

Linking National Competitiveness to Innovation at a Global Level in the Period 2019-2022

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Please cite this paper as:

Toma, S.G. and Săseanu, A.S., 2023. Linking National Competitiveness to Innovation at a Global Level in the Period 2019-2022. In: R. Pamfilie, V. Dinu, C. Vasiliu, D. Pleșea, L. Tăchiciu eds. 2023. 9th *BASIQ International Conference on New Trends in Sustainable Business and Consumption*. Constanța, Romania, 8-10 June 2023. Bucharest: ASE, pp. 295-302

DOI: [10.24818/BASIQ/2023/09/061](https://doi.org/10.24818/BASIQ/2023/09/061)

Abstract

The rapid expansion of the globalization process worldwide has continuously shaped the post-Cold War world. It is said that the last three decades represented a period of global economic integration through financial, trade and informational channels. One of the effects of the vast spread of the globalization process was the emergence and expansion of a new type of competition, entitled hypercompetition. Characterised by intense and ceaseless change, innovative competitors and unsustainable competitive advantages, hypercompetition is practically met in all fields of activity. This is why innovation, a prerequisite of competitiveness, has become increasingly important as, in order to achieve superior economic performance, both countries and organizations should make significant efforts to constantly innovate. The goals of the paper are to briefly define the concepts of national competitiveness and innovation, and to illustrate their relationship in the case of countries in the period 2019-2022. The authors achieved the objectives of the paper through a qualitative research method. The paper provides a better understanding of the terms of national competitiveness and innovation. Its novelty is given by the fact that it demonstrates that national competitiveness and innovation are connected at a global level. In the period 2019-2022, developed capitalist countries, in their vast majority, dominated in an obvious manner the top of the world's most competitive and innovative countries. These results may help policymakers and experts who are in charge of designing national strategies.

Keywords

National competitiveness, innovation, Switzerland, hypercompetition, globalization.

DOI: [10.24818/BASIQ/2023/09/061](https://doi.org/10.24818/BASIQ/2023/09/061)

Introduction

After the fall of the European communist regimes at the end of the 1980s and the beginning of the 1990s, the world economy entered a new evolutionary phase. The rapid expansion of the globalization process worldwide has continuously shaped the post-Cold War world since then (Toma, 2005). It is said that the last three decades represented a period of global economic integration through financial, trade and informational channels (Das, 2010a). In this respect, financial globalization has rapidly advanced due to the liberalization of capital account and the massive flows of money all over the world (Das, 2010b). On the other hand, globalization has imposed the regulation of the competitive environment (Dinu, 2017).

One of the effects of the vast spread of the globalization process was the emergence and expansion of a new type of competition, entitled hypercompetition. Characterised by intense and ceaseless change, innovative competitors and unsustainable competitive advantages, hypercompetition is practically met in all fields of activity (Lindskov, 2022). This is why innovation, a prerequisite of competitiveness, has become increasingly important as, in order to achieve superior economic performance, both countries and organizations should make significant efforts to constantly innovate.

The goals of the paper are to briefly define the concepts of national competitiveness and innovation, and to illustrate their relationship in the case of countries in the period 2019-2022. The structure of the paper is as follows: the second part displays the literature review. The research methodology is exposed in the third

section of the paper. The fourth part of the paper presents the results of the research. The paper ends with conclusions.

Literature review

Hypercompetition represents a worldwide phenomenon. Facing properly this defy imposes both countries and organizations, irrespective of their size, geographical position and domain, to design and implement different strategies in their activities and processes (Toma & Naruo, 2017), based on a plethora of various concepts, techniques and methods, such as knowledge (Toma, 2011), quality (Toma, 2006; Toma & Naruo, 2009) or social responsibility (Toma, 2008; Imbrișcă & Toma, 2020).

As a multidimensional and complex notion, competitiveness can be defined at national, industry, and business organization levels. National competitiveness represents “the ability of a nation to provide conducive environment to its firms and industries in order to raise the prosperity of the nation” (Bhawsar & Chattopadhyay, 2015, p.670). There are several determinants of national competitiveness as follows (Ham, et al., 2022):

- exchange rate,
- savings rate,
- investment rate,
- national culture,
- government policy.

It can be measured through national productivity, balance of trade, labor productivity etc.

In its turn, innovation constitutes one of the main sources of national competitiveness and a country’s success. It only appears if a country has not only the desire but also the capacity to innovate. This means the existence of various policies, investments, research and development (R & D) expenditures, resources (e.g., human, financial, informational) and a proper infrastructure. As a concept, innovation is referring to “both innovative ideas that are intended to be commercialized in the market and ideas that have already been successfully commercialized” (Dziallas & Blind, 2019, p.4).

The relationship between these two concepts, national competitiveness and innovation, is to be found within the Institute for Management Development (IMD) World Competitiveness ranking. It is based on four factors (economic performance, government efficiency, business efficiency, infrastructure), each of them being divided into five sub-factors. Altogether, there are 20 sub-factors that comprise 333 criteria (IMD, 2022). The factor “infrastructure” encompasses sub-factors such as total expenditure on R & D, total R & D personnel, patent applications etc.

Research methodology

To achieve the objectives of the paper, the authors employed a qualitative research method. In this respect, they detected the main sources of information (e.g., journals, yearbooks, reports) through desk research. Then, the authors gathered and classified the data by means of a literature review. Afterwards, they analysed and synthesized the information. Finally, the authors designed and wrote the paper.

Results and discussion

After the review of the scientific literature, the authors carefully analysed and synthesized all the data obtained. This led to several interesting results of their research that explained the relationship between national competitiveness and innovation.

As the economic world has increasingly become hypercompetitive in the past decades, countries all over the world made significant efforts to reach higher positions in the global arena. In 2019, Singapore was the most competitive country in the world (Table no. 1), followed by Hong Kong and the United States of America (USA). The first ten most competitive countries were from:

- Europe - five countries (Switzerland, Netherlands, Ireland, Denmark, Sweden);
- Asia - two countries (Singapore, Hong Kong);
- Middle East - two countries (United Arab Emirates (UAE), Qatar);
- North America - one country (USA).

Table no. 1. The ten most competitive countries of the world in 2019

Rank	Country	Score
1	Singapore	100.000
2	Hong Kong	97.986
3	USA	97.119
4	Switzerland	96.005
5	UAE	95.891
6	Netherlands	94.366
7	Ireland	94.218
8	Denmark	93.425
9	Sweden	92.585
10	Qatar	91.948

Source: IMD World Competitiveness Yearbook, 2019

One year later, Singapore preserved its first place in the world (Table no. 2), followed by Denmark and Switzerland. The first ten most competitive countries belonged to:

- Europe - five countries (Denmark, Switzerland, Netherlands, Sweden, Norway);
- Asia - two countries (Singapore, Hong Kong);
- North America - two countries (USA, Canada);
- Middle East - one country (United Arab Emirates).

Table no. 2. The ten most competitive countries of the world in 2020

Rank	Country	Score
1	Singapore	100.000
2	Denmark	99.496
3	Switzerland	98.373
4	Netherlands	98.352
5	Hong Kong	97.061
6	Sweden	95.866
7	Norway	94.602
8	Canada	93.506
9	UAE	93.505
10	USA	92.358

Source: IMD World Competitiveness Yearbook, 2020

In 2021, Switzerland became the most competitive country in the world (Table no. 3), followed by Sweden and Denmark. The first ten most competitive countries were from:

- Europe - five countries (Switzerland, Sweden, Denmark, Netherlands, Norway);
- Asia - three countries (Singapore, Hong Kong, Taiwan);
- Middle East - one country (UAE);
- North America - one country (USA).

Table no. 3. The ten most competitive countries of the world in 2021

Rank	Country	Score
1	Switzerland	100.000
2	Sweden	96.714
3	Denmark	96.667
4	Netherlands	96.348
5	Singapore	94.703
6	Norway	94.493
7	Hong Kong	93.538
8	Taiwan	92.602
9	UAE	89.561
10	USA	89.126

Source: IMD World Competitiveness Yearbook, 2021

The year 2022 witnessed once again the change of the leader. Consequently, Denmark was the most competitive country in the world (Table no. 4), followed by Switzerland and Singapore. The first ten most competitive countries belonged to:

- Europe - six countries (Denmark, Switzerland, Sweden, Netherlands, Finland, Norway);
- Asia - three countries (Singapore, Hong Kong, Taiwan);
- North America - one country (USA).

Table no. 4. The ten most competitive countries of the world in 2022

Rank	Country	Score
1	Denmark	100.000
2	Switzerland	98.92
3	Singapore	98.11
4	Sweden	97.71
5	Hong Kong	94.89
6	Netherlands	94.29
7	Taiwan	93.13
8	Finland	93.04
9	Norway	92.96
10	USA	89.88

Source: IMD World Competitiveness Booklet, 2022

In its turn, Switzerland dominated by far the top of the most innovative countries in the world. In 2019, the Swiss Confederation was followed by Sweden and the USA (Table no. 5). The first ten most innovative countries were from:

- Europe - seven countries (Switzerland, Sweden, Netherlands, United Kingdom, Finland, Denmark, Germany);
- Middle East - one country (Israel);
- Asia - one country (Singapore);
- North America - one country (USA).

Table no. 5. The ten most innovative countries of the world in 2019

Rank	Country	Score
1	Switzerland	67.24
2	Sweden	63.65
3	USA	61.73
4	Netherlands	61.44
5	United Kingdom	61.30
6	Finland	59.83
7	Denmark	58.44
8	Singapore	58.37
9	Germany	58.19
10	Israel	57.43

Source: Cornell University et al, 2019

One year later, the first three places of the top remained occupied by the same countries (Table no. 6). The first ten most innovative countries belonged to:

- Europe - seven countries (Switzerland, Sweden, United Kingdom, Netherlands, Denmark, Finland, Germany);
- Asia - two countries (Singapore, Republic of Korea);
- North America - one country (USA).

Table no. 6. The ten most innovative countries of the world in 2020

Rank	Country	Score
1	Switzerland	66.08
2	Sweden	62.47
3	USA	60.56
4	United Kingdom	59.78
5	Netherlands	58.76
6	Denmark	57.53
7	Finland	57.02
8	Singapore	56.61
9	Germany	56.55
10	Republic of Korea	56.11

Source: Cornell University et al, 2020

In 2021, the first four places at the top were the same as in 2020. The first ten most innovative countries were from:

- Europe - seven countries (Switzerland, Sweden, United Kingdom, Netherlands, Finland, Denmark, Germany);
- Asia - two countries (Republic of Korea, Singapore);

- North America - one country (USA).

Table no. 7. The ten most innovative countries of the world in 2021

Rank	Country	Score
1	Switzerland	65.5
2	Sweden	63.1
3	USA	61.3
4	United Kingdom	59.8
5	Republic of Korea	59.3
6	Netherlands	58.6
7	Finland	58.4
8	Singapore	57.8
9	Denmark	57.3
10	Germany	57.3

Source: World Intellectual Property Organization (WIPO), 2021

The year 2022 witnessed once again the domination of Swiss Confederation, followed by the USA and Sweden (Table no. 8). The first ten most innovative countries belonged to:

- Europe - seven countries (Switzerland, Sweden, United Kingdom, Netherlands, Germany, Finland, Denmark);
- Asia - two countries (Republic of Korea, Singapore);
- North America - one country (USA).

Table no. 8. The ten most innovative countries of the world in 2022

Rank	Country	Score
1	Switzerland	64.6
2	USA	61.8
3	Sweden	61.6
4	United Kingdom	59.7
5	Netherlands	58.0
6	Republic of Korea	57.8
7	Singapore	57.3
8	Germany	57.2
9	Finland	56.9
10	Denmark	55.9

Source: WIPO, 2022

In the period 2019-2022, developed capitalist countries, in their vast majority, dominated in an obvious manner the top of the world's most competitive and innovative countries. The above outcomes reveal some interesting matters as follows:

- The European countries monopolized the hierarchy of the ten world's most competitive countries: from five countries in 2019, 2020 and 2021 to six countries in 2022. Four European countries (Switzerland, Netherlands, Denmark, Sweden) were always present in the top in the above mentioned period. It is the same in the case of two Asian countries (Singapore, Hong Kong) and the USA.
- Singapore was the world's most competitive country for two consecutive years, 2019 and 2020. Switzerland became the world's most competitive country in 2021 whereas Denmark in 2022.
- The European countries dominated by far the top of the ten world's most innovative countries: seven countries in 2019, 2020, 2021 and 2022. The seven European countries (Switzerland, Sweden, United Kingdom, Netherlands, Germany, Finland, Denmark) were always present in the top in the above mentioned period. It is the same in the case of Singapore and the USA.
- Switzerland remained the world's most innovative country in the period 2019-2022.

Four European countries (Switzerland, Netherlands, Denmark, Sweden), one Asian country (Singapore) and the USA were not only among the world's most competitive countries but also among the world's most innovative countries in the period 2019-2022. Thus, there is a clear relationship between the world's most competitive countries and the world's most innovative countries. In essence, national competitiveness and innovation are connected at a global level.

Conclusions

The diffusion of the globalization process has brought hypercompetition all over the world. This is why the economic world has witnessed the emergence of much more fierce competition among states. Consequently, states worldwide have understood the need to increase their competitiveness in order to face the challenges raised by this new type of competition.

The paper leads to the enrichment of the scientific literature in two ways. Firstly, it provides a better understanding of the terms of national competitiveness and innovation. Secondly, the paper shows their relationship at a global level in the period 2019-2022. In this respect, it may have practical implications for policymakers and experts who are in charge of designing national strategies. Further research may identify and take into account other factors related to the connection between national competitiveness and innovation.

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