R&D investments in the Asian region. It is interesting to note that while the demands of brands stimulate R&D, industrial applications slow down this type of investment. We empirically argue that while economies still rely on polluted industries, clean energy is gaining more and more importance. In addition, as expected, the export of ICT industrial products and ICT services is in favor of the development of investment in R&D. Based on the above findings, we can provide some key policy implications for Asian authorities. In a normal context, policymakers are urged to invest in renewable energy not only because of global pressure but also because of its positive impact on R&D during stable periods. In this context of a pandemic, the ability of companies to cope with these changes is a key competitive advantage that will require the adoption and mastery of certain digital tools. This is due to the transition to Industry 4.0, which is therefore not only a temporary means of dealing with the crisis, but a lasting solution to become more competitive in the medium and long term. In addition, the ability of companies to begin their transition to this model will result in better customer relations, increased competitiveness and increased market share. Therefore, the coronavirus pandemic has made digital solutions an essential condition for continued economic growth.

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INNOVATION STRATEGIES AND MARKET ORIENTATION IN SELECTED NIGERIAN BANKS

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Abstract: *In an attempt at improving market orientation, management of organisations employ innovation strategies and practices that reflect this area of operation. Thus, this study investigated innovation strategies and market orientation in selected Nigerian banks. It specifically examined the effect of process, product, marketing and organisational innovation on market orientation among selected Nigerian banks. It is a field survey within a cross sectional time frame of 2021. A total of 399 management and senior staff of five deposit money banks with international affiliation constituted the sample size. Data was gotten from the primary source and generated through the administration of copies of questionnaire to respondents. Data was analysed using descriptive and inferential statistics. The outcomes of the study showed that process, marketing and organisational innovation have positive significant effect on market orientation among selected Nigerian banks. This study therefore recommends that deposit money banks should implement process, product, marketing and organisational innovation by putting in place the effective and efficient utilization of technologies in the areas of operations and service delivery. It also recommends that they cover wide areas of the market in terms of segmentation, market share, promotional activities, advertisement and other marketing areas so that they can attract new customers and new businesses so as to increase the demand and visibility of their products thus enhancing their customers' satisfaction. Also, the study recommends constant engagement in organisational innovation in a bid to meet the changing competitive nature of the banking industry and the set international standard to enhance their market orientation vis-à-vis their overall performance.*

Keywords: Innovation Strategies, Market Orientation, Process Innovation, Product Innovation, Marketing Innovation and Organisational Innovation.

JEL classification: M10, M30, L10, L19, L20, L21, L22

1. Introduction
Continuous performance is one of the major objectives of any organisation and through performance organisations can grow and progress (Gavrea, Ilies and Stegerean, 2011). Performance encompasses frequent activities done to ensure the establishment and achievement of organisational goals. It also evaluates the progress made towards the set

goals and ensures that the necessary modifications to accomplish these goals more effectively and efficiently are done (Njagi and Kombo, 2014). In an attempt to improve performance, the managements of organisations have to employ innovation strategies and practices that reflect the area of operation. The need for innovation strategies towards the enhancement of its market orientation is that the business environment is highly competitive, complex in nature and there is economic instability all over the world (Cerulli, 2014). An effective innovation strategy correctly informs both the management and subordinates staff about the job they must do, market segments to be targeted in the achievement of the projected growth and the unmet needs that needs to be given attention in order to achieve a great performance (Pinoy, 2015).

The goal of innovation strategy is to ensure that organisations incorporate effective strategies to enhance improved performance. Innovation strategy enables top management to monitor the activities of their competitors, access customer market information, use organisational resources effectively and efficiently towards the growth of the organisation (Oke, Walumbwa, and Myers, 2012). Innovation strategy activities such as product innovation, market innovation, process innovation and organisational innovation could have implications for organisational performance (Verhees and Meulenberg, 2004). Therefore, bearing innovation strategy in mind, organisations will usually conduct their activities taking into cognizance internal and external contingencies, to better manage uncertainties as well as achieve better performance.

Major factors like globalization and the growing competitiveness in the market have compelled financial institutions to entrench innovativeness in their operations in order to gain a sustainable competitive advantage and improve their overall performance in terms of market orientation, financial standing, human resources among others (Muigai and Njeri, 2018). Financial institutions are currently not only competing based on their service offerings but also on the basis of physical products as it may be hard to distinguish between the products of the competing brands in a given product category. The ever increasing competition in the banking industry has caused the players in this industry to find alternate ways of surviving and performing well amidst the competition. Asikhia (2010) noted that many organisations in the banking and other related industry have continuously been reformed when it comes to market share, technology, competition and consumer demands. Innovation strategy in the banking industry can bring about swift transformation especially when it concerns new distribution channel systems, such as Internet and mobile banking services amongst others (Larsen, Markides and Gary, 2002). While these technological innovations possibly will have some resemblances, they meet diverse needs in the service delivery strategy of deposit banks (Mansury and Love, 2008). It is because such banks deal predominantly with services that needs the invention and innovation of products while improving existing ones, and are consequently required to stay relevant even as the business environment experiences volatile changes (Porter, 2008).

Organisations need to comprehend their processes of innovation to be able to thrive in a challenging business environment. McAdam (2000) noted that for an innovation strategy to be effective, it must integrate all areas of an organisation and possess the ability to affect every department and process in that organisation. Innovation may be transformational, far-reaching or incrementally dependent on the nature and the resultant effect the change has on the performance of the organisation. In a competitive business environment, competing organisation strive to be the bench racer instead of benchmarking in innovation strategy so as to enhance their performance. Innovation strategy when appropriately applied towards the achievement of an increasing and high organisational performance in any business will vary from organisation to organisation. Larsen, Markides and Gary (2002) asserted that strategic innovation centres on adapting over time the strategy on a corporate level, pinpointing untapped positions in the industry ahead of other rival organisations. Hence, this

study investigates the impact of innovation strategies on market orientation in Nigeria with emphasis on Deposit Money Banks (DMBs).

1.2 Statement of the Research Problem

Volatile uncertainties have affected the orientation of organisations towards innovation and its activities leading to innovation not being implemented. This leads to reduction in organisational returns on investment, equity and the general overall performance (Abdi, 2014). Innovation comes with its challenges and uncertainties and many organisations, especially those in the banking sector perceive that their approach towards innovation for increased performances have not yielded the desired returns expected (Siam, 2006; Sana, Mohammad, Hassan, and Momina, 2011). The impacts of these innovation strategies like product, process, marketing and organisational strategies are absent in most organisations such as banks and other financial institutions. They have streamlined their strategy to conventional approaches and procedures, hence they are not being able to perform optimally and enhance their organisational performance (Larsen, Markides and Gary, 2002). Despite the implication of innovation strategies (like process, product, marketing and organisational strategies) in translating the organisational performance in these banks, the impact is yet to be understood because of the vague understanding of the aim of innovation and its' strategies. Hence, its impact on the performance of an organisation remains a key ingredient of research.

However, most prior studies on innovation strategies and market orientation were confined to developed countries, while few of these extant studies were from developing countries like Nigeria. For instance, Obenjo (2016) investigated the effect of innovation strategies on the performance of firms listed in the NSE, Ejabefio and Nwaeke (2018) examined corporate entrepreneurship initiative and organisational performance of deposit money banks in Port Harcourt, Akpoviroro, Akinbola and Akinrinola (2019) examined process innovation on organisational performance and Ukpabio., Oyebisi and Siyanbola (2019) examined the role played by innovation in Small and Medium Enterprises (SMEs) operations sustainability in the manufacturing sector of Chinhoyi. Their results were inconsistent and inconclusive thereby creating a knowledge gap. Consequently, extant studies from Nigeria failed to introduce variables like process and organisational innovations as variables about performance among selected deposit money banks in Lagos. This is a gap in knowledge this study fills.

1.3 Objectives of the Study

This study broadly investigated the effect of innovative strategies on market orientation in selected Nigerian banks, while it specifically looked at the objectives below:

    i). determine the effect of process innovation on market orientation in selected Nigerian banks;

    ii). ascertain the relationship between product innovation and market orientation in selected Nigerian banks;

    iii). evaluate how market innovation affects the market orientation in selected Nigerian banks; and,

    iv). examine the extent to which organisational innovation impacts the market orientation in selected Nigerian banks.

1.4 Research Hypotheses

The hypotheses are stated in the null form as follows:

    i). Process innovation has no significant effect on the market orientation in selected Nigerian banks.

ii). Product innovation has no significant relationship on the market orientation in selected Nigerian banks.

iii). Market innovation has no significant effect on the market orientation in selected Nigerian banks.

iv). Organisational innovation has no significant impact on the market orientation in selected Nigerian banks.

2. Literature Review

2.1. Concept of Innovation Strategy

Innovation strategy gives a distinct direction, concentrating the efforts of the whole institution on a common goal (Nmadu, 2005). Drucker (2003) sees innovation as a specific tool for entrepreneurs. It is how the entrepreneurs take advantage of change for an innovative business or service. Innovation can be presented as a discipline, which is cultivatable or practical. Betz (1997) assumes that the introduction of a novel or enhanced product, process, or service to the market place is innovation.

Innovation strategy refers to the development of new services and products, growth strategies or models of business that change the orientation of business and produce significant new value for customers and the corporation itself (Walumbwa, 2012). Innovation strategy challenges a company to look for new possibilities to engage in activities beyond the existing borders of the business (Drucker, 2012). Aliber (2007) describes innovation strategy as the creative direction of a company to end up with a range of aims, procedures and ways to fully make use of and advance the new, creative potential of the business enterprise.

Innovation strategy originates from unexpected occurrences, incongruities, industry market changes and process needs (Drucker, 2001). Moeller (2006) believes that demographic change is the cause of strategic innovation across the world. Markides (1999) argues that new needs which arise as a result of changes in consumer preferences, evident in competitors' efforts in mopping up the neglected segments, act as an insightful source for strategic innovation. Innovation strategy serves as a guide for organisations planning how and why to innovate before attempting to make an innovation. It is made up of financial requirements and areas related to growth regarding new goods or services; it is the overall standard that provides a set of filters through which the notions of strategic roles and new products or services have to pass, thus defining the strategic purpose of new products or services (Dougherty, 1992).

2.1.1. Process Innovation

This is the practice of re-engineering and improving the internal operations of a business process (Cheng and Chiu, 2008). This process involves many functional aspects of an organisation, including technical design, research and development, manufacturing, management and commercial activities (Freeman, 2002). In the views of Oke and Burke (2007), process innovation is most related to the creation of, or improvement in techniques, and the development of process or system.

In production terms, process innovation can be referred to new or improved techniques, tools, devices, and knowledge in the manufacture of a product (Gopalakrishnan and Damanpour, 2007). Process innovation constitutes the sequence of activities right from the conceptualisation of an initiative through to the implementation stage and finally the evaluation stage. Cumming (2008) notes that process innovation is a team-based approach that includes elements like facilitated workshop sessions, part information exchange, part exploration, part mediation, part creative invention and part improved theatre. These

sessions kindle cross-functional teams to see past the noticeable answers and to discover and speculate about the future with its endless, foreseeable and unforeseeable possibilities.

2.1.2. Product Innovation

Kotler (2011) defined a product as anything that can be introduced to a market for use, acquisition, consumption, or attention and can satisfy a want or a need. Thus, a product may be tangible (goods) or intangible (service or a set of ideas). In the context of the present study, products refer to various services that banks offer to their customers. The creation and subsequent introduction of a good or service that is either new or an improvement on previous goods or services is therefore seen as product innovation (Azaze and Haji, 2005). Gopalakrishnan and Damanpour (2005) also defined product innovation as the creation of a novel product from new materials (totally new product) or the alteration of existing products to enhance customer satisfaction (customized and enhanced version of existing products). To cope with the competitive pressures of the market, the changing tastes and preferences of customers, short product life cycles, technological advancement (or contrarily technological obsolescence), varying demand patterns, and specialized requirements of customers, innovations in firm's product offerings are required of the firm.

Product innovations focus on marketplaces and are primarily customer-oriented. In banking, product innovation requires that financial institutions understand customer needs, changes in demographics and using the information gained, devise new ways to be introduced to bank markets (Wan, Ong and Lee, 2005; Wang and Ahmed, 2004). With innovation, the quality of products could be improved upon, which results in the betterment of the performance of an organisation and ultimately to its competitive advantage (Gunday, Ulusoy, Kilic and Alpkan, 2011).

Product innovation in banks is achieved by the introduction of better and newer ways of offering credit facilities, taking deposit, ensuring insurance, facilitating lease and hire purchase, rendering banking derivatives and other financial products such as e-banking, investment and retail banking, soft loans facilities amongst others. To respond better to changes in market demand or to maximise the profit capability of the institution, they may introduce these products. However, considering the evolution of bank products, Watkins (2007) categorized these products into three groups namely, core products, formal products, and augmented products. Core products define the business, for example, a bank's core products include current account, savings account, term deposit, fixed deposit, term loan, credit card, overdraft, and so on. A formal product is a combination of two or more core products and usually has strong marketing content as it caters to some specific customer needs. Formal products refer to customized products as per customers' requirements which are used to boost the banking business. Augmented products are produced by further modification of the formal product. The main advantage of an augmented product arises from its strong marketing content because an augmented product is made out of a formal product which itself has a strong marketing content. All these forms of products have constituted banking operations.

2.1.3. Marketing Innovation

Johne (1999) posits that market innovation deals with the market mix and market selection to meet a customer's buying preference. Marketing innovation is the ability to re-engineer existing markets model and industries in ways that it creates new value for customers, undermines competitors, and produces new wealth for all stakeholders of the organisation (Hanvanach, Droge and Calatone, 2003). Marketing innovation can be seen as the significant change in innovation that stems from the revelation of something novel (Garcia and Calantone, 2002). The logic behind marketing innovation accentuates increasing sales growth by shifting consumer demand from elastic to more inelastic market segments via the

delivery of superior value (actual or perceived) to the customers (Hurley and Hult, 1998). Moreira, Silva, Simões and Sousa (2012) defined marketing innovation as an advancement which is the capacity of a firm to invents or creates new product that will lead to their market sustainability and strong presence. Naidoo (2010) revealed that marketing innovation is defined as the improvements in product design, approximating situations, advancements, and the chance of survival in the market. Clemmer (1998) also posited that marketing innovation should be seen as an integral key for the success of an organisation in the business environment, particularly in the strategic planning of its' future growth and also, for developing new products and services.

The Organisation for Economic Co-operation and Development (OECD, 2005) defined marketing innovation as the utilisation of a new marketing technique to a product or service that accounts for significant alterations to any of the following elements: product (design or packaging), placement, promotion and price which is an established criteria and definition in line with the widely accepted marketing mix of 4P - Product, Price, Promotion, and Place (McCarthy and Perreault, 1993). The distinguishing feature of a marketing innovation compared to other changes in a firm's marketing strategy is the implementation of a marketing strategy not previously and currently used by the firm or other firms. It must be a whole or part of a new marketing concept or strategy that represents a momentous departure from the firm's existing marketing methods (OECD, 2005).

Market innovation is concerned with improving the mix of target markets and educate on how the chosen markets are best served (Kotler, 2011). Its' purpose is to identify better potential markets, and new ways to serve target markets.

2.1.4. Organisational Innovation

Organisational innovation can be generally defined as the changes, modifications and alterations in the firm's structure or management's strategies that are intended to advance the firm's use of knowledge, the quality of goods and services, and the efficiency of workflows. It is the implementation of new methods in the business practices of an organisation, its workplace organisation or external relations (Hamel, 2009). It also means the implementation of a new organisational method in the undertakings of business practices, workplace organisation or external relations.

Gunday and Dutton (2011) notes that organisational innovations are intensely linked with all administrative efforts to renew organisational routines, procedures, mechanisms, systems, etcetera and to renew teamwork, sharing of information, coordination, collaboration, learning and innovation. Innovation in the corporate work environment involves the application of new procedures for distributing responsibilities and ensuring decision making among employees for the clear division of work within and between organisational activities and organisational units, as well as new concepts for the structuring of activities (Salter, 2006). In a general sense, it refers to the creation or adoption of an idea or behaviour that is new to the organisation (Damanpour, 1991). It is the development and implementation of new ideas by people who over time engage in transactions with others within an institutional order (Greenhalgh, 2005).

2.2. Concept of Market Orientation

Market orientation as a non-financial performance is the methodical organisation of marketing resources and processes to accomplish quantifiable gain as a result of investment in an enterprise with efficiency while maintaining quality in customer experience (Kotler, 2011). Marketing orientation is a central facet of the marketing operations function within marketing departments and involves the use of pricing strategies, market penetration strategy and market skimming. Market orientation involves the set of activities through which a firm by coincidence or plan develops resources and uses them to deliver services or

products in a way that its users find value while meeting the financial and other objectives despite the constraints imposed by key stakeholders.

Market orientation gives an organisation some property that is unique or at least distinctive and the means for renewing its competitive advantage as the environment changes (Haberberg and Rieple, 2008). Market orientation also involves the process of setting a considerable price, which will be affordable for the customer, thus there may be a need for price reduction to gain acceptance and thus create speed for the product in the market. The interest in the assumed relationship between market orientation and performance ostensibly has remained steadfast for its apparent strategic importance (Kotler, 2011). The popular notion has been that proper execution of the market orientation brings about superior performance (Damanpour, 1991).

2.3. Underpinning Theory for the Study and Empirical Review

This study is anchored on the knowledge-based theory. The knowledge-based theory of the organisation sees knowledge as the most strategically significant resource of the organisation. Knowledge-based resources are usually hard to copy and socially intricate. Hence, strategic innovation is well-rooted in the knowledge-based theory of organisation (Grant, 1996). It is widely accepted that the ability of an organisation to innovate is linked to the abundance of accessible knowledge within an organisation (Subramaniam and Youndt, 2005).

This study reviewed the works of other researchers on innovation strategy including their findings and conclusions but there are little or no studies done on the relationship between innovation strategy and market orientation and this shows the identified gaps left by these previous studies that was filled by this research. Nwokah, Ugoji and Ofoegbu (2009) examined product development and corporate performance in the Nigerian brewing industry. It was revealed that a positive and significant relationship exists between product quality, product lines/product mix and profitability, sales volume and customer loyalty and recommended that high product quality should be maintained and that new market segments and appropriate products should be continuously developed accordingly. Also, Maurice (2013) investigated the relationship between organisational performance and product development by innovation. The findings show that the impact of product development on organisational performance was higher in Nigeria when consumers perceive product innovation as stronger, more favourable and more unique. Creativity/quality of the innovation process exerts a positive influence on product development and organisational performance as it recommended that creative/quality innovations should be maintained continuously to develop appropriate product continually. Karabulut (2015) explored the effects of innovation strategy on firm performance in the manufacturing sector in Istanbul, Turkey. Factor analyses and multiple regression analyses were conducted on the data compiled by questionnaires. It concluded that innovation strategy in Turkish manufacturing firms led to improved financial performance, customer performance, internal business processes performance and learning and growth performance. Ejabefio and Nwaeke (2018) examined corporate entrepreneurship initiative and organisational performance of deposit money banks in Port Harcourt and recommended that the deposit money banks should try and renew their strategies regularly for better performance and that an innovative spirit should be imbibed by the management of the banks while the banking culture should be reviewed regularly to meet up with international standards of banking.

3. Methodology

The survey research design was used since the objective of the study was to investigate and understand the traits and mechanisms of the relationship between the innovation

strategies and the market orientation of five selected deposit money banks in Nigeria namely Zenith Bank, Eco Bank, Guaranty Bank, United Bank for Africa, and Access Bank because they were ranked among the top five (5) systematically important Nigerian banks and with international affiliation/authorisation in 2014 (Oleka and Mgbodile, 2014). The choice of selecting Nigerian banks in Lagos State is borne out of the fact that Lagos State is one of the major business engines of Nigeria and it is also the state where the head offices and core departments of these banks are situated. The selected employees are staff from head offices that work in various departments, namely: Corporate Strategy, Human Resources, Business Process re-engineering, Strategic Management and e-Channels and they were examined since they form the core operational departments in the banks. The reason for the choice of these departments is because the various departments play key roles in innovation and strategy development in the banking environment. A total of six hundred and sixty-five (665) employees constituted the population of the study, obtained from the human resources department as depicted in Table 1. A total of three hundred and ninety-nine (399) employees formed the sample size of the study which was achieved via purposive prediction of number of more than half of the population. Therefore, Table 2 illustrates the allocation of sample size according to the proportion of individual banks.

Table 1: Study Population Proportion

S/N	Banks	Number of Staff in Selected Departments at the Head Office of the Selected Banks					Total No.
		Corporate Strategy	Human Resource	Business Process re-engineering	Strategic Management	e-Channels	N
1	Zenith Bank	30	30	15	15	35	122
2	Eco Bank	25	35	15	15	40	163
3	GT Bank	20	35	30	20	35	107
4	UBA	30	35	25	30	30	152
5	Access Bank	25	20	20	15	40	121
	TOTAL						665

Source: Human Resources Department Database of the Banks, 2021

Table 2: Proportionate Distribution of sample among the selected banks using the formula

S/N	BANK	N
	Zenith Bank	73
	Eco bank	97
	GT Bank	64
	UBA	92
	Access Bank	73
	Total	399

Source: Researcher's Data, 2021

It is a field survey covering a cross-sectional time frame of 2021 as we examined how banks faced their challenges before, during and after the outbreak of the coronavirus (COVID 19) amid the lockdown and partial operation. This study adopted the convenience sampling technique because only staffs at the time of the survey were administered copies of the questionnaire. This sampling procedure employed ensures easy and proper administration

of the questionnaire, and more importantly, to enabling the researcher to maximise the limited time and financial resources devoted for this survey.

The research instrument used to collect primary data is a structured adapted questionnaire and it had three main parts: section one collected demographic characteristics of the respondents; section two had questions on variables of innovation strategy which emphasized the sub-variables such as product innovation, process innovation, market innovation and organisational innovation, while section three presents questions on market orientation. The questionnaire contains close-ended questions and has various sections. The research instrument for the study made use of a five-point Likert Scale with Strongly Disagree (SD =1); Disagree (D =2); Undecided (UD =3); Agree (A=4); and Strongly Agree (SA =5).

3.1. Validity and Reliability of the Research Instrument

The validity of the research instrument was established through content validity as the research instrument was given to senior colleagues and lecturers with proven expertise in the field. The research instrument's reliability was conducted via a preliminary survey. The research instrument was administered to sixty-seven employees that make more than 10 per cent of the sample size. This was to identify any ambiguities on questions that may not be easily understood or is poorly constructed. From the responses, remarks and comments received, the whole questionnaire subsequently was then refined and upgraded to take care of the detected inadequacies. This made the questions easier to answer and more response-friendly. The Cronbach's Alpha was used to test the reliability and consistency of the instrument and a summary of the reliability statistics coefficient is presented in Table 3.

Table 3: Summary of Cronbach's Alpha Reliability Coefficients

Variables	Cronbach's Alpha	Items
Product Innovation	0.831	4
Process Innovation	0.792	4
Marketing Innovation	0.861	4
Organisational Innovation	0.890	4
Overall Average Alpha for the instrument (α)	**0.844**	**16**

Source: Researchers' Computation, 2021.

The data collected was analysed through the use of descriptive and inferential statistics. All data were coded and the test analyses were done at 5 per cent level of significance using the Statistical Package for the Social Sciences (SPSS) version 22.0.

Model Specification

In this study, our model was specified with market orientation (MO) as the dependent variable and the independent variable was proxied with product innovation (PI); process innovation (PRI); market innovation (MI) and organisational innovation (OI). The model was functionally specified in the equation below as:

$$MO = f(PI, PRI, MI, OI) \qquad (1)$$

Econometrically, the model equation is stated as:

$$MO = \beta_0 + \beta_1 PI + \beta_2 PRI + \beta_3 MI + \beta_4 OI + e \qquad (2)$$

Where: β_0 = Constant; β_1 to β_4 = Coefficients of the independent variables; MO = Market Orientation; PI = Process Innovation; PRI = Product Innovation; MI = Marketing Innovation; OI = Organisational Innovation; and e = error term.

With our Apriori expectation stated as:

$$\beta_1>0, \beta_2>0, \beta_3>0 \text{ and } \beta_4>0 \tag{3}$$

The Apriori expectation signifies that a unit increase in product innovation, process innovation, marketing innovation and organisational innovation will bring about an increase in market orientation.

4. Discussion of Findings

Table 4 presents the results of the inter-correlation among the variables. In Table 2, all the correlation statistics values are positive, indicating that these variables move in the same direction as marketing orientation. It was observed that PI, PRI, MI, and MI variables in relation to marketing orientation did not exhibit multi-collinearity since none of the variables have correlations in excess of 0.8 as suggested by Dwivedi (2008).

Table 4: Mean, Standard Deviation and Pearson's Correlation Coefficient for All Variables

Variables	Mean	Std. Dev.	MO	PI	PRI	MI	OI
MO	4.031	1.013	1.0000				
PI	3.913	1.161	0.4428	1.0000			
PRI	4.076	0.232	0.3459	0.2335	1.0000		
MI	4.105	1.037	0.5144	0.3902	0.5952	1.0000	
OI	4.468	0.995	0.6657	0.4421	0.1053	0.4958	1.0000

Source: Researchers' computation based on the field survey 2021 using SPSS 22.0

Table 4 also shows the means of the four constructs use to define innovation strategies: process innovation, product innovation, marketing innovation, and organisational innovation. The table reveals that the Nigerian banking sector emphasized more on organisational innovation (mean = 4.468; standard deviation = 0.995) followed by marketing innovation (mean = 4.105; standard deviation = 1.037), and the lowest components of innovation strategies is process strategy (mean = 3.913; standard deviation = 1.161). The average score for the four innovation strategies constructs was equal to 4.1405. Given that the scale used a 5-point scale (1=strongly disagree, 5=strongly agree), it can be established that Nigerian banking sectors is highly dedicated to innovation strategies above the average mean. Table 2 also shows the mean of the marketing orientation of Nigerian banking sectors. The table reveals that Nigerian banking sectors has a high marketing orientation with a mean of = 4.031. Given that the scale used a 5-point scale it can be established that Nigerian banking industry has a marketing orientation above the average mean of 3.

Table 5: Regression Analysis Using Ordinary Least Square Estimation Technique

Model	Unstandardized Coefficients		t-Statistics	Probability Value	Hypotheses
	B	Standard Error			
(Constant)	1.972	0.185	10.681	0.000	Significant
PI	0.448	0.042	10.621	0.000	Significant
PRI	0.045	0.019	2.347	0.002	Significant
MI	0.164	0.083	2.338	0.009	Significant
OI	0.181	0.072	2.531	0.012	Significant
R=0.748[a]; R Square=0.730; Adjusted R Square=0.693; Standard Error of the Estimate=0.52971; F-Stat=40.056; Durbin-Watson=1.930					

Source: Researchers' computation based on the field survey 2021 using SPSS 22.0

Table 5 shows the regression method results using the Ordinary Least Squares estimation technique. The correlation coefficient of 0.748 (75 per cent), implied that independent variables are highly correlated with bank performance. The coefficient of determination (R^2 = 0.730), showed that the independent variables explained 73 per cent of the systematic variations in the market orientation (MO). Also, the adjusted coefficient of determination (R^2=0.693) indicated that over 69 per cent of the changes were explained after adjusting the degree of freedom by the independent variables, while the remaining 31 per cent were explained by the error term. The overall test (F-statistic) (goodness-of-fit measure) of the model indicated a value of 40.056 units and a significant level of 1 per cent, compared with standard error of regression with a minimal value of 0.5297, implied that the overall result is statistically significant. The Durbin-Watson statistic with the value of 1.930 showed an absence of serial correlation in the result.

4.1. Discussion of Hypotheses

In Table 5, process innovation had a positive coefficient value of 0.448 with market orientation (MO). This suggests that a unit increase in process innovation would bring about an increase in bank market orientation by 45 per cent. This revealed that the outcome is in line with our apriori expectation such that a unit increase in process innovation could bring about an increase in bank market orientation (MO). The result of the hypothesis tested showed that process innovation has a significant effect on the market orientation (MO) of selected deposit money banks in Lagos, Nigeria. By implication, process innovation is a strong factor as far as innovation strategy is concerned on bank performance. The finding is consistent with extant studies of Hashi and Stojčić (2013) and Obenjo (2016) who revealed that process innovation as one of the strategies has a positive relationship with the performance of firms in NSE. Also, Karabulut (2015) showed that process innovation strategy can lead firms to improve performance.

Similarly, product innovation (PRI) showed a positive coefficient value of 0.045 with market orientation (MO). This implies that a unit increase in product innovation would bring about an increase in market orientation (MO) by 5 per cent. The result of the hypothesis tested indicated that product innovation (PRI) has a significant effect on the market orientation (MO) of selected deposit money banks in Lagos, Nigeria. The finding is in tandem with prior studies of Obenjo (2016) who indicated that product innovation has a positive association with the performance of firms. Also, Karabulut (2015) showed that product innovation strategy significantly influence on growth performance. In the same vein, Maurice (2013) noted that product innovation has a higher influence on organisational performance in Nigeria especially when consumers perceive product innovation as stronger, more favourable and more unique. Furthermore, Hashi and Stojčić (2013) and Nwokah, Ugoji and Ofoegbu (2009) indicated a positive relationship between product innovation and productivity at the firm level in terms of profitability, sales volume and customer loyalty.

The result of the hypothesis tested showed that market innovation has a significant impact on market orientation. Also, marketing innovation (MI) indicated a positive coefficient value of 0.164 with market orientation. This implies that a unit increase in marketing innovation would bring about an increase in bank market orientation by 16 per cent. The finding is corroborated with extant studies of Adeyeye (2014) who found that marketing innovation capability has a significant impact on organisational performance. Karabulut (2015) indicated that market innovation strategy could lead to improving their customer performance and growth performance as well. Hashi and Stojčić (2013) and Obenjo (2016) demonstrated that market innovation as a strategy was found to have a positive correlation with firms' performance.

Also, Organisational Innovation (OI) had a positive coefficient value of 0.181 with market orientation (MO), This is in line with our Apriori expectation such that a unit increase in

organisational innovation could bring about an increase in MO by 18 per cent. The result of the hypothesis tested showed that organisational innovation has a significant impact on the market orientation in selected Nigerian banks. By implication, organisational innovation is a critical factor as far as innovation strategy is concerned on bank performance. This present study revealed that organisational innovation strategies positively and significantly affects the overall financial performance of banks as supported by the finding of the extant studies of Muriuki and Kiiru (2019) which was done in the Kenyan banking industry and related organisations. Also, Karabulut (2015) showed that organisational innovation strategy leads to enhancement of organisational performance. Furthermore, Hashi and Stojčić (2013) findings confirmed the positive relationship between organisational innovation and organisational performance.

4.2. Summary of Hypotheses Tested

Process innovation has a significant effect on the market orientation in selected Nigerian banks. It would bring about an increase in banks' market orientation and is necessary to be adopted in the innovation strategy of the bank and can help and improve performance. This finding is consistent with extant studies of Hashi and Stojčić (2013) and Obenjo (2016) and Karabulut (2015). Product innovation has a significant effect on the market orientation in selected Nigerian banks. Product innovation as part of the innovation strategy of the bank can improve the overall performance of the bank especially when consumers perceive its' innovation in products as stronger, more favourable and more unique than that of the competition. This finding is in tandem with prior studies of Obenjo (2016), Karabulut (2015), Maurice (2013), Hashi and Stojčić (2013) and Nwokah, Ugoji and Ofoegbu (2009). Market innovation has a significant impact on market orientation. This finding is corroborated with extant studies of Adeyeye (2014), Karabulut (2015), Hashi and Stojčić (2013) and Obenjo (2016). Organisational Innovation (OI) has a significant impact on market orientation. This finding is supported by the extant studies of Muriuki and Kiiru (2019), Karabulut (2015) and Hashi and Stojčić (2013).

5. Conclusion

This study examined innovation strategy as it affects the market orientation of deposit money banks in Lagos State. From the research carried out, it has been revealed that all the sub-independent variables of innovation strategies have significant effect on market orientation selected Nigerian banks This study identified that innovation strategy could enhance the market orientation in selected Nigerian banks as the knowledge-based theory suggested that innovation strategy should involve knowledge management and be used to improve the market orientation of organisations because strategy in form of process, product, market and organisational innovation have a relationship and influence on the market orientation of the organisation. Therefore, this study concluded that innovation strategy has a positive relationship on the market orientation in selected Nigerian banks.

5.1. Recommendations

Based on our findings, the following recommendations were made:
i). Banks should implement key decisions made in terms of process innovation so as to attract customers while putting in place the effective and efficient utilization of technologies in the areas of operations and service delivery;
ii). Banks should focus on product innovation strategy that can enhance customers' satisfaction, increase demand and visibility of its products and organisational performance;
iii). Banks should ensure that their marketing innovation strategy covers wide areas of the market in terms of segmentation, market share, promotional activities, advertisement and

other marketing areas that are capable of attracting new business and customers so as to enhance performance.

iv). Banks should carry out organisational innovation strategy from time to time to meet the changing competitive nature of the banking industry and international standard.

5.2. For Future and Further Studies

Based on the above recommendations, we put forward the following suggestions for further studies and replicability in other countries:

i). Other researchers should purposively select firms that have data on innovation strategy and market orientation and carry out analysis by using and employing time series and regression methods.

ii). They should also examine innovation strategy and market orientation in other industries since this study focused on banks.

iii). Innovation strategy can be broadened by the addition of more variables as proxies and re-examined while this can be tested against other indices of performance.

iv). The subject matter we researched here can also be reexamined in different countries/economies of research interest and peculiar time periods to check the reliability of results presented in this study.

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THE INFLUENCE OF GENERIC STRATEGIES ON PERFORMANCE OF TANZANIA'S TOURISM FIRMS IN NORTHERN CIRCUIT

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Abstract: *Tanzania's northern circuit (Arusha and Kilimanjaro) has continued to be characterized by limited growth of firms' in the tourism industry despite the initiatives made by government in stimulating both performance and growth of the industry. This paper was set out to investigate the influence of generic strategies (low-cost leadership, focus and differentiation) on performance of tourism firms in Tanzania's northern circuit. Cross-sectional survey design was used in 40 tourism firms targeting a sample size of 120 respondents. However,* only *100 participants making 83.3% of the valid questionnaires. The study employed explanatory sequential mixed method strategy, where questionnaires and interview guide were used to collect quantitative and qualitative data respectively. Quantitative data were analysed both descriptively and inferentially using SPSS while qualitative data were analysed thematically using content analysis. The study revealed that, the generic strategies positively influence by 62.8% the performance of tourism firms in the Tanzanian northern circuit while 37.2% is contributed by other factors which were not studied. The study concludes that, generic strategies influence performance of tourism firms; and further recommends that, tourism firms are required to implement generic strategies in order to improve their performance and search other factors which can influence the performance of tourism firms.*

Keywords: Generic strategies, Performance, Tanzania Tourism firms, Northern circuit, Regression Analysis.

JEL classification: C12, C18, M10, M19

1. Introduction
The concept of competition dates back several years ago, however it has become more vibrant in the last two decades (Ngugi & Waithaka, 2020). Competitiveness at international level is in terms of the country or firm' capacity to coordinate economic growth with external balance. Scholars link the concept of competitive to productivity as contended by Porter (1985), the only meaningful concept of competitiveness at the national level is productivity. According to the World Economic Forum's Global Competitiveness Report, competitiveness is defined as the set of institutions, policies, and factors that determine the level of productivity of a country (Rusu & Roman, 2018). In this study, competitiveness is operationalized in the context of innovation and strategies used by tourism firms leading to growth, productivity and sustainability of the firms in the tourism industry. Specifically, the

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study intends to assess the influence of generic strategies in the delivery of tourism services. The tourism sector is chosen because of its important role in the economic and technological development of nations. There is no question at the global level, that tourism sector stimulates the development of basic infrastructure, attracts foreign investment (especially in hotels) and contributes to the growth of tourism-related industries such as transportation, food processing and construction among others (Rusu & Roman, 2018). Tourism has fuelled some of countries in eradicating poverty and transform from the least developing countries to developing countries. These countries include Botswana, Cape Verde, and Maldives (Murphy, 2011). This transformation is possible if operating tourism firms and tourism destinations are attracting tourists as the result of increasing number of tourists which in turn lead into increase of foreign currencies and employment opportunities as well as improving Gross Domestic Product (GDP).

1.1   Tanzania's Tourism Sector

The tourism sector is one of the fast growing sectors in the global economy; where in year 2019 the sector contributed to the tune of 10.3% (US$ 8.9 trillion) of global GDP and about 330 million jobs, which is 10% of total global employment (WTTC, 2020). Further, the development of the tourism sector in developing countries and Tanzania in particular, has stimulated the growth of hospitality and transport industries (Gisore & Ogutu, 2015; Sokhanvar et al., 2018). Tanzania's tourism sector contributed to the national income about US$ 6,577.3 million in year 2019, equivalent to 10.7% of the total country's GDP and became second to manufacturing sector (Murphy, 2011; Mathieson, 2014; WTTC, 2020); and in respect to employment the sector created 1,550,100 jobs in 2019, which is equal to 11.1% of the total employment in the country. Moreover, the increase of international tourism receipts has increased forex and balance of payment (Gisore & Ogutu, 2015). In aggregate, Tanzania has sixteen (16) national parks, forty four (44) game-controlled areas; twenty eight (28) game reserves, two (2) marine parks, one (1) conservation area hosting the world's renowned biodiversity, unique ecosystems, wildlife; and several forest reserves (Wamboye et al., 2020). Moreover, for the case of average tourism receipts, over the period 2010 to 2019 compared with other African countries, Tanzania was 23.95%, Uganda 21.17%, Kenya 16.22%, South Africa 9.24%, Ghana 5.85% and Mozambique 4.68% respectively (World Bank, 2021).

The sector has attracted the attention of the Tanzania Government into harnessing the potential of tourism in accelerating economic growth, this is supported by Sokhanvar et al. (2018) who confirmed that, tourism development has the potential to the increase in the price of non-traded local services and goods, thus triggers increase of employment and use of local resources. In this context, tourist destinations and tourism firms are doing their best to heighten the attractiveness of natural resources and quality of services (Gisore & Ogutu, 2015). The country also is blessed with many tourism potentials including an unpolluted natural environment with rich, beautiful and diverse tourism resources such as national parks and protected game reserves (Gisore & Ogutu, 2015; Wamboye et al., 2020). Moreover, the country also is politically stable than many other countries in Africa (Mathieson, 2014; WTTC, 2020). This makes Tanzania as a leading country in Africa with many tourist destination (Murphy, 2011; Wamboye et al., 2020).

Tourist Circuit in Tanzania's tourism sector refers to a framework within which the different attractions are linked together based on factors such as accessibility, facilities, supply of resources and products (Mihalič, 2013). The two major circuits include the Northern Circuit and Southern Circuit tourist destinations. Besides natural resources endowment and the fact that Tanzania's tourism sector is among the five top destinations in the world, there is a plethora of literature (Murphy, 2011) showing that Tanzania's tourism firms are characterized by limited growth firms. The limited growth of tourism industry as well as tourism firms is

contrast with the expectations of the first National Tourism Policy of 1991, as well as the Integrated Tourism Master Plan of 2002 which provides strategies and actions. Many reasons have been contributed the decline of tourism firms which includes; globalization that engulfed Small and Medium-Sized tourism firms, the level of ICTs adoption by the tourism firms, the quality of services and products offered by tourism firms. Moreover, lack of firm competitiveness at an international scale is suggested as the leading limiting factor against the growth of the sector and performance tourism firms in Tanzania. Though, governments can contribute to creating conditions that facilitate tourism growth by developing policies that support and encourage tourism firms (Dredge, 2017). Therefore, due to limited studies on influence of generic strategies on performance of tourism firms in Tanzania's northern corridor triggered the need for this study to be conducted in order to fill the existing literature gap.

2. Literature Review

2.1 Firm Performance
Performance is the firm's ability to produce results in the manner determined by the targeted achievement (Laitinen, 2002). The firm performance are of two types namely, perceived business performance and archival data. Archival data involve the aspects related to financial performance determined by secondary sources which are kept in a firm, on the other hand, perceived firm's performance is owners/managers' perceptions towards a firm's performance (Laitinen, 2002). Measurement of performance are three types which are regularly employed in the strategy namely; objective financial performance, subjective financial performance and objective non-financial performance (Laiten, 2002). Furthermore, competitive performance is usually measured by the business volume including sales and profits (Ngugi & Waithaka, 2020). Additionally, business performance indicators are profitability and growth of sales (Dunford, 2000). Therefore, in order to assess firm performance, measures and performance indicators should be clearly articulated in order to establish which performance is measured.

2.2 Generic Strategies
There are three potential successful generic strategies used to outperform other firms in a particular industry namely; differentiation, overall cost leadership and focus (Porter, 1985). Low-Cost Leadership Strategy emphasize on efficiency and charging lower prices to gain competitive advantage and thus outsmart competitors (Porter, 1985). This can be attained through reducing the costs attained in the production and distribution that foster the lowering of the overall price of commodities or services. A firm should keep lowering prices and reducing operating costs to avoid the risks of depleting resources and subsequently becoming insolvent especially in a viciously competitive market (Woodruff, 1997). Some of firms do lower price in order to capture low-income customers and harvesting extra profits (Lynch, 2003). Furthermore, Differentiation Strategy is considered as one of the key strategies in business (Allens & Helms, 2006). A firm distinguishes itself from its competitors if offers unique and valuable products or services to its customers. Murphy (2011) postulated that, differentiation only occurs when a business attempts to make its product or service more attractive to consumers than is the case with a competitor and thereby potentially commanding higher prices. Differentiation is to create something unique as perceived by buyers which mostly depend on technology, branding, positioning and designing or innovativeness (Murphy, 2011). Differentiation is targeted to the customers with high income. Moreover, focus Strategy aims at meeting need of different market segments in a particular geographical area (Murphy, 2011). Focus strategy is about specializing in the

chosen segment of a particular market which is useful in the attainment of competitive advantage. A business can select to focus on a selected product range, consumer group, service line or geographical area (Rusu & Roman, 2018). Focus strategy is more efficient when consumers have distinct preferences and when the niche market has not been pursued by rival firms (Murphy, 2011). Presence of different market segments with different cost structures allow a company to use focus strategy.

2.3 Theory Underpinned the Study
The study was governed by Porter's generic business strategy as the theory of this study, the theory was discussed below in detail.

2.3.1 Porter's Typology of Competitive Business Strategy
According to porter, in business strategy such as focus, cost leadership or differentiation should be selected to enable a business to avoid the risk of wasting its valuable resources. Understanding these strategies is useful in analysing the competitiveness of a firm with the logic that competitive advantage is realized after knowing how to deal with strengths, weaknesses, opportunities and threats confronting an organization (Lu, Shem & Yam, 2008). Moreover, a business can have two basic types of competitive advantage: differentiation and low-cost leadership. On the other hand, focus strategy has two alternatives namely, cost focus and differentiation focus (Porter, 1985). Though, in low-cost leadership strategy, a business intends to be the lowest-cost producer in its industry, but sources of cost advantage differ and depend on the industrial structure (Porter1985). Moreover, a low-cost producer exploits all the sources of cost advantage to enjoy preferential access to raw materials, economies of scale, proprietary technology and other related factors. Similarly focus strategy is based on selecting a segment or group of segments in a particular industry which is aimed at reaching all type of markets of the same industry.

Generic Strategies are generally accepted by researcher and other academicians who proposed the application of all generic strategies (focus, cost- leadership and differentiation) in order to improve firm performance as insisted by Kim, Nam, & Stimpert (2004) who argued that, the application of a single generic strategy may lead to lowering the performance of firm. Also, a study on manufacturing firms in Kenya which used Porter's competitive business strategies (focus, cost-leadership and differentiation) revealed that, the majority of manufacturing business in Kenya adopted these strategies. Therefore, the theory is relevant in this study since Porter's generic strategies seems to have a great contribution on the performance of firms especially tourism firms in the northern circuit (Kilimanjaro and Arusha). In this case the study proposed those tourism firms to apply all generic strategies as suggested by Michael Porter in order to improve their performances.

2.4 Empirical Literature Review
Number of studies carried out on the effects of competitive strategies on firm performances in different industries and sectors. A study by Tehrani (2003) focused on the impact of competitive strategies on the performance of prominent sixteen segments of high-tech industries in the US and EU. The results revealed that, a correlation between performance and competitive strategy depend on the geographical location of the firm. Further, US firms which adopted product differentiation, low cost and focus product differentiation had higher performance than other companies while in Europe, low-cost operating firms outperformed other types of firms. Mutunga and Minja (2014) studied firms that adopted competitive strategies in the beverage industries in Kenya and found that, 52.2% of the companies adopted dual strategies of differentiation and cost leadership concurrently whilst 25% adopted cost leadership exclusively and 18.8% used differentiation exclusively. On the other hand, Waweru (2008) identifies three strategic groups namely; low-cost leaders,

differentiators, and duo strategists. Similarly, Bita, Kabaison & Muketha (2016) revealed that, competitive strategies were adopted by commercial banks that participated in clearinghouses. The study revealed further that focus and product differentiation are among the main strategies, which the banks have adopted in their quest for outperforming rivals in their industry. However, much have been written by literature on the effects of competitive strategies on the performance of firms in different sectors and industries how little studies investigated the effects of generic strategies on the performance of tourism firms in Tanzania's northern circuit. The null hypothesis of this study was:

H_o: *Generic strategies do not influence the performance of tourism firms in Tanzania's northern circuit.* The null hypothesis will be rejected if the p-value will be equal or less than the significance level of α = 0.05; and the study will fail to reject the null hypothesis if the p-value is greater the significance level of α = 0.05.

2.5 Conceptual Framework

The conceptual framework explains the narrative or graphics form of the main variables to be studied and their relationship (Mathieson et al., 2001). The framework indicates the existing relationship between independent variables, that is generic Strategies (low cost leadership, differentiation and focus) and a dependent variable which is the Performance of tourism firms. In this study, while other things remain constant, it is assumed that the performance of tourism firms is theorized as the dependent variable to competitive strategies namely, Low-cost leadership, differentiation and focus. The literature acknowledges that Porter's framework of generic strategies is also inherently related to firm performance (Allen & Helms, 2008). Figure 1 shows this relationship.

Figure 1: Conceptual framework of the study
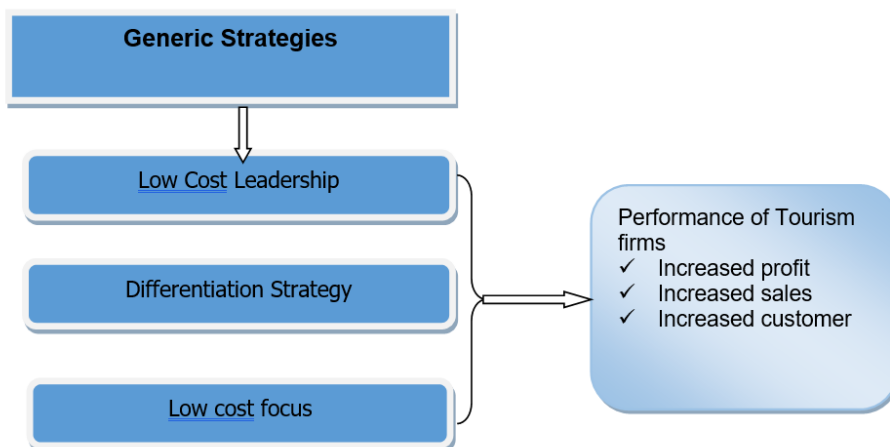
Source: Researcher's construct, 2021

3. Methodology

Research design is the overall plan of the research, it is a blueprint for data collection, variable measurements and data analysis (Kothari, 2004). The study was a survey to 40 tourisms firms in northern circuit in Tanzania using Explanatory Sequential Design as a mixed-method strategy, where quantitative data were collected first followed by qualitative data. The type of mixed Method design involved large QUAN and small qual. Time horizon was cross-sectional where data on cost leadership, differentiation and focused were

collected in one point in time in order to determine their effect on the performance of tourism firms. QUAN was employed in the study in order to understand the level of contributions among surveyed tourism firms for validation and generalization. On the other hand, qual was used to understand variations in the performance outcomes to explain contributions of generic strategies in the surveyed tourism firms. The study applied both probability and non-probability sampling, for the case of probability sampling (stratified random sampling) was used to select 120 respondents from 40 tourism firms. On the other hand, purposive sampling was employed to select the key informants. Furthermore, questionnaires, interviews and documentary reviews were used to gather both quantitative and qualitative data. Qualitative data thematically were analysed by using content analysis while quantitative data were analysed descriptively and inferentially by using SPSS. The data which were analysed descriptively presented mean, standard deviation, tables and figures. Similarly, inferential analysis was conducted through a multiple regression model that establish the effects of generic strategies on performance of tourism firms at significant level of 0.05. The regression model of this study was; $Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$

Whereby $Y =$ dependent variable (performance of tourism firms), β_o Is a constant that explaining the level of influence given the Y-value when all the predictors' values (X_1, X_2, X_3) are zero while $\beta_1, \beta_2, \beta_3$ - are constant regression coefficients representing the conditions of the independent variables to the dependent variables. On the other hand, X_1 - Low-cost leadership, X_2 – Differentiation, X_3 – Focus (indicators of generic strategies) and ε - Extraneous variable (An error term explaining factors influencing performance of tourism firms but were not accounted for in this model).

4. Presentation of Findings

4.1 Descriptive Analysis
The data were collected from 40 tourism firms, the study sample size was 120 and the returned questionnaires were 102 out of 120 which made 85% and 18 questionnaires were not returned which equal to 15% respectively. However, among the returned 102 questionnaire, only 100 questionnaires were valid for analysis. Thus the response rate was 100/120 which equals to 83.3%. This is supported by Kothari (2011) who attest that, response rate of 70% is suitable for a study, therefore this study has response rate of 83.3% which was appropriate.

4.1.1 *Generic Strategies and Performance of Tourism Firms*
The study examined the influence of generic strategies (low-cost leadership, focus and differentiation) on the performance of tourism firms Tanzania's Northern Circuit and below were finding obtained.

Low-Cost Leadership Strategy and Performance of Tourism Firms
The study sought to determine the contribution of low-cost leadership strategy on the performance of tourism firms in Tanzania's Northern Circuit comprising Arusha and Kilimanjaro Regions. The findings in Table 1 show that among tourist firms some executed the Low-Cost Leadership Strategy (LCLS) by accident in a bid of improving the firms' performance, without knowing that they were executing competitive strategies. The following indicators with their respective frequencies were used to demonstrate the applicability or use of low-cost leadership strategies in the tourism industry. These include Reduced operation cost (33 per cent), reduced labour cost (27 %), reduced distribution cost (24 %) and utilised shared management cost in the tourism firms or organizations (16 %).

Table 1: Types of Used Low-Cost Leadership Strategy in Firms' Performance

Type of Low-Cost Leadership Strategy	Participants in the Tourism Sector	Frequency
Low operation cost in the organization	33	33
Reduced labour cost in the organization	27	27
Reduced distribution cost in the organization	24	24
Utilization of a shared management cost	16	16
Total	**100**	**100**

Source: Field Data, 2021

Various narrations were reported to in supporting those findings. One of the key informants from a group of tourism firms in the Arusha region had this to say during an interview,

> *"… Ah!, our tourist firm for example undertakes bulk procurement of firm items/needs such as the purchase of glossary (products for the clients especially in hotels or sending vehicles for services such as repairs at once, thus lowering the cost of products or services. This is an example of the applicability of low cost leadership strategy" (Interview, Field Manager in Asilia Tourism Firm, Arusha; 26/10/2020).*

The Cost Focus Strategy and Performance of Tourism Firms
The study assessed the contribution of the cost focus strategy on the performance of tourism firms in Tanzania's Northern Circuit. It is important to note that each cost focus strategy executed contributed not only to performance efficiency but also to the firm efficacy. The findings in Table 2 show that many tourist firms executed the Cost Focus Strategy (CFS) not for lowering costs to improve firms' performance, but instead for offering higher quality services to improve firms' performance. A good example is a shift from 3rd Star to 5th Star hotels. The following indicators in frequencies were used to demonstrate the applicability of the cost focus strategy. These include focusing on the market (39 per cent), focusing on easiness to manage input cost (33 per cent), focusing on the reduction of distribution cost (14 per cent), and focusing on the provision of higher quality service (16 per cent). Various narrations were reported as supporting the use of cost focus strategy among the key informants from tourism firms in Arusha and Kilimanjaro Regions.

Table 2: Types of Cost Focus Strategy used by Firms' to improve Performance

Types of Cost Focus Strategy	Participants in the Tourism Sector	Frequency
i. The one that focuses on the market	39	39
ii. The one that is easy to manage input cost	33	33
iii. The one with reduced distribution cost	14	14
iv. The one with the higher level of service	16	16
Total	**100**	**100**

Source: Field Data, 2021

In an in-depth interview with one of the respondents in Arusha region confirmed that:

> *"… In my view, in the use of Focus Strategy, a firm analysis and utilises either speciality of product/service or look for an un-served market. In the context of our firm, our camps are located far away (prime areas) to avoid congestion. Further, our services are gender-sensitive in Tanzania. This is because we offer ladies camps with a lady who guides clients in every aspect of their needy" (*Interview, Head Training, African Environment-Arusha; 20/10/2020).*

Differentiation Strategy and Performance of Tourism Firms
The objective examined the contribution of differentiation strategy on performance of tourism firms in Tanzania's northern circuit. The findings revealed that, in differentiation strategy, a tourism firm may decide to use both of the two cost focus strategies based on the type of customers, preferences and access to services. Differentiation strategy however emphasises brand loyalty or product/process innovation. Table 3 provides an overview of the types of differentiation strategies used by the tourism firms to improve their performance.

Table 3: Types of Differentiation Strategy used by Firms' to improve Performance

Types of Cost Focus Strategy	Participants in the Tourism Sector	Frequency
Customer specification determines the service/product selection	41	41
Products /services are positioned for ease access by customer of different kinds	31	31
The firm uses celebrities for advertisement and promotion of the company's product	14	14
There is higher level of service/product provision	14	14
Total	**100**	**100**

Source: Field Data, 2021

The finding in Table 3 summarizes and presents several indicators with their respective frequencies, which were used to demonstrate the applicability of differentiation strategy. These indicators include having tourism firms that, customer's specification determines the service and product selection (41 per cent), products and services are positioned for ease of access by a customer of different kinds (31 %). It was also reported that, tourism firms used celebrities for advertisement and promotion of their products (14 %), and also, the firms being characterised with a higher level of service or product provision (14 %). In the same vein, various narrations were reported by key informants from a group of tourism firms in Arusha and Kilimanjaro Regions to justify the use of differentiation strategy; where one respondent validated the above findings by attesting that:

> *"…Our Company offers full board packages for tourists and whether you take the service or not, that is none of their business. For example, a transport firm and an accommodation firm may combine management operations and offer unique services to clients such as walking safaris, and night game drives, thus being at the pick"* (Interview, Head, Department of logistics, Abakombe- Arusha; 19/11/2020*).*

4.2 Inferential Analysis
Inferential analysis was used to indicate the relationship between generic strategies (low cost leadership, focus and differentiation strategies) as independent variable on the performance of tourism firms as dependent variable.

4.2.1 The Impact of each Generic Strategy on Firm Performance
To measure the impact of Low-Cost Strategy, Cost Focus Strategy, and Differentiation strategy on the firm's performance, the study utilised a multivariate regression analysis. The findings are shown in Table 4.

Table 4: The Impact of each Generic Strategies on Firm Performance

Model	R²	ΔR	B	B	S. E	F-statistic	t-statistic	P-Sig. level
	0.671	0.628				9.979		
Constant				0.448	0.800		0.560	0.038
Low-Cost Strategy			0.245	0.310	0.141		2.207	0.031
Focus Strategy			0.246	0.316	0.163		1.934	0.028
Differentiation Strategy			0.312	0.436	0.182		2.410	0.019

Source: Field Data, 2021

Whereby:

R^2 is known as R Square; ΔR is known as adjusted R Square; β is known as the standardized coefficient; b is known as the non-standardized coefficient; S.E is known as Standard Error of Variables; F-is known as F-statistic; t-is known as t statistic; P-is known as a significant level.

According to the findings of the regression model, the firm's performance of 67.1% is contributed by generic strategies while 32.9% is realised by other factors which were not considered in this study. The F value is 9.976 (using sig. 0.000), which infers that the model is statistically crucial with the significance level of α = *0.05.* The study findings show that Low-Cost Strategy is positively related with Firm Performance from the prediction of 31.0% when b=*0.31 and p=0. 031. This* infers that for each 1-unit change in pursuing low-cost strategy the firm performance will change positively by 0.31, all the other variables remaining unchanged. Also, the study authenticated that the focus strategy is positively related to the firm's performance in a situation when performance is predicted for 31.6 at b=0.315 and p=0.028.

This also infers that for each 1% change in the execution of focus strategy, the firm performance will change by 31.6%. In terms of differentiation strategy, the study reveals a positive relationship between differentiation strategy and the firm's performance. The predictions show that a performance level of 43.6 ought to be reached when b=0.436 and p=0. 019. Since all variables tested (low-cost strategy, cost focus strategy and differentiation strategy) had shown a positive impact on the firm's performance, involvement of each strategy improves the performance of a firm. Therefore, t-test and F-test concluded that, individually and collectively generic strategies influence firm performance in the Tanzania's northern circuit.

5. Discussion of Findings

The findings from descriptive analysis indicated that tourism firms in Tanzania's Northern Circuit (Arusha and Kilimanjaro) executed generic strategies (Low-Cost Leadership, Focus and Differentiation Strategies) accidentally in a bid of improving firms' performance. Those findings concur with the findings in a study by Ngugi and Waithaka (2020) who revealed that cost leadership strategy has some influence on the performance of insurance firms in Nyeri County, Kenya. Also, the results from the inferential analysis showed that both indicators of generic strategies (low-cost leadership, focus and differentiation strategies) as independent variables individually and collectively had influence on the performance of tourism firms as dependent variable. The results from the regression model, the firm performance of 67.1% is realised in the dependent variable when independent variables enter the regression

analysis. The F value is 9.976 (using sig. 0.000), which implies that the model is statistically crucial with the significance level α = *0.05.* From the first hypothesis (H1), the study has concluded that low-cost strategy has a positive relationship with firm performance given *p=0.031< α = 0.05.* Similarly, the second hypothesis (H2), the study has confirmed that focus strategy is positively related to the dependent variable "firm performance" given *p=0.028< α = 0.05.* On the other hand, the third hypothesis (H3) differentiation strategy, the study reveals a positive relationship between differentiation strategy and firm performance whereby *p=0.019< α = 0.05.* Those results concur with by Ngugi & Waithaka (2020) who revealed that businesses that adopt low-cost strategy have the following advantages, (a) in terms of low cost, the business is capable to sell products and services at lower prices than is the case with its rivals and attain the similar amount of profits, (b) raising competition makes the cost leader more resistant as opposed to the rivals.

5. In conclusion

The study investigated influence of generic strategies (low-cost leadership, focus and differentiation strategies) on the performance of tourism firms in Tanzania's Northern Circuit (Arusha and Kilimanjaro), the majority of findings from descriptive analysis confirmed that, some of tourism firms executed competitive strategies (cost-leadership, focus and differentiation strategies) accidentally without knowing, and this seems to improve the performance of tourism firms. On the other hand, the result from individually and collectively linear regression model of predictors of generic strategies (low-cost leadership, focus and differentiation strategies) had positive influence on the performance of tourism firms in Tanzania's Northern Circuit. For instance, low-cost leadership has positively significant influence on the performance of tourism firms given; p=0.031< α = 0.05 while focus strategy positively influence the performance of tourism firms whereby p=0.028< α = 0.05. On the other hand, differentiation strategy has positive significant influence on the performance of tourism industry given; p=0.019< α = 0.05. Moreover, generic strategies contributed about 67.1% in the pperformance of Tanzania's tourism firms in northern circuit. Furthermore, the study recommended that based on the findings participants from tourism firms were found unfamiliar with the issues related to the execution of generic strategies in the tourism industry; however, they practiced accidentally without knowing due to low level of education. Thus, there is a need for strengthening of human capital in the tourism industry in Tanzania.

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IMPACT OF THE MINING AND AGRICULTURE SECTOR ON THE MONGOLIAN ECONOMY

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Abstract: *Increasing the use of natural resources can improve the country's wealth, but it has adverse effects caused by improper usage, and it is non-renewable. The depletion of natural resources is a global environmental issue that threatens the livelihoods of billions of people. Moreover, not all resource-rich countries are highly developed. Mongolia is one of the natural resources-rich countries in the world. The agricultural sector is Mongolia's traditional economic sector, and it still plays an essential role in the country's economy. This paper investigated the interrelation between the agriculture and the mining sectors and their impact on Mongolia's economic growth. A multiple-stage regression model was used to analyse the selected variables' time series data over 20 years of Mongolia. In addition to the model's sectoral data per capita wealth, other control variables are added to explain economic convergences, human capital impact, and government size. Result proves that the mining sector has a substantial impact on the economic growth of Mongolia. However, agricultural sector growth does not depend on the mining sector. The high dependency from one sector, particularly the extractive sector, warns against the sustainable development of the country's economy. Therefore, it is essential to support agriculture and other secondary sectors based on renewable natural resources and agriculture.*

1. Introduction
The sustainability of renewable and non-renewable natural resource usage is a global issue since resources are the source of every life globally. The pressure on global natural resources will continue to grow in the coming years. The world population is continuously growing and is expected to reach 9.7 billion by 2050 (United Nations, 2019). Understandably, people aspire for a better lifestyle, leading to higher consumption levels, although some variations in low and middle-income countries are comparable to high-income countries (Food and Agricultural Organization, 2017). The increasing higher consumption levels of the

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world population lead to the further depletion of natural resources. About 3.5 billion people live in oil-, gas- and mineral-rich countries. However, these resources have become a source of conflict rather than an opportunity all too often. Many of these resource-rich countries also suffer from poverty, corruption, and conflict stemming due to weak governance (World Bank, 2021b). An abundance of natural resources is not directly related to economic growth. However, natural resources underpin the functioning of the worldwide economy and the quality of life (Bouwman et al., 2012).

Natural resources, including land, water, forests, fisheries, animals, mineral ores and energy sources, are considered valuable in their relatively unmodified form. The problem starts when the regrowth and regeneration of renewable resources are not as fast as the consumption rate. Soil degradation has affected 1.9 billion hectares already (Young, Orsini and Ian, 2015), and 45% of total Gross Domestic Product (GDP) ($63 trillion) will be at risk due to water stress by 2050 globally (Growing Blue, n.d.). Compared to 16 million hectares of deforestation annually in the 1990s, the number decreased between 2015 and 2020 to 10 million ha per year (FAO and UNEP, 2020).

Non-renewable resources tend to be an essential source of economic growth and energy in many countries. Schröder and Zwichel (2015) designed a model showing what will be left of earth's non-renewable resources. The projection shows that the world will have 11 years of gold, 30 years of copper, 77 years of phosphorus and 117 years of coal resources by 2020. The agriculture sector is crucial to economic growth. By 2018, sector share accounted for 4% of the global gross domestic product (GDP). In some developing countries, agriculture shares are more than 25% of GDP. Agriculture can help reduce poverty, raise incomes and improve food security for 80% of the world's poor. Agriculture sector growth is 2-4 times more effective out of the poverty than other sectors. 65% of the poor engaged in agriculture (World Bank, 2021a).

The extractive industries sector plays a decisive economic role in 63 countries facing resource dependency and weak governance (World Bank, 2021b). By Ericsson & Lof (2018) research on mining's contribution to the economic development of low- and middle-income countries (for the years 1996–2014), in some nations, mining accounts for a dominant share of the national wealth, with more than 50 percent of exports and around 10–20 per cent of GDP.

Mongolia is ranked as the highest level of mining dependency and the highest per capita value of resource reserves among the lower-middle-income countries. Mongolia is ranked 4th in mining sector contribution to the economy after DRC, Chile and Australia (Ericsson and Lof, 2018). Mongolia is one of the leading producers of mineral commodities such as coal (the world's 13th largest producer in 2017) and copper and one of the countries highly dependent on a commodity (Li, Gupta and Yu, 2017; Ericsson and Lof, 2018). In addition to coal and copper, Mongolia produces and exports 15 mineral and petroleum commodities, including gold, iron ore, zinc, molybdenum, fluorspar, tungsten, silver, tin, gypsum, zeolite, lead and clinker (The Extractive Industries Transparency Initiative, 2021).

Economists do not have a common agreement on the interrelationship between natural resources and the country's economic development and have not yet reached a standard agreement (Li, Deng and Cheng, 2013; Sachs and Andrew, 2001). The study of the Mongolian case has a similar phenomenon in terms of mineral resources depletion and economic development (Ge and Kinnucan, 2017; Avralt-od et al., 2012; Tserendorj and Purevjav, 2012; Khan and Gottschalk, 2017; Lkhagva, Wang and Liu, 2019; Dagys et al., 2020; Davaakhuu, Sharma and Oczkowski, 2015; Li, Gupta and Yu, 2017; Locatelli, 2019). Studies of Ge & Kinnucan (2017), Avralt-od, et al. (2012) and Tserendorj & Purevjav (2016) concluded that there is no negative direct effect from the mining boom on other economic sectors. Nevertheless, Khan & Gottschalk (2017), Lkhagva, et al. (2019), Locatelli (2019) and Dagys, et al. (2020) summarised that resource curse exists in Mongolia. These

researchers highlighted the mining sector as a vital driver of the Mongolian economy and paid less attention to its non-renewable resource usage and sustainability issues.

Therefore, the research aims to investigate the perspective of natural resource use in Mongolia and its impact on economic growth by checking the following hypothesis i) mining sector growth supports other sectors growth, ii) natural resource using sector growth increases per capita GDP growth in Mongolia, and iii) agriculture sector growth does not depend on the mining industry.

The second section introduces the theoretical background of economic growth and natural resources and the Mongolian perspective on natural resource use. The third section discusses research methodology, variable selection based on the literature, data analysis and model setting and descriptive statistics of the variables. The fourth section presents results and discussion based on data analyses, and the paper ends with a conclusion, including the study's limitations.

2. Depletion of natural resources and economic growth

A major policy challenge facing developing countries with abundant natural resources is achieving and sustaining rapid economic growth that will help reduce poverty while being socially inclusive and environmentally sustainable (Almas, 2018). The concern about resource depletion does not stand in isolation and is central to sustainable development where social and economic aspects are also interlinked with environmental resources (Ayadi, Ayadi and Ashiomanedu, 2008; Dominati et al., 2014). Consequently, governments need to engage in regulations and decisions on utilising natural resources proactively, and thus environment, society and economy go hand in hand (Pearce and Moran, 1994; Ayadi, Ayadi and Ashiomanedu, 2008). It is crucial to understand the role of natural resources in the economy to grow an economy that is sensitive to how it utilises and protects natural resources (Barbier, 2003; Organisation for economic co-operation and development, 2011). Some empirical studies showed that countries with abundant natural resources, particularly non-renewable, fared both much more poorly than they should have compared to less well-endowed countries at similar stages of development. The notion that countries well endowed with natural resources have experienced relatively slow growth is called the "curse of natural resources" and the "Dutch disease". The Dutch disease research focuses on resource-dependent countries' challenges, such as democratisation, rent-seeking, corruption, bribery, and conflict (Organisation for economic co-operation and development, 2011; Sachs and Andrew, 2001; McMahon and Moreira, 2014). For instance, in the Gulf countries, Nigeria, Mexico and Venezuela, Oil States have not reached sustainable economic growth (Sachs and Andrew, 2001). However, there are other examples of highly developed or developed countries with abundant natural resources. Examples include the United States, Venezuela, Australia, Norway, Chile, Peru, Brazil, and Botswana (Avralt-od et al., 2012; McMahon and Moreira, 2014). Thus, the optimum exploitation of natural resources is more critical than their availability. Furthermore, they are implying that there is a necessity to understand the root of the curse of natural resources.

Natural resource use and economic growth in Mongolia

The Gross Domestic Product of Mongolia is relatively growing steady except for 2008-2009 and 2014-2016 during the selected period (Figure 1). The global economic crises of 2008-2009 impacted the Mongolian economy. The steady growing economic growth of Mongolia had declined to 1.2% in 2016 (USD11147) from 7.9% in 2014 (USD12224), due to the economic difficulties after mineral exuberance, as a result of unprecedented terms-of-trade and foreign direct investment shocks, and a lack of fiscal policy adjustments indicated by rapid and unsustainable debt accumulation (Asian Development Bank, 2020). Mongolia's

economic performance improved from 1.2% in 2016 to 7.2% in 2018. The Strong growth between 2016 and 2018 was accomplished without excessive inflationary pressures. Strong growth momentum was supported by steady commodity exports (coal and copper), a recovery in Foreign Direct Investment, and improved business sentiments, as well as a practical implementation of an economic adjustment program by the government (Nganou et al., 2018).
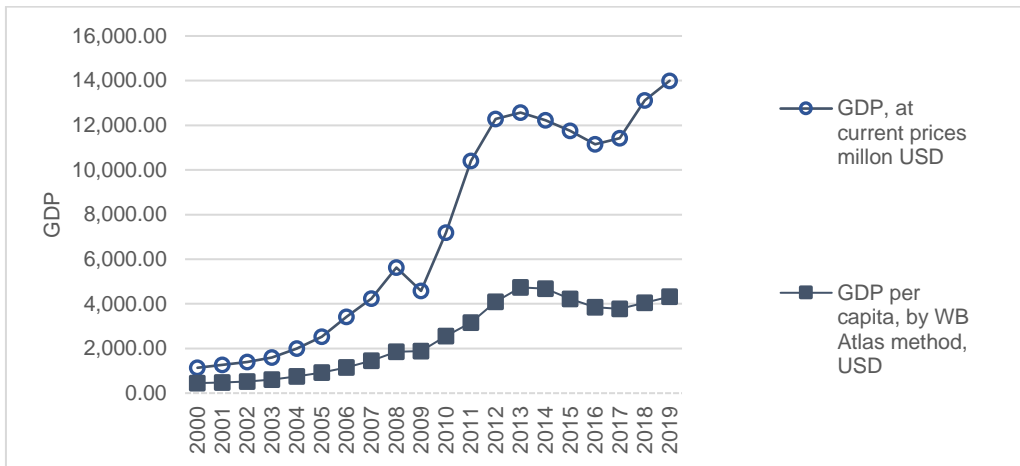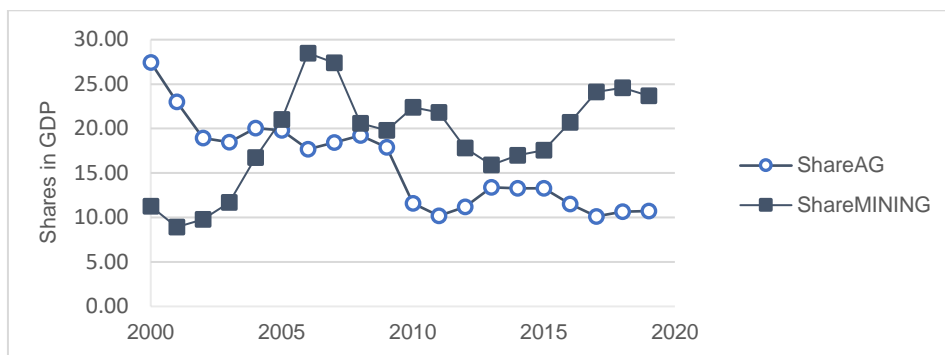

Figure 1. Nominal GDP growth and per capita GDP growth in Mongolia, USD
Source: Authors processing based on the data from the National Statistical Office of Mongolia, 2000-2019.

Since agricultural production depends entirely on renewable resources such as land, water, and forest, these resources' use and future perspectives will directly impact the development of the Mongolian economic sectors. Besides, the rapid development of mining in Mongolia over the last 20 years has greatly affected these renewable resources. Land of 118.4 million ha (75%) of the total area of Mongolia (156.5 million ha) is suitable for agriculture production and pastoral livestock production (National Statistics Office of Mongolia, 2020).

The agriculture sector had been a dominant sector of the Mongolian economy. The mining sector has gained momentum; agriculture has been ranked second to third in the GDP last two decades. In 2005, large national and foreign-invested mining companies began their operations, and in 2006 the Minerals Law was renewed. As a result, the mining sector alone accounted for more than 30% of budget revenues and more than 90% of total export earnings (National Statistics Office of Mongolia, 2020). Figure 2 provides agriculture sector share (ShareAG) and mining sector shares (ShareMINING) in GDP. By 2005, the share of the agriculture sector had declined, and the share of mining had increased. A slowdown in the agricultural sector is due to privatisation, structural changes and animal loss from the very harsh winter in 2000 and 2010. The agricultural sector's maximum (27.4) and minimum (10.1) shares happened in 2000 and 2017. A very harsh winter hit the agriculture sector in 2010; while a big mining site started its operation, the agricultural sector share declined. In general, as the share of the mining sector in GDP increases, the share of the agricultural sector in GDP decreases- Figure 2.

Figure 2. Share of agriculture and mining sector in GDP of Mongolia
Source: Authors processing based on the data from the National Statistical Office of Mongolia, 2000-2019.

3. Materials and methods

3.1 The model and data
The study adopted the most commonly used methodology of estimating the growth model (Sachs and Andrew, 2001; Ronald, 2006). This growth model has become the standard for investigating the determinants of growth across countries. We have developed a three-step economic growth model (Y1, Y2 and Y3) to investigate the sectoral effect on economic growth. Y1 model has three sub-models (Y1-1, Y1-2 and Y1-3) that excludes control variables.
The variable selection has been made based on the previous review of scholarly studies.

Table 1. The variable description and references

Variables	Impact*	Variable explanation	References
Dependent variable:			
Economic growth rate GDP		The annual growth rate of GDP in logarithm	(Ronald, 2006; Sachs and Andrew, 2001)
Experimental variables:			
Log GDP per capita	+	GDP per capita, by WorldBank Atlas method, USD	(Ronald, 2006; Sachs and Andrew, 2001)
ShareMINING	+	Share of the mining sector in GDP in percent	(Barro, 2016; Ronald, 2006; Sala-i-Martin, Doppelhofer and Miller, 2004; Sachs and Andrew, 2001)
ShareAG	+	Share of agriculture sector in GDP in percent	(Barro, 2016; Ronald, 2006; Sachs and Andrew, 2001; Sala-i-Martin, Doppelhofer and Miller, 2004)
Control variables:			
Education	+	Gross enrollment ratio	(Sachs and Andrew, 2001; Iponga et al., 2018; Sala-i-Martin, Doppelhofer and Miller, 2004; Barro, 2016)
ShareNetTax	-	Income tax contribution in the GDP	(Ronald, 2006)
ShareGov	-	Share of Government expenditure in the GDP	(Barro, 1997; Ronald, 2006; Sala-i-Martin, Doppelhofer and Miller, 2004)

Note: * + positive impact; - negative impact;
Source: Authors processing based on the scholarly articles

Table 1 shows the main variables that affect economic growth and their explanations. These variables were used to determine the extent to which natural resources affect economic growth and whether there is a resource curse.

The following general equation shows a model form explaining relationships between dependent and independent variables. The dependent variable is estimated in three different forms:
Thus:

$$Y_t = \alpha + \beta logPC_t + \gamma X_{i_t} + e \qquad\qquad (1)$$

where: i: share mining, share agriculture, gross enrollment rate (Education) and share tax of net tax

$$Y_t = \frac{LogGDP_t - LogGDP_{t-1}}{LogGDP_{t-1}} \quad \text{where } t = \{0; 20\} \qquad (2)$$

Data set $t_0 = 2000$ and $t_{20} = 2019$.
$logPC_i$ is the initial level of Per Capita GDP in logarithm
Here, the dependent variable Y is the annualised growth rate for Mongolia.
Model Y1 -annual growth of GDP; It has three different forms regarding the number of independent variables.
$$Y_t^1 = \alpha + \beta logPC_t + \gamma X_{i_t} + e;$$
$$\text{where } Y_t^1 = \frac{LogGDP_t - LogGDP_{t-1}}{LogGDP_{t-1}} \qquad (3)$$

model Y2- annual growth of GDP less the contribution of the agriculture sector; and
$$Y_t^2 = \alpha + \beta logPC_t + \gamma X_{i_t} + e;$$
$$\text{where } Y_t^2 = \frac{Log(GDP_t - GAP_t) - Log(GDP_{t-1} - GAP_{t-1})}{Log(GDP_{t-1} - GAP_{t-1})} \qquad (4)$$
model Y3-annual growth of GDP less the contribution of agriculture, and resource extraction sector.
$$Y_t^3 = \alpha + \beta logPC_t + \gamma X_{i_t} + e;$$
$$\text{where} \qquad Y_t^3 = \frac{Log(GDP_t - GAP_t) - Log(GDP_{t-1} - GAP_{t-1} - GMP_{t-1})}{Log(GDP_{t-1} - GAP_{t-1} - GMP_{t-1})} \qquad (5)$$

These different forms aim to investigate the sectoral effects on economic growth. Variables as GDP per capita, Agriculture sector share (ShareAg), Mining sector share (ShareMining) are experimental variables. Moreover, variables such as Education (Education) and Net taxes (ShareNetTax) are selected as control variables. The selected independent variables denoted X_i are the share of selected variables in GDP except for the gross enrollment ratio (Education) representing human capital.

Ronald (2006) took the share of college and university-educated people in the total population as variable Education. Unfortunately, this type of data was unavailable in Mongolia's statistical information; therefore, we use the gross enrollment ratio. Theoretically, initial levels of human capital, usually measured in terms of schooling years, positively affect economic growth, and expenditures on education and school enrollment are negatively correlated with the share of natural capital in national wealth (Ronald, 2006; Barro, 1997). Several debates are taking place in the literature on development economics regarding the role of human capital in economic growth. Some of the debates on the lack of standardised

indicators to measure human capital stock and investments as different authors have used different measures of human capital indicators (health and education expenditure, school enrolments, adult literacy rates, average years of schooling, mortality, life expectancy and adult survival rates). Another issue is related to the econometric problem of simultaneity. There is maybe a reciprocal relationship between human capital and economic growth (Almas, 2018).

4. Results and discussions

4.1 Growth model - 1
The three steps explain the growth model Y1 annual growth of GDP (2000-2019). In the first steps, the model estimated only two independent variables: the share of agriculture and mining (Model Y1-1). Furthermore, the second and third steps added control variables one by one (Y1-2 and Y1-3). The regression results of the first type of growth model are presented in Table 2.

Table 1. Regression of annual growth of GDP (2000-2019) on agriculture and natural resources intensity and other controlling variables

Variable	Growth model 1-Y1		
	Model Y1-1	Model Y1-2	Model Y1-3
	no control variables	with education	with education & tax
Log GDP per capita	-0.014 (-1.65*)	-0.015 (-1.61*)	-0.005 (-0.576)
ShareAG	-0.061 (-0.85)	-0.072 (-0.81)	0.002 (0.022)
ShareMINING	0.055 (1.88**)	0.057 (1.81*)	0.73 (2.49**)
Education		0.00 (-0.22)	0.00 (0.233)
ShareNetTax			0.269 (2.088**)
Constant	0.057 (1.5*)	0.072 (0.943)	0.026 (-0.31)
R-squared	0.266	0.268	0.452
Adj R-squared	0.119	0.059	0.241
Durbin Watson	1.91	1.92	2.3

Note: t- statistics in parentheses;
        *, ** *indicates that significant at 10 and 5 % level respectively.*
Source: Authors analysis based on regression analysis

The log GDP per capita coefficient interprets a conditional rate of convergence. This coefficient is statistically significant in two regression models, i.e. Y1-1 and Y1-2. The estimated coefficient of -0.014 and -0.015 implies a convergence rate of these two cases, respectively (Peter et al., 2005). The variable Share of agriculture on GDP is negative but not significant in all forms. The ShareMINING variable is positive and highly significant, indicating that Mongolia's economic growth depends on the mining sector contribution. The variable Education is insignificant. Thus, this variable has no impact on GDP growth. Variables such as years of schooling and school enrolment, which do not reflect the quality

of education, have weak relation with economic growth (Barro, 2016). The variable ShareNetTax is highly significant and positively related to the growth of GDP. This result implies that an increase in tax income supports economic growth. Government tax has a high portion of natural resources income and extraction.

4.2 Growth model – 2 and Growth model – 3

The second type of regression analysis excluded a contribution of the agriculture and mining sector in the GDP growth step by step from dependent variables. Model Y2 estimated the exclusion of agriculture share in per capita GDP, and model Y3 ran without considering both agriculture and mining sectors' share in GDP growth in the dependent variable. Table 3 provides the regression results of these two models.

Table 2. Regression of annual growth of GDP less the contribution of agriculture and resource extraction sector (2000-2019) on natural resources intensity and other controlling variables

Variable	Y2 (exclude agriculture)	Y3 (exclude both sectors)
Log GDP per capita	-0.012 (-1.185)	0.001 (0.081)
ShareAG	-0.044 (-0.457)	0.035 (0.311)
ShareMINING	0.071 (2.186**)	0.058 (1.51*)
Education	8.819 (0.128)	0.00 (0.16)
ShareNetTax	0.248 (1.74*)	0.389 (2.32**)
Constant	1.012 (11.1***)	0.941 (8.73***)
R-squared	0.45	0.367
Adj R-squared	0.239	0.124
Durbin Watson	2.36	2.19

Source: Authors analysis based on regression analysis
Note: t- statistics in parentheses;
        *, **, *** *indicate that significant at 10, 5 and 1 % level respectively.*

The estimation results are pretty similar to the growth model 1. The log GDP per capita's coefficient indicates a conditional rate of convergence is no longer significant in these two cases. While the coefficients of ShareMINING and ShareNetTax are positive and remain highly significant. All other variables are insignificant. In the two models, the contribution of the agriculture and mining sector in economic growth has not affected the mining sector's importance in economic growth. The result supports the other researchers that Mongolia is overdependence on mineral resources (Li, Gupta and Yu, 2017; Lkhagva, Wang and Liu, 2019; Dagys et al., 2020; Locatelli, 2019). The coefficients on the control variables are very close to the first regression model's result in table 2. Therefore, the evidence does not support the notion that resource richness hampers other sectors' growth in Mongolia. This result is similar to the Avralt-od et al. (2012), and Ge and Kinnucan (2017) concluded that the resource curse is not detected in Mongolia.

5. Conclusion

The importance of natural resource use increases year to year due to the increasing demand of the world population and the resources' availability. High usage or depletion of renewable and non-renewable resources causes biodiversity, environmental degradation and many other side effects.

From an economic point of view, natural resources are an essential source of the nation's economic growth and wealth. The study results prove that Mongolia's economic growth is positive and highly dependent on mining. Likewise, the net tax share in GDP is highly significant and positively related to the per capita growth GDP. The result implies that an increase in tax income supports economic growth, explaining the comparatively high Government tax on a portion of natural resources income and extraction. The evidence does not support that resource richness hampers other sectors' growth in Mongolia. The log GDP per capita coefficient interprets a conditional rate of convergence. Thus, the research endowment of Mongolia is not supporting reducing poverty. The Mongolian agriculture sector is highly dependent on weather conditions and does not depend on the mining sector. According to the historical data, the agriculture sector can grow because Mongolia has vast pasture land, and the manufacturing sector is based on renewable agricultural resources. Mongolia should support the agriculture sector's growth and other sectors with growth potential, quickly adopt new and advanced technological innovation and increase productivity to diversify economic performance.

The study's main limitation is the lack of some data on control variables. For instance, variable Education (gross enrollment ratio) should be replaced by the share of highly educated people or expenditures on higher education. Similarly, other experimental and control variables need to extend the regression model where significant pooled data is available. Therefore, the follow-up study should consider appropriate data gathering from different means through primary and secondary sources.

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PERFORMANCE THROUGH INTERNATIONALIZATION AS A STRATEGIC OPTION FOR SMES

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Abstract: *Internationalization is often considered a strategic option for SMEs, but a large part of small firms' contribution to internationalization is not reflected in statistics, as many of them participate indirectly in the global economy as suppliers of exporting firms. The export-oriented model of SMEs seems to follow the general strategic choices, most SMEs do not export at all, and most exporting SMEs are regular companies. The literature mentions a number of characteristics that distinguish companies that are likely to export such as group membership, consistent expertise, size, rapid growth and innovation orientation, production experience or collaborations in production and distribution. At the European Union level, the recognition of the role of internationalization in increasing the performance of SMEs and the performance of the economy as a whole is complemented by extensive support measures, which prove both their direct role (volume of exports and imports, degree of international cooperation, profitability, turnover, competitiveness) but also their indirect role, to train young companies, dynamic in the world economic circuit.*

Keywords: SMEs, European Union, internationalization, performance, strategy.

JEL classification: L26, M16, F15.

1. Introduction

The internationalization of entrepreneurial firms is often presented as a feature of modern, dynamic and knowledge-intensive times, a profitable, complex and risky option at the same time. However, the internationalization of entrepreneurial businesses is not a recent phenomenon, and one in which the complexity and risks are associated only with the specifics of the contemporary period. According to Etemad (2018), entrepreneurs of past historical periods have faced greater risks, complex political, economic and social situations, with personal difficulties almost unimaginable nowadays. Documented historical information on entrepreneurship in international trade dates back to ancient times, with the famous Silk Road, a network of roads that connected major cities in Asia and Europe for almost 1600 years, reffered to, in fact, much later, as "roads of silk". The very long missions, the risks, the losses and the lack of information and security suggest the enormous uncertainty and complexity of these activities. They required great adaptability, flexibility and other

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outstanding entrepreneurial traits, active relationships with partners, buyers, suppliers, inventing and developing a multitude of support services for concluding transactions. Later, European traders faced similar uncertainties, taking great risks in their continental or intercontinental travel, expressing those attributes we now call "entrepreneurial" orientation, capacity, commitment and motivation, adaptability, interaction management, risk-taking and complexity management.

2. Literature on the relationship between internationalization and entrepreneurial performance

Located at the crossroad of entrepreneurship and international business, contemporary international entrepreneurship focuses on a strategy that combines innovative, proactive, and opportunity-seeking behaviour across national borders to create value in organizations (McDougall & Oviatt, 1996), (Oviatt & McDougall, 2005). Such a strategy allows firms to actively pursue opportunities for growth and innovation in foreign markets, enhancing firms' performance (Zahra, 2005). However, entrepreneurial internationalization also exposes firms to uncertainties and risks that require adapting internal routines and processes to new external environments - a resource-consuming challenge that can affect firms' performance. Considering these divergent arguments, it is not surprising that empirical findings from different studies and contexts are largely inconclusive, and it still remains unclear to what extent entrepreneurial firms should pursue an internationalization strategy to succeed in various limited conditions.

The main argument is that valuable resources allow firms to pursue (internationalization) strategies more efficiently, and according to the knowledge-based vision (Schwens, et al., 2018), knowledge is the most important strategic resource of a company, allowing the company to gain competitive advantages and maintain these advantages as long as the company's knowledge retains its value (Amit, et al., 1993). Internationalization is an effective means for entrepreneurial firms to exploit and explore valuable knowledge abroad, as long as the dispersion of knowledge can be prevented (Oviatt & McDougall, 2005). An entrepreneurial firm depends on the inherent knowledge in its activities and previous results and this knowledge is a valuable resource, a source of competitive advantage, ensuring performance in the case of the internationalization option.

Although the internationalization and performance of firms is a multidimensional phenomenon (Zahra & George, 2002), we must distinguish between the dimensions of internationalization (i.e. the degree, scope and speed of internationalization) and the performance of that firm (i.e. growth and profitability). The initial emphasis of the relationship between entrepreneurship - performance - internationalization, starts from the motivations of companies that internationalize fast and proactively shortly after their start-up (McDougall & Oviatt, 1996), (Oviatt & McDougall, 2005). Another perspective is to analyze the cross-border expansion of entrepreneurial firms, regardless of their size and age (Zahra, 2005), a considerable part of the relevant literature investigating young and small firms crossing national borders, (such as *born global*, or young firms attracted to the opportunities offered by new international projects). Another area of theory focuses on the cross-border entrepreneurial expansion of larger and more established firms.

In general, entrepreneurial firms are characterized by the specificity of their activities, by the involvement of innovation and risk-taking as they expand (or reduce) their international operations (Zahra & George, 2002, p. 260). While early research assumed a positive linear relationship between internationalization and business performance, a broader view considers both the benefits and costs of an internationalization strategy, as innovation is by nature proactive and risky (Schwens, et al., 2018), and therefore may have potentially negative implications for performance (McDougall & Oviatt, 1996).

Zahra & George (2002) identify three key dimensions of an entrepreneurial internationalization strategy: (1) the degree of internationalization refers to the percentage of an abroad (foreign) sales in total sales and expresses the extent to which the firm is exposed to foreign markets, (2) the scope of internationalization covering the number of countries or regions in which the entrepreneurial firm is active, thus indicating the diversity of the company's international activities, and (3) the speed of internationalization describing the period of time between the setting-up of the firm and its first foreign sales indicating the "precocity" of a firm's exposure to foreign market environments (Khavul, et al., 2010), (Zahra & George, 2002). Thus, the degree, scope and speed of internationalization are relevant dimensions to understand the various aspects of the internationalization of an entrepreneurial firm (Khavul, et al., 2010).

Company's performance is considered a major outcome variable in international business and strategy (Rauch, et al., 2009). Firms can achieve an increase at the expense of short-term profitability, for example an international increase through aggressive price reduction strategies, leads to an increase in market share, but to a declining profitability (Schwens, et al., 2018).

The existing literature that studies the relationship between internationalization and performance among entrepreneurial firms provides largely mixed results. For example, some research reports simultaneous sales growth and profitability, while others show that while sales growth is considered a significant positive effect of internationalization, international diversity and return on investment can have positive, negative, or insignificant influences (Zahra, 2005), (Schwens, et al., 2018). Moreover, McDougall and Oviatt (1996) do not find any significant direct relationship between the share of international sales in total turnover and the return on investment of new technology-based enterprises. In contrast, other research reveals that the extent of internationalization is significant (though marginal) and positively related to profitability, but not to sales growth. Finally, there are analyses that find even a negative and significant effect between internationalization in terms of export intensity, and the performance of small firms.

The "entrepreneurial" behaviour of internationalized firms seems to contribute to their success abroad to a greater extent than broader variables, such as firm size or age (McDougall & Oviatt, 1996). On the other hand, the intensity of knowledge can negatively influence the relationship between internationalization and performance, highlighting the risks for knowledge-intensive companies, technology, etc., which enter various foreign markets and the efforts required to integrate diverse foreign knowledge. The intensity of knowledge positively mediates the relationship between the speed of internationalization and performance. Many theories argue that less pre-existing knowledge allows early internationalized firms to enjoy the learning benefits because firms have less "baggage" that prevents them from seeking new knowledge abroad (Autio & Acs, 2007), (Gustafsson & Autio, 2011). In contrast, other theories claim that more pre-existing knowledge helps firms that internationalize early to absorb new foreign knowledge more efficiently.

3. Development and internationalization of entrepreneurial companies in the European and global context

The internationalization of entrepreneurial firms is a specific topic, often presented in a favourable light as inherent in the development of this type of business. Growth is a crucial part of their strategies and direction, as evidenced by the fact that almost 90% of young European firms say they intend to internationalize, or increase their degree of internationalization in the next twelve months (Steigertahl & Mauer, 2018) (Bormans, et al., 2020).

Successful capitalization of foreign markets has proven to be a major driver of the recent growth of many EU' SMEs. There are several ways in which SMEs can expand internationally - by exporting or importing goods and services, by making foreign direct investment abroad, or by attracting foreign investors to their business, becoming part of a national value chain which also has an international component, through involvement in cross-border research and development and collaboration in innovation, or by licensing or franchising certain products or services.

Most European start-ups usually start expanding to neighbouring (EU) countries and then try to move to larger international markets. According to surveys, 77% of these firms have plans to internationalize in the EU in the next 12 months, and about 36% want to do so (and) outside the EU (in North America and then in Asia), 26% in the EU and outside the EU, and 11% have no such intention (European Commission, 2015).

3.1. The situation of the internationalization of SMEs in the European Union, and the OECD

According to OECD statistics, "the share of enterprises participating in international trade varies significantly from country to country, ranging from 10% to 40% for exports and from 10% to 70% for imports" (OECD, 2017). Small countries tend to have higher levels of involvement in import-export operations, reflecting the limited size of their internal market, although there are substantial variances from one country to another. In almost all economies and in all size classes, the number of importing enterprises is usually higher than the number of exporters, and the United States is a notable exception (OECD, 2017), see Figure 1.
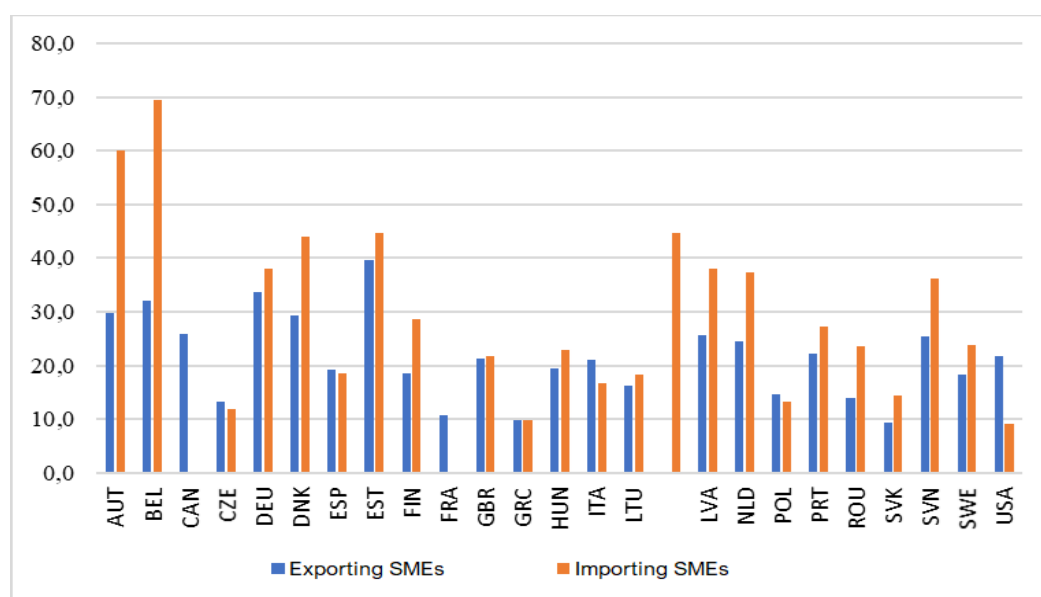
Figure 1. Share of exporting and importing SMEs, in total firms involved in exports, respectively imports, OECD countries, 2017 (in %)
Source: (OECD, 2021a)

There are significant differences between SMEs of different sizes in terms of participation in international trade. On average, 15% of micro-enterprises in OECD countries are involved in international trade, while for small enterprises the share reaches 60% and for medium-

sized enterprises up to almost 80%. Finally, the export sector is relatively concentrated, the top 100 exporting companies in each country have a significant share of that country's exports, and this percentage can range from about 25% in Italy to over 90% in Luxembourg (OECD, 2017). Data that reflect only direct export (and import) channels may underestimate the true scale of integration into global value chains, especially by size classes of firms. For example, upstream SMEs may participate in global value chains by providing goods and services to larger exporting firms, but their importance is often underestimated, and this in most cases refers to small size, usually micro-enterprises.

If we analyse the internationalization of firms, depending on the size class, we find that, although between 25 and 70% of exporting firms are micro-enterprises, they represent only a limited part of the total value of exports. Micro-enterprises active in wholesale and/or retail commerce have play a significant role in stimulating import-export activities. They include about three-quarters of all companies in the sector engaged in international trade and approximately 15-50% of total imports and exports in the sector. In general, compared to large firms, small firms are more likely to export to markets relatively close to their country of origin, which is explained by the impact of fixed costs, which tend to be relatively higher for smaller firms. Barriers to importing SMEs seem less expensive than those to export activity. Another result of this analysis is that the value of exports (imports) relative to the firm's turnover is generally higher as the firm is larger and the economy is smaller (OECD, 2017), see also Table 1 below. These include countries such as Ireland and the Netherlands, which host many foreign multinationals with a high use of intellectual property, and which have the highest export rates in OECD turnover.

Table 1: Ratio of export value to turnover, by size classes (SMEs and large firms), OECD countries, in 2017*

	Export		Import	
	SMEs	**Large firms**	**SMEs**	**Large firms**
Austria	31.33	51.94	21.48	31.04
Belgium	40.06	43.77	27.15	35.12
Czech Republic	25.47	45.88	18.23	29.14
Germany	17.73	34.43	10.80	17.58
Denmark	31.26	41.69	15.49	16.73
Spain	23.32	28.75	14.45	30.77
Estonia	51.78	62.50	30.57	43.04
Finland	20.93	35.79	11.31	22.62
France	16.49	27.73	13.15	22.19
UK	17.03	24.93	14.20	21.18
Greece	24.66	38.38	22.60	55.45
Hungary	31.18	53.05	27.09	43.98
Ireland	69.79	62.25	16.59	17.46
Italy	23.48	32.75	11.50	19.12
Lithuania	46.12	65.67	33.55	62.19
Latvia	47.09	33.25	24.79	23.46
Netherlands	37.14	39.99	24.25	33.37
Poland	24.03	35.60	15.76	28.51
Portugal	25.43	46.58	18.64	41.51
Romania	30.05	50.66	26.88	38.54
Slovakia	34.43	61.38	26.36	46.18
Slovenia	32.23	71.05	23.78	38.10
Sweden	23.86	44.82	14.15	21.92

|	Export		Import	
	SMEs	**Large firms**	**SMEs**	**Large firms**
Turkey	11.56	18.51	14.22	32.51
United States	9.39	12.51	8.97	14.76

Note: * or the most recent year available
Source: (OECD, 2021a)

Differences in participation in international trade between size classes and by country may highlight important barriers to participation in international trade, especially for smaller firms (OECD, 2021a), (OECD, 2017).

3.2. Internationalization and competitiveness as strategic options for SMEs

Entering new foreign markets is not an easy task and it is important to find those factors that can best help SMEs to internationalize. As a rule, SMEs refrain from entering new markets because they do not understand or have the ability to control the risks associated with operating abroad. This is why when asked to specify their needs in this sector, most mention "providing information on external markets, their legal and regulatory environment", "connecting with new partners", "guidance and training needs", and "providing financial support" (European Commission, 2015).

Thus, entrepreneurs face many challenges such as: lack of stable external relations (55%), adequate financial support (43%) and insufficient knowledge of differences in legislation (38%), or difficulty in adapting production and products (23.3 %), language barriers (20.7%) and cultural differences (32.4%) (Steigertahl & Mauer, 2018), (Bormans, et al., 2020). Ensuring acceptable profitability (86.2%) and cash flow (72.3%) (Figure 2) are considered by most start-ups to be the biggest challenges of internationalization. Expanding into new markets is done to gain access to more potential customers, higher sales and possibly more financing.
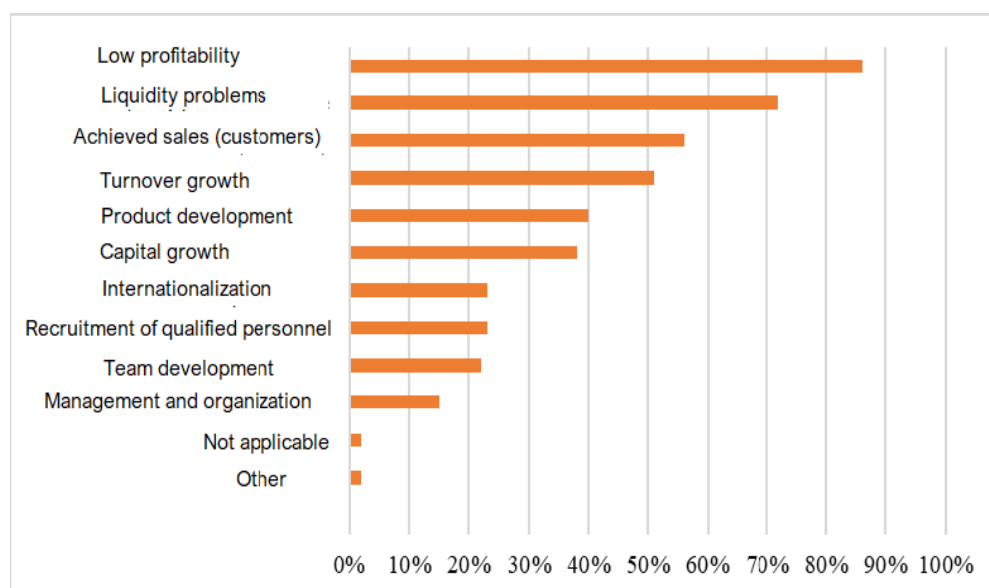
Figure 2: Difficulties and tasks facing start-ups in business development and internationalization
Source: (Bormans, et al., 2020), (Steigertahl & Mauer, 2018)

Encouraging SMEs to become more innovative and export-based is based on consistent policies and arguments – about two-thirds of European SMEs currently operate in sectors with either low knowledge and technological intensity or are poorly visible on export, with a very high concentration of micro-enterprises and small enterprises with less than 50 employees (European Commission, 2018). Similarly, about 90% of SMEs are active in sectors with low and very low export intensity (see Table 2).

Table 2: Distribution of EU SMEs in value added generation, employment and number of enterprises between sectors with different export intensities

Intensity of export sectors	Micro	Small	Medium	Micro	Small	Medium	Micro	Small	Medium
	Number			*Added value*			*Employment*		
Very high (over 40%)	0,9%	0,2%	0,1%	0,6%	1,9%	4,3%	0,6%	1,4%	2,8%
High (20-40%)	3,2%	0,5%	0,1%	1,4%	2,8%	3,7%	1,8%	2,6%	3,0%
Medium (10-20%)	4,8%	0,6%	0,1%	1,6%	2,6%	3,7%	2,8%	3,2%	3,5%
Low (5-10%)	28,0%	1,0%	0,2%	10,9%	7,4%	7,7%	10,7%	5,3%	5,4%
Very low (0-5%)	56,3%	3,5%	0,5%	20,8%	16,3%	14,3%	27,4%	17,5%	11,9%

Note: Export intensity – the share of exports in total sales, calculated for each industry
Source: (European Commission, 2018)

According to the latest data, SMEs are more active in the Single Market, which is somewhat to be expected. The small size and limited human and financial resources of SMEs (Badulescu & Badulescu, 2010), (Badulescu & Petria, 2011), typically prevent these firms from expanding globally outside the EU, with nearly 25% of SMEs importing from other EU Member States and half of the number of SMEs imports from outside the EU (European Economic and Social Committee, 2017). An even smaller share of SMEs (7%) dare to export their production globally.

3.2. Improving the performance of companies through internationalization and the role of public support

Various research and surveys conducted by the European Commission over the last decade (EIA (Pantheon), 2010), (European Commission, 2010), (European Union Open Data Portal, 2015) have shown a strong correlation between internationally active SMEs and business performance, better than average. Although part of this effect may be due to "self-selection", in the sense that better performing SMEs are more likely to be active internationally, it is very likely that there will be a direct, positive effect on business performance. Which become active internationally. This will also have an effect on the performance of the national and European economy and, in addition, there may be indirect effects, for example, on learning and innovation. Surveys cited by these studies have shown that SMEs active in export-import operations have much higher employment increases than other SMEs: nearly 7-8% in the case of import-export operations compared to SMEs operating only on national markets, and by more than 15% in the case of SMEs involved in foreign direct investment, compared to SMEs that do not benefit from this investment.

Whether we are referring to SMEs active in international activities, or to SMEs with concrete plans to become active internationally, we can assert that they report an increase in employment of 7%, compared to only 1% for SMEs without plans or effective involvement in

international activities. Secondly, the evolution of the turnover in a few successive years shows a positive correlation between the active firms at international level and the faster growth of the turnover. The effect is particularly high for SMEs that invest abroad, SMEs that are subcontractors of a foreign company and SMEs that have foreign subcontractors, respectively, about 20% of them reported that the turnover increased "quite enough" in the last three years, while for ordinary SMEs the average is only 12%. Moreover, SMEs firms that have invested abroad and those that have been involved in external technological cooperation have increased by more than 50%, compared to an average of 33% (EIM (Panteia), 2010).

Thirdly, surveys confirm the strong correlation between internationalization and innovation, with over 25% of internationally active SMEs introducing new products or services for their sector in their country, while for non-internationalized SMEs this percentage is only 8%.

Internationalized SMEs perform above average, i.e. they are more competitive than non-internationalized SMEs, in the long-term, because internationalization and innovation complement and stimulate each other.

They already indicate the need to combine internationalization and innovation when designing government support for this type of enterprise. Public support can indeed play a role in promoting greater internationalization of firms, and especially SMEs, with some firms acknowledging that they would not have internationalized without this support (European Union Open Data Portal, 2015). More than half of domestically active SMEs mention that they have identified growth opportunities at the international level as well, clarified or encouraged by the existence of support measures for internationalization. Public support can also make a valuable contribution by addressing those issues that are perceived as the main obstacle to internationalization: access to information and access to financial support. However, it is important to note that not all public support is equally effective, it needs to set clear quantitative targets and objectives, tools for monitoring and evaluating results, to ensure that support reaches the intended recipients and avoids wasting resources (EIM (Panteia), 2010), (European Union Open Data Portal, 2015), (Yu et al, 2020).

3.3. Internationalization of Romanian SMEs

Regarding the access to the Single Market, the reports of the Small Business Act (SBA) show that Romania performs below the EU average in this respect. In 2017, Romania had the lowest percentage of SMEs with intra-EU online imports and exports. The ease of market access in 2015 for new and growth-oriented firms is among the lowest in the EU, the same low level being valid for the percentage of public contracts provided by SMEs abroad in 2017 (European Commission, 2019).

Regarding the field of internationalization of SMEs, based on the latest available data "Romania performs in accordance with the EU average in this regard. Although Romania has one of the lowest scores in the EU for SMEs exporting online outside the EU and for SMEs with exports of goods outside the EU, Romania performs substantially above the EU average in terms of procedures and formalities prior to import-export operations" (European Commission, 2019). Moreover, the "World Bank's Doing Business Romania 2020 Report shows that Romania has, out of all 10 chapters, the maximum performance (100) and rank 1 in Trading across Borders" (Herte & Badulescu, 2020).

In recent years, "Romania has made limited progress in policies and economic measures to support SMEs in this area, only a few programs implemented providing financial and information support to SMEs that help them internationalize~ (Herte & Badulescu, 2020), i.e. to do business abroad. Single access points have been set up for information on rules and regulations on foreign markets (Ministry of Business Environment, Trade and Entrepreneurship, 2019) (Ministry of Economy, Trade and Business Environment, 2019).

According to the European Start-up Monitor (Bormans, et al., 2020), (European Commission, 2019) Romanian SMEs have a low degree of internationalization, most of these businesses address their products or services to the local market, more exactly the population of the locality where it operates (36%). Approximately 34% of new firms trade products and services for the national market and only 30% from them went abroad, more precisely 10% are focused on regional markets and around 20% are active on international markets (European Commission, 2019).

In the future plans to expand into new markets, internal or external, start-ups entrepreneurs intend to enter with their business in new geographic markets (external) in a proportion of nearly 50%. The preferred area of expansion is the regional one, Europe, targeted by nearly 51% of those who plan to enter new markets. "A significant number of start-ups intend to enter the US market (17%) and a relatively small proportion of such firms (10%) are thinking of expanding nationwide" (Ernst & Young Global Limited, 2019), see Table 3.

Table 3: The main new markets (domestic or international), targeted by a possible expansion of the Romanian SME business

Internal	Cities in Romania (10%)		
External	Europe (51%), *of which*	Germany	7%
		Bulgaria	3%
		Hungary	1%
	Asia (5%), *of which*	China	2%
	North America (18%), *of which*	Canada	1%
		USA	17%
	Africa (1%)		
	Globally (3%)		

Source: (Ernst & Young Global Limited, 2019)

The most important difficulties and obstacles mentioned by young business entrepreneurs are the lack of capital for investment (45%), limited resources for promotion (38%), the lack of qualified staff (35%) and the lack of clients (34%).

Sources of financing, for growth and expansion, international or not, "are often different, not so much in their variety but in frequency of use, compared to already established or young firms, but not necessarily innovative" (Herte & Badulescu, 2020). Traditional ways of financing (such as the founders' personal savings - 78% of cases, or support from family and friends - 30.2%) are the most frequently invoked, but they are followed by Business angels (29%), venture capital (26%) or various equity investors (21%), government grants/funding (20%), crowdfunding (18%). Compared to "ordinary" SMEs that add bank loans to personal resources, and family and friends; start-ups are more opened to unconventional (crowdfunding) or risky (capital investors) financing. Working with other businesses can be a way to overcome challenges and access new markets and opportunities. The survey conducted by Bormans, et al. in 2020 shows that about 29% of new firms work together with large companies, and the majority of them seem to be international trade with goods and services, but also high-tech cooperation, followed by cooperation with traditional SMEs (41%), universities (11%), other start-ups (9%), governmental agencies and institutions or NGOs (11%) (Bormans, et al., 2020). The reasons are diverse, but we can notice - 84% for access to new markets and customers or 42% for improving image, reputation and commercial know-how transfer.

4. Conclusions

In this article we have analysed the link between the performance of small and medium enterprises, in relation to the exit on new foreign markets. It is a fact that the internationalization of European SMEs has significantly contributed to economic growth in recent years, exports of SME goods from the EU-28 have increased by 20% in the last 5 years, and the Single Market is proving its importance and special character for EU' SMEs. However, SMEs are internationalizing on the basis of strategic choices, in which political support can play a decisive role in influencing this choice. Finally, there are high expectations that policy measures aimed at stimulating currently non-exporting SMEs to relocate to foreign markets to give results in the future and that many SMEs currently operate in sectors that are characterized by a low level of knowledge, technological intensities or openness to export. Internationalization can support economic growth and well-being and improve the performance of firms, also generating indirect effects on learning and innovation, by opening up to newness, cooperation in various fields, dissemination of knowledge and production techniques.

Given the importance of the internationalization of SMEs in the European economy, both in terms of turnover and added value growth, but especially in employment, technological dynamism and innovation, the role of public support for internationalization is becoming essential. Some of the SMEs that use public support measures have acknowledged that they would not have internationalized without this support, many of them have identified growth opportunities at the international level as well, clarified or encouraged by the existence of support measures for internationalization.

Measures are required to make this support more effective, to set clear quantitative targets and objectives, tools for monitoring and evaluating results, to ensure that support reaches targeted recipients and maximizes resources in tangible results, encouraging firms to real internationalize, in the medium and long term

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THE AESTHETIC NATURE OF CORPORATE SOCIAL RESPONSIBILITY AND GREENWASHING

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Abstract: *This article argues that the governance, corporate social responsibility (CSR) and the communications and environmental practices done in the name of it should all recognize that the corporation is an aesthetic phenomenon. Through logos, trademarks, websites and product advertisement CSR practices are being aesthetically projected. In turn, this misleads and influences the consumer about the corporation's environmental performance and compliance with CSR regulations. As a result, the article argues that the aesthetic nature of a corporation must be taken into consideration when punishing dishonest corporate behavior through governance methods. The illusion a corporation can create in claiming it is "green", can create difficulties for regulations, therefore, tackling the wrongful and misleading statements about a corporation's products can be more beneficial than focusing on the broader aesthetic of a corporation. Social and environmental activists play a subversive role in the equation which can help with unveiling the green mask. Though history has shown that these narratives can play a limited role in re-establishment, lawful regulation can assist these narratives in forming a more rigid practice when it comes to CSR and greenwashing.*

Keywords: CSR, Greenwashing, Environmental, Aesthetic, Consumerism

JEL Classification: M14, K13, K32, K33

1. Introduction

In recent years, Volkswagen launched a line of "clean diesel" cars claiming that these cars could be an alternative to hybrid and electric vehicles with the slogan "Clean Diesel, like really clean diesel". Volkswagen installed emissions software to 11 million vehicles that allows them to sense the unique parameters of emissions drive cycle set by the Environmental Protection Agency. However, the cars did not comply with the company's claims. It turned out that these devices detect the speed, throttle and other inputs in order to switch from one operating mode to another. The trick was that these vehicles are fully compliant with the claims made about them, but only when operating in the test mode. However, when driving normally and at a higher speed, the computer switches to a different mode significantly changing the way the vehicle runs and in turn, significantly increasing the amount of nitrogen oxide emissions alongside other pollutants and toxins. By doing so, Volkswagen is in violation of the Clean Air act and is being investigated for doing so. The result of the investigation could cost the automaker close to $18 billion.

The Volkswagen scandal is one of the more extreme examples of greenwashing (Aurand et al., 2018). But the practice of claiming positive environmental performance and not delivering has been remarkably widespread among multinational corporations. A 2010 report suggests that 95% of "green" products are in fact not or include at least one questionable claim

(Terrachoice, 2010). When corporations attempt to impress the people with their environmental practices, gloating about their recycling initiatives and low carbon footprint, they as often as possible exaggerate their claims with engaging tasteful aesthetics. Corporate sustainability reports bustling with specialized information are apparently not enough to impress the public.

The general population may view Nestle's recyclable plastic bottles, or Tide's "plant based" laundry detergent as green without looking any deeper into the ingredients list or the packaging details. Colloquially, these presentations are sometimes mocked as "greenwashing." They are not simply the results of inventive advertising groups in any case, rather, mirror the profoundly tasteful characteristics of the contemporary business enterprise and the customer economy in which it works.

As currently structured, CSR is a voluntary effort that fundamentally relies on the alignment of environmental awareness and long-term firm reputation with stakeholder value, the ethics of corporate managers and directors, and the goodwill of consumers and investors toward a healthy planet. How might we assess the aesthetic nature of CSR in terms of guaranteeing responsibility on organizations' environmental practices? What is the effect of aesthetics in terms of examination of CSR jurisdiction? These questions outline this article, which contends that we need to consider the aestheticized aspect of a corporation's environmental practices in order to appropriately comprehend their societal effect and the suitable administration reaction thereof. As opposed to the predominant accounts about the ethics of aesthetic appreciation, prominently for emotive amusement and the development of morality (Freeman, 2014), this article similarly features their negative implications in the realm of business. For business administrators, tasteful qualities serve not only to incline how general society sees their natural or social exercises yet additionally the actual enterprise as a stylish peculiarity. Unlike an individual human, the "distinguishing component of the body corporate is its imperceptibility," clarifies law teacher Leslie Moran (1992). A corporation is seen by the people indirectly as an aesthetic phenomenon through its graphic logos and sites. The organization, subsequently, isn't just apparently everywhere but additionally nowhere, without association with a particular spot or person. It is often debated that a human being and a corporation are not and cannot be equal in the presence of the law as the two are very dissimilar.

This article will discuss several aspects of CSR aesthetics and the proposed measurements thereto. First and foremost, the article presents the theoretical and procedural structure for assessing the aesthetic nature of CSR. From this, it analyzes the aesthetic elements of business and the consumer economy, including the green-washed aesthetics of CSR. It will touch down on customary regulatory controls, including misleading advertising, and evaluating the potential strategies to countering these strategies. The article closes emphasizing on how regulation may help escape aesthetics by protecting the public from being deceived. All through, the article models from an assortment of jurisdictions however mainly, Anglo-American jurisdictions.

2. The Aesthetics of Greenwashing

Corporate Social Responsibility Marketing

The business organization is indeed a tasteful wonder. You would not think that, nonetheless, by seeing the ascetic ceremonies of shareholder gatherings and boardroom meetings. Their monotonous customs - from recording investor goals to tuning to the chief executive officers' advice – give a false representation of the corporate personality shown to the more outsider world. This outsider identity is substantially more than up-to-date corporate workplaces or meeting rooms beautified with compelling artwork; it emerges to pass through

trademarked logos, websites, brilliant exposure, and omnipresent item showcasing. Sometimes music plays a role with some corporations to create a theme song specially for the corporation which is said to promote the loyalty of the employees (Nissley, et al., 2003). The word aesthetic was originally derived from the ancient word "aisthetikos" which means "of or for perception of the senses". However, in contemporary English the word aesthetic means the significance given to experiences that have a sensual character. When used as a noun, the word signifies the principles or philosophy of aesthetic opinions particularly relating to art and beauty (Light, A. and Smith, J, 2005). Giving things an aestheticized effect has a considerably bigger influence on consumers, for certain significant organizations' advertising expenses exceeding the expenses incurred in the actual manufacturing of goods (Surbaugh, et al. 2013). Shopping itself has gotten an aestheticized effect as it offers unmistakably tasteful feels. The market has transformed into an economy where the consumer purchases an experience rather than a product. An experience which entails spending time undergoing a series of experiences that the corporation makes memorable for the consumer (Pine et al., 1999). There are certain amusement cafes that are well known for the experience the consumer encounters rather than being known for the coffee or the food. Such places have aesthetic qualities, particularly for multinational corporations, they tend to blend into the brand that summons the organization's qualities and promotes developed relationships with specific ways of life and status. Malls also tend to deliver a music/perfume filled experience which leads consumers to stick around and purchase more (Brottman, 2007).

Organizations utilize stylish impacts to "console" consumers of their environmental qualities with an end goal to proceed with their monetary achievement. These tasteful impacts are utilized not only to advance business in clearly environmental-themed areas, for example, the eco-tourism industry (Campelo, Atiken and Gnoth, 2011), however the appealing melodies and symbolism in advertising can carry believability to claims about strategic approaches taking on the appearance of "zero emissions," "carbon impartial," or "economical." Logos give another powerful stylish image of eco-friendly affectations. Considering the analysis of its environmental practices, the company British Petroleum dispatched an enormous rebranding campaign that incorporated another logo of a yellow and green sunflower, representing the god of sun of old Greece. It also changed its name with the slogan, "Beyond Petroleum" (Beder, 2002). However, there was nothing really "beyond" about it. This is the very same organization that was found liable for an enormous oil spill in the Gulf of Mexico called the Deepwater Horizon (Pallardy, 2020) and for whom non-renewable energy source deals actually represent by far most of its profits and revenue.

3. Regulating Green Illusions

3.1. Trading and Advertising

Laws and regulations have not been able to keep up with corporate greenwashing on account of their inability to perceive and adjust to the developing aestheticized character of business and its CSR plan. For the sake of intellectual property protection, governments have been more invested in shielding corporate aesthetics than controlling their deceptive implications. Copyright law in the United States of America, a main shaper of worldwide standards, has a few times expanded the length of legal protection to creators' manifestations, generally to protect corporate interests, for example, the Walt Disney Company, which persistently campaigned for such expansions in 1998 (Svhlackman, 2015). Trademarks additionally get liberal legal insurances in order to protect corporations. Concurrently, experts in numerous jurisdictions have surrendered greater duty to organizations to deal with their own environmentally conscious performance through sets of

principles such as codes of conduct or contracts and advisory guidance, resulting in creating more opportunities for dishonest conduct, given the diverse record of self-regulation in businesses (Haufler, V, 2013). Large numbers of these voluntary CSR initiatives contain assumptions that member organizations will openly unveil their environmental and social performance, however such assumptions either identify with explicit technical information, for example, reporting their greenhouse gas emissions, or are projected too comprehensively without the intention to hold these corporations responsible for their performance.

Active statements and exclusion can both amount to bad or faux forms of communication between a business and a consumer. For example, Canada's Competition Act 1985, recently amended in 2020, precludes bogus or deceiving claims about any product, service, or business. This incorporates both the literal meanings of the claims and the overall impressions they make. The Competition Act additionally precludes any presentation asserts that are not supported by adequate and appropriate testing, which should be conducted before the cases are made. Since these controls apply paying little mind to the mode of correspondence, they could catch a portion of the tasteful articulations peddled in the past segment of this article. The misleading advertising Directive defines misleading advertising as "advertising which in any way, including its presentation, deceives or is likely to deceive the persons to whom it is addressed or whom it reaches and which, by reason of its deceptive nature, is likely to affect their economic behavior or which for those reasons, injures or is likely to injure a competitor" (Directive 2006/114/EC). The US Federal Trade Commission works inside a similar regulatory system under the Federal Trade Commission Act and has exhorted that it "looks especially closely at advertising claims that can affect consumers' health or their pocketbooks". Advertising controls in certain nations are additionally expressed through codes that are broadcasted conjointly by government and industry. An example is the Great Britain's Advertising Standards Authority's codes and Canada's Code of Advertising Standards which limits certain promoting and advertising acts and accommodates the public to issue complaints where they are needed (Harker, 1998).

Fair trading regulations are restricted in terms of addressing CSR aesthetics. A few significant contemplations apply. To start, unveiling on bundling the fixings in cosmetics or groceries or providing details regarding ozone depleting substance emanations, such guidelines serve to control bogus or misdirecting claims. In many jurisdictions, organizations are not for the most part obliged to investigate their CSR executions. However, when organizations decide to make aestheticized claims about their CSR qualifications, they might get exposed by fair trading controls. Second, although advertising controls do extend to implied depictions, for example, pictures of farm animals or beautiful scenery in item promoting, specialists have seen that changing depicted claims is more difficult because the meaning of such claims are not clear or apparent, but they are deceptive and do manipulate the consumer (Nehf, 2016). Misleading advertising laws are applied to word centered advertising that covers written text but does not extend to the visual or audible aspects of branding advertising. Legal charges have been brought by The Australian Competition and Consumer Commission (ACCC) against Heinz for having misleading nutritional facts on food that is meant to be consumed by infants.

One other problem regarding false advertisement is the fact that many of the terms used in packaging and labeling lack uniform definitions and classifications. Words such as free, natural or organic are hence figurative words or representations that are very difficult to control. The bigger problem, however, is that consumer protection only applies to consumers who are reasonable in their corporate marketing interpretations, leaving the overly trusting consumers vulnerable to these deceitful corporate actions (Nehf, 2016). These types of sanctions can be punishable by law and can bring both criminal and civil sanctions. An example is the Canadian Competition Act of 2020, which states that "No person shall, for

the purpose of promoting, directly or indirectly, the supply or use of a product or for the purpose of promoting, directly or indirectly, any business interest, by any means whatever, knowingly or recklessly make a representation to the public that is false or misleading in a material respect."

3.2. Trademark Law

While the feel of corporate correspondences can fall inside the domain of fair-trade regulations, which center around the general impression in deciding whether it is deceiving or not. Such guidelines will in general be useful essentially for authorizing deluding notices about items or benefits as opposed to handling the brand character of an organization that may itself contribute to greenwashing. The tasteful character of an organization's logo, website, and other expressive components of its brand tend to be difficult to identify as being tricky contrasted with item promoting since their implications about environmental quality will in general be undeniably more inconspicuous and not entirely clear, notwithstanding being less solidly attached to the retailing of explicit items.

One tool that could be used to address parts of corporate brand character is trademark law. Brand names are a type of illustrative capital that gives an aesthetic monopoly for their owners. Many organizations depend on unmistakable logos or different brand names to draw the attention of the consumer since they diminish exchange costs by giving buyers compact and solid approaches to recognize merchandise and enterprises in the market. Trademarked brand names are personally tied up in corporate brands and may even serve to address the unmistakable environmental attributes and characteristics of organizations and the products they produce. To achieve these monetary benefits, trademarks require lawful insurance, particularly to keep consumers from being deceived by rival organizations passing off comparable logos.

Like bans on deceiving advertising, trademark registration procedure and regulations block or bar the registration of trademarks that could be deceptive and lead to the confusion of the public. In recent times, trademark controllers have gotten numerous applications for brand name enrollments with environmental implications, incorporating words such as vegan, eco, green or natural among other environmentally proclaimed popular expressions. Esthetic images inferring such terms that may likewise be important for a brand name application incorporate a tree, tortoises or planet Earth. Some brand name workplaces are getting more attentive to such applications. The law can likewise utilize corporate logos to help "name and shame" organizations that are in violation of the law, counting natural guidelines. This should be possible when organizations are obliged to put public takes note in the media unveiling their infringement, with the notification showing the culpable organization's logo unmistakably to guarantee crowds will promptly recognize the offender.

Perceiving the force of aesthetic portrayal of corporate practice, a few governments have resorted to techniques in controlling misleading claims through advertisement by presenting their own visual images of pro environmental models. One of the most well-known models is Germany's "Blue Angel" program, made in 1977 on the activity of the German government to consider eco-friendly items and administrations to be named and showcased with an effectively recognizable name. Certified items and administrations, of which there are presently around 12,000, can show the logo of the Blue Angel. Some noticeable private area, eco-certified models incorporate Carbon free and Fair Trade. However, a few analysts question the effect of these stylish images of environmental quality on consumer behavior since the names do not in themselves question the actual need of some utilization. In certain conditions the most environmentally economical alternative is no purchasing by any means (Horne, 2009).

The EU's far reaching non-financial reporting directive requires enormous organizations to distribute reports occasionally on the environmental and social effects of their exercises. Yet

neither of these methodologies is probably going to have any immediate pertinence to the aesthetic qualities of corporate communications as the focus of this directive is to the formal composed detailing of financial and non-financial information. Administration gaps in controlling the style of corporate correspondences are not considerably filled by private law rights. Common law regulations that cover misdirecting corporate correspondences are accessible under contract law and tort law. These approaches can be helpful to distressed consumers or financial investors where controllers neglect to give alleviation. Yet they have numerous downsides. Consumers can only with significant effort prevail with the misdeed of injurious falsehood since they should exhibit that the organizations have acted maliciously when making a deceitful ad. Due to privity of contract, consumers additionally have experienced issues profiting by authoritative cures against retailers where items do not coordinate the quality guaranteed in advertisements made by the corporation. Also, in distortion cases, singular consumers ordinarily just experience the minor effects of buying an item, except if they endure actual harm (for instance, from a restorative containing cancer-causing fixings). Case itself is a costly and hazardous recommendation, although consumers may participate through class activities, which can likewise overcome the trouble of demonstrating adequate individual misfortunes.

To sum up thus far, misleading environmental claims are intensified by corporate aesthetics installed in websites, trademarks and packaging. The current laws that manage advertisements, brand names, and the protection of investors insurance give the chief methods for administering their stylish properties and substance. They generally catch the most serious or unmistakable maltreatments, require impressive resources in order to prosecute, and largely neglect to perceive the universal and unpretentious pervasions of corporate aesthetics that add to naturally harming consumerism. Consumption itself is totally outside the extent of these legitimate controls however might be controlled through different methods, for example, in managing waste control or recycling norms. Without satisfactory lawful powers over the style of consumerism and corporate aesthetics, organizations that really hold fast to high environmental guidelines may not profit by their endeavors since consumers or financial investors can only with significant effort recognize the truly environmentally mindful firms. The appearance of environmental affirmation plans, in any case, can be truly favorable to environmental organizations through tasteful images that give consumers confirmation of sustainability principles. However, these corporations do not take any stance themselves against inescapable consumerism and incidentally may even empower it. The following chapter of this article inspects how social and environmental activist groups can assist with making up for this administration shortfall by making organizations more responsible for their green illusions.

4. Countering the Aesthetic Nature

4.1 Unveiling the Illusion

The foregoing regulatory regimes are not sufficient for confronting deceptive CSR aesthetics and greenwashing. While the advertising of consumerism cannot be easily reversed, environmentalists work tointercede to ingrain subliminal messages that instruct the public where laws and regulations failed to. Environmental community groups and critical artists help supplement governmental guidelines but in no way replace them. These activist groups and environmentalists work on shaping the public opinion and help build consumer knowledge. In turn, that may elevate more grounded laws and regulations to address the fundamental drivers of environmental deterioration such as gas emissions resulting from burning fossil fuels. Countering aesthetic techniques can offer the methods for both governing CSR straightforwardly and utilizing legal reform.

4.2 Defying the Environmental Aesthetic

Countering environmental aesthetics relies intensely upon the innovative expressions to draw the general society in. Timothy Morton, a professor in ecological studies, supports arts and human expressions for their power to help us reevaluate our place in nature for a superior environmental future (Morton, 2007). Morton perceives art as a tool to assist individuals with seeing and comprehending environmental effects that they do not individually experience firsthand. Such effects, including the warming of the earth as a result of climate change, are what Morton calls "hyper-objects" since they show over temporary and spatial scales that stunt the growth of the human perception (Boulton, 2016). In the areas where environmental change could not be experienced firsthand by humans, arts have an uncommon educational objective that can influence legal and political changes.

One strategy of politically involved art that challenges questionable CSR aesthetics and huge name brands is referred to as "culture jamming". Ultimately, culture jamming is a creative form of activism against consumerist social movements which aims to disrupt mainstream media culture and its institutions, including corporate advertising (Dery, 2017). Cultural jamming commonly entails artists hijacking billboards, reconfiguring logos, and caricaturing ads to drastically sabotage their messages. The art ordinarily includes brilliant, metaphorical and sculptural components that are aggregately written without official approvals. What makes this social damage so striking is that it "makes use of a corporation's own method of communication to send a message starkly at odds with the intended one" (Kohn, 2004). The companies are usually left to clean up the mess as it is seen to be destructive to keep these artistic invasions on their billboards. Also, they are being billed for that space.

Another form of countering these aesthetic feels is the recovering of public spaces, for example, sidewalks, town squares, transport stops, and city structures and buildings, which have surrendered to universal corporate advertising. Such imaginative activism has been conjectured by observers as being insightful of a developing "political consumerism" in which political qualities and acts are moved to the marketplace to oppose and reuse the rationale of appropriation. Since numerous public issues are underestimated by the strength of market esteems and business communications, activists have needed to go to the actual market as a stage to communicate their complaints. Political consumerism has become predominantly applicable to environmental activism since it tries to uncover the part of the market and uncontrolled industrialism as drivers of biologically unsustainable and impractical practices. We can conclude that the main purpose of this type of activism is to expose corporations for all the damages and social suffering they might be causing and making it transparent to the consumer who has a right to know the truth.

5. CSR Initiatives

Activism is not the only action taken towards bettering CSR rehearses among the world. Governments as well as some corporations have directed effort towards the establishment of several CSR initiatives. In this chapter, I will discuss a couple of these initiatives and the impact each has in the realm of CSR practices.

5.1 National Initiative: The United Nation's Global Compact

The United Nations Global Compact (2001) is a United Nations agreement is an initiative established in order to urge organizations to implement sustainable and socially acceptable approaches, and to report their execution. Although it is considered non-binding, The UN Global Compact is a rule-based framework for organizations, expressing ten standards and principles in the sects of human rights, labor, the environment and anti-corruption. Under the

Global Compact, organizations are united with UN agencies, labor, and society. The Cities Program is provided so that cities can join the Global Compact. This Global Compact is the world's biggest corporate sustainability initiative with over 12000 corporate members and different stakeholders in over 150 countries (The UN Global Compact, 2000).

The Global Compact is a management platform that offers a strategic approach for members to propel their duties to sustainability and corporate citizenship. Organized as a public private activity, the Global Compact is strategy structure for development, execution, and exposure of sustainability standards and practices offering members a wide range of specialized work streams, executive instruments and assets, and topical projects and tasks all intended to advance sustainable business models and markets so as to contribute to the initiative's mission to build a sustainable and comprehensive global economy.

Views on the Global Compact are reasonably divided. Supporters generally consider it to be an inventive and realistic methodology that can change corporate culture by ingraining new qualities and activate the assets of vast businesses for social and sustainable development. It is viewed as a commendable type of "good governance", where collaboration and voluntary approaches prevail upon conflict and ponderous regulation. It is additionally expected to promote "social" or "organizational learning", where business and different stakeholders learn through multi-stakeholder exchange, examination and systems administration. Critics of the initiative are worried that it might be accomplishing more to upgrade the stance of large businesses than supporting the environment and society. They are stressing that organizations with a notoriety for negligence have been invited into Global Compact, and that the conditions forced on businesses to conform to the standards are frail

5.2 European Initiative: Green Paper Promoting a European Framework for CSR

The European Union is apprehensive about CSR as it tends to be a positive commitment to the essential objective shown in Lisbon: "to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion".

This Green Paper intends to send off a wide discussion on how the European Union could advance CSR at both the European and international level, specifically on the best way to benefit as much as possible from existing encounters, to support the development of innovative practices, to bring greater straightforwardness and to increase the unwavering quality of assessment and approval. It proposes a methodology based on the deepening of associations wherein all actors play a functioning role.

At the European level, the test is regarding the way in which CSR can add to the Lisbon objective of building a dynamic, competitive and durable knowledge-based economy. The Lisbon European Council made an extraordinary allure for organizations' feeling of social obligation regarding best practices on long lasting learning, work association, equal opportunity, social inclusion and sustainable development.

6. Conlcusion and future reflections

The concept of aestheticizing things has a power on humans and a huge influence on the culture. This notion is exploited by the business sector in order to claim social responsibility. False or misleading ecological claims are subsequently as anyone might expect enhanced by corporate aesthetic installed in brand names, packaging, websites, and advertising techniques. They are not effectively dependent upon the control of law as they are not text based. Fair exchanging and trademark law apparently include the general media measurements of corporate promoting and marking, yet they can struggle to observe and restrain some aesthetic components of business interchanges and completely fail to oppose the more extensive consumerist motivation. When showcasing rehearses and lawful

convention work in various domains, we can begin to value that CSR aesthetics present a genuine challenge for regulators and legislators.

Past bureaucracy, a rebel social development that challenges corporate malpractice has ascended. Countering aesthetic techniques cunningly changes corporate expressive material - trademarks, melodies, logos, slogans, announcements, or different components of the business brand - into something revolutionary. Countering aesthetics can uncover tricky corporate practices that decline the environmental state or disclose other concerning social issues. These culture-jamming techniques additionally face lawful obstructions of their own, nonetheless, including reducing admission to public spaces, limitations on the right to speak freely, defamation law, and organizations' obnoxious implementation of their licensed property rights.

The main contributions of this article to CSR are not primarily to offer solid answers for the previous regulatory gaps and deficiencies, which are extremely hard to resolve, but to present novel methods of recognizing how CSR rehearses present complications for regulators and to feature the commitments and contributions which non-state actors are making through their rebellious idea of countering these aesthetics. By enlightening the aesthetic elements of CSR and distinguishing regulatory shortcomings, this article wishes to spike further reflection and academic discussion on the issues made by CSR aesthetic and how to educate the general society and change consumer conduct. In portraying a plan for the laws governing CSR, countering such aesthetics ought to be thought of.

Securing the public from aesthetic expression and making sure they have a healthy community discourse is crucial for the foregoing plan. The decrease of the public domain, a space as far as anyone knows, must be isolated and inaccessible by the economy, was seen by Hannah Arendt in the 1950s as declining in terms of the availability of space of appearance (Arendt, 2013) for drawing in with their companions in political talk and community action. Philosophers claim that the public sphere is an essential site for public thought and objective talk for the quest for social and moral concerns (Habermas, 1991). When observers wail over the "McDonaldization" or "Disneyfication" of our modern-day society, they are talking decisively about the destructive corporate advances into this public domain (Ritzer, 2013).

Enthusiastically, some intriguing legal precedents are putting the brakes on corporate aesthetics. These precedents have risen in certain regions. A few municipalities are limiting invasive marketing inter alia. In Brazil, the city of Sao Paolo has restricted boards and banners in open territories including public transport, and since the year 2007, has been preparing to free the city of visual pollution (Downie, 2008). The city of Canberra, Australia, has also kept a long-standing prohibition on promoting billboards to the staggering endorsement of its population (Evans, et al., 2020).

Culture-jamming activities can be seen as a violation of copyrights and trademarks as well as the publisher's moral privileges of ascription of authorship. Australia's Copyright Act 1968 was revised in 2006 to protect those controlling copyright material for the reasonable use of parody, in spite of the fact that with changes that additionally made it simpler to sustain criminal indictment against unlawful infringements. Some other examples are the South African courts have effectively favored the culture jammer's rights of expression (Seriff, 1996) Several US cases have similarly supported mocking business brand names as ensured noncommercial freedom of speech, so long as it does not undervalue it by influencing consumers which is ultimately the main goal of culture jamming.

In shutting these short reflections on future governance, improving the jurisdictions for culture jamming is not entirely enough to resolve all the issues associated with the aestheticized nature of CSR. Culture jamming alone is not enough to circulate change within environmental laws and policies. The art of culture jamming can add to public discourse and the human creative imagination in novel and fascinating manners for investigating

environmental practices, yet they rely upon different stakeholders and procedures acting towards changing corporate and government conduct, regardless of whether through boycotting specific corporations or public interest litigation, or different intercessions. Art is meant to get people to better understand their reality and if used correctly in this context, it might be monumental in helping people to discover reality behind greenwashing and subsequently perhaps to one day hold business investors and legislators responsible for their misconduct.

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