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Proceedings of the 6th International Conference on Economics and Social Sciences (2023), ISSN 2704-6524, pp. 690-699

The 6th International Conference on Economics and Social Sciences
Geopolitical Perspectives and Technological Challenges for Sustainable Growth in the 21st Century
June 15-16, 2023
Bucharest University of Economic Studies, Romania

Globalisation and the Fluctuation of the Stock Exchange in the Global Economy: Case and Tendencies

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DOI: 10.2478/9788367405546-064

Abstract

This paper investigates the impact of globalisation on the fluctuation of the stock exchange in the global economy. Globalisation has interconnected and turned different markets and economies into a global economy. Economic globalisation is about the global mobility of goods and services, people, technology and capital; it is about the fact that trading blocks and economies, countries and regions become interdependent. The research questions are "Does globalisation impact the stock exchange?" and "Is there a fluctuation in the global economy and stock exchange at the global level?" As research method, we focused on literature review and data analysis in qualitative quantitative way by focusing on data and correlation of some indexes by studying the interconnection between markets, we chose some representative indexes. For this purpose, we made the assumption that the stock exchanges are representatives of the global economy. The results showed that the Stock Exchange indexes for different countries are strongly correlated, and the occurring fluctuations in the advanced economies can be seen in all the indexes at the same time. One main aspect modifying the world economic shape, inducing fluctuations, is the change due to intelligent economy, to the implementation of new technologies and substituting human contribution in industry. The most important game changer is the spread of machine learning, deep learning and AI techniques, in many businesses. In conclusion, due to globalisation, markets and economies are highly connected especially with the incorporation of digitalisation processes that help show the transmission of economic trends from between economies faster, the stock exchange is linked to the market system that is impacted by globalisation.

Keywords: Globalisation, stock exchange, fluctuation, economy, business, trend.

JEL Classification: F01, F60, F62.

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1. Introduction

Globalisation has interconnected and turned different markets and economies into a global economy. Economic globalisation is about the global mobility of goods and services, people, technology and capital, it is about the fact of trading blocks and economies, countries and regions become interdependent. The ideological and regulatory playing field was now set for an unprecedented expansion in global economic activity, after the fall of the Berlin wall an era started which is nowadays called hyper-globalisation, countries around the world began in earnest to industrialise their economies bringing in countries workers into urban centres to work in the low-skilled manufacturing of goods that now could be exported to global supply chains, global trade agreements removed the limitations of the national economy as the world economy could observe a much greater amount of production. With the incorporation of digitalisation, more products and information started to move between more nodes faster. The deregulation of financial institutions in the late 1980s enabled the formation of a global financial structure to move investments around the world; foreign direct investment started to flow to emerging economies as money became relatively freely available with capital markets, and this was the pinnacle of neoliberal economic globalisation that took place during the 1990s and 2000s with development of global supply chains and hyper growth in driving commodity and economic cycles.

Globalisation has driven dramatic changes around the world. Globalisation has interconnected and turned different markets and economies into a global economy. Economic globalisation is about the global mobility of goods and services, people, technology and capital, it is about the fact of trading blocks and economies, countries and regions become interdependent. As economies depend on each other for commodities, food, services, etc. The market value of a company should reflect how much cash investors believe the firm will make in the future. If changes in the broader economy are likely to affect company performance, then this should lead to changes in share prices. But it is important to emphasise that investors will consider not only what is happening now, but also what is likely to occur in the future (Economics Observatory, 2021).

2. Problem Statement

The phenomenon of "globalisation" is primarily to blame for the unprecedented trend of social, economic, cultural, and political interconnections that the global society is currently experiencing in daily life (Jackson, 2008). The extent and speed with which this phenomenon affects global society, are quite difficult to describe, in part because of researchers who have put forth conflicting conceptualisations and understandings of the consequences, making it one of the most discussed and contested topics in the modern era. Studies (Grossman, Helpman, 1991) have found that globalisation plays a significant role in the expansion of the economy because of the employment opportunities it creates and the ease with which technology can be accessed. But there are studies (Gaston, Nelson, 2004) that demonstrate the adverse effects of globalisation, particularly on developing states. According to Investopedia, a stock exchange does not own shares. Instead, it acts as a market where stock buyers connect with stock sellers. Stocks can be traded on several exchanges such as the New York Stock Exchange NYSE or the NASDAQ (Harper, 2022). Although most stocks are traded through a broker, it is important to understand the relationship between exchanges and the companies that trade. Additionally, there are various requirements for different exchanges designed to protect investors. (Harper, 2022). A stock exchange is a centralised location that brings corporations and governments together so that investors can buy and sell equities. Furthermore, auction-based exchanges such as the "New York Stock Exchange" provide the traders and brokers the possibility to physically and verbally communicate, buy and sell orders. Electronic exchanges take place on electronic platforms, so they don't need a centralised physical location for trades. (Harper, 2022).

Some previous research showed that exchange demutualisation enhances a stock exchange's operating performance (Otchere, Abou-Zied, 2008) but remains silent on its impact on an exchange's market participants. In fact, this important event, similar to other economic and regulatory changes, is likely to affect the behaviour of investors, firms, and financial intermediaries. Stock exchanges play a crucial role in financial markets by providing liquidity and disseminating stock price information. (Hanselaar et al., 2019). The efficiency of the secondary market in providing liquidity and accurate price discovery facilitates firms' access to capital. In a liquid stock market, firms can easily sell their stocks (i.e., more equity issuance) to service debt without greatly affecting the stock price. In contrast, in a less liquid market, equity issuance becomes costlier because an increase in the supply of stock has a greater price impact (Hanselaar et al., 2019). According to Harper 2022, the stock prices are determined in the marketplace, where the seller/supply meets buyer/demand. However, unfortunately, there is no clean equation that mentions exactly how the price of a stock will behave. (Harper, 2022). Stock market fluctuations often seem far removed from what is happening in the wider economy, especially in a crisis (Economics Observatory, 2021). Fluctuations in the prices of financial assets in the stock market can sometimes seem to be inconsistent with what is happening in the rest of the economy (Economics Observatory, 2021).

3. Research Questions / Aims of the Research

The aim of this paper is to investigate, present, and describe the tendencies of globalisation and the economic fluctuation of the stock exchange in the global economy and markets. The research questions are "Does globalisation impact the stock exchange?" and "Is there a fluctuation in the global economy?"

4. Research Methods

As research method we focused on literature review and data analysis in qualitative quantitative way.

5. Findings

With the process of globalisation, the rise of a new organisational paradigm in the form of the market system, a new logic of commercial exchange has been extended to ever more spheres of human activity after the fact that people and governments are making choices within a political context. Today economies around the world are less governed by the choices of their political institutions and by the rules of economics, markets, and flows of financial capital. This truly radical transfer of power and decision-making has taken a place within a few short decades with far- reaching implications. In other words, more and more societies around the world and more aspects of those societies become open to being organised through the logic of the market system. So, things have become increasingly organised with global networks of economic exchange. Until the middle half of the twentieth century hierarchies were almost unanimously seen as the only effective method for organising production with large mass societies; then, a new ideology of free market as a distributed coordination mechanism in its own right arose, Then with the work of Friedrich Hayek who recognised that price produced by supply and demand alone could be an accurate and sufficient signal of information to allow decentralised coordination to achieve the optimal allocation of resources with society. Although the state was seen to be needed to provide basic support. Hayek saw the market as an optimal self-sustaining system, and enabling it required converting as much as possible into private property and contracts that would allow for those signals to order the economy spontaneously; the latter half of the twentieth century saw the realisation of Hayek's in the United States and other developed economies with acceleration of a process of transferring socio-economic organisations from hierarchical social organisations to market structures as promoted by a new ideology of neoliberalism in the 1970s, 1980s and 1990s. Public previsions started to retreat and private production via the market started to expand into almost all areas.

The neoliberal paradigm is the logic of the market system. Although originally it may have been an economic theory, neoliberalism became much more than that, it came to encompass a set of ideas or paradigm about human nature, economic and social organisation. Neoliberalism is the free market ideology based on individual liberty and limited government, it is about the connected human freedom to the action of the rational self-interested actor in the competitive marketplace, the neoliberalism formed created a conceptual rationale for shifting economic organisation from people and hierarchies toward an impersonal logic of the market. In order to achieve this, it had removed power and capabilities from the nation state, it moved economic organisations to the market through privatisation and deregulations of national economies. Moreover, by shifting the power of national democracies and their parliaments or organisation into executive and international bodies that were not controlled by democratic procedures such as the IMF or WTO.

The deregulation of financial institutions in the late 80s enabled the formation of a global financial structure to move investments around the world, foreign direct investment started to flow to emerging economies as money became relatively freely available with capital markets, this was the pinnacle of neoliberal economic globalisation that took place during the 1990s and 2000s with development of global supply chains and hyper growth in driving commodity and economic cycles. Globalisation has driven dramatic changes around the world.

Globalisation has interconnected and turned different markets and economies into a global economy. Economic globalisation is about the global mobility of goods and services, people, technology and capital, it is about the fact of trading blocks and economies, countries and regions become interdependent. As economies depend on each other for commodities, food, services, and various products.

5.1 Fluctuation of the Stock Exchange (Example of Four Large Economies)

Another point of demonstration would be that the major markets of the world are all evolving synchronously, they are linked and correlated, and their fluctuations are transmitted to lower-volume markets. In order to study this interconnection between the markets, we chose some representative indexes. For this purpose, we made the assumption that the stock exchanges are representatives of the global economy. The bigger and more important stock exchange, there is a better correlated with the economy status. For this study we evaluated four stock exchanges, which we considered to be the most representative of the world, due to their volume, tradition, and influenced region. The three major stock exchanges, situated on three continents, are New York Stock Exchange (NYSE), Tokyo Stock Exchange and London Stock Exchange. To the three major stock markets, we added the representative index for Shanghai Stock Exchange.

The following four indexes were considered to be representative for each of the three Stock Exchange institutions:

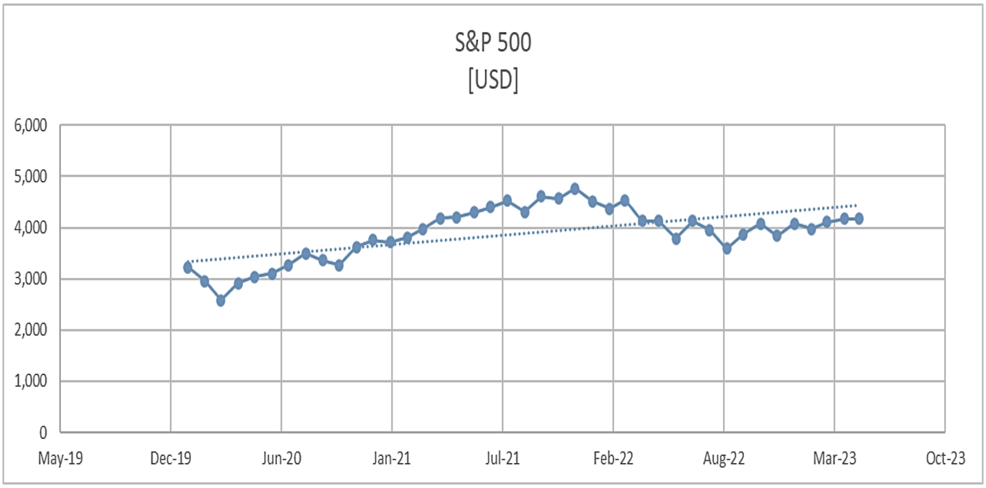
Table 1. Representative indexes for the most important stock exchange economies

Index	Description	Value April 1st 2023 [USD]
S&P 500 (GSPC)	Standard & Poor's 500 Index, is a market-capitalisation-weighted index of 500 leading publicly traded companies in the U.S.	4,169.48
Nikkei 225 (N225)	Nikkei 225 is a price weighted composed index by the most important 225 blue chip companies in Japan.	215.67
FTSE 100 (FTSE)	FTSE is an index tracking the price action of the shares traded on the London Stock Exchange; it has currently 94 components.	9,890.95
SSE Composite	The Shanghai Stock Exchange Composite Index is a composite index based on all A and B shares traded on the Shanghai Stock Exchange	479.81

Source: Author's contribution and research 2023, Yahoo Finance data 2023.

Below are represented the variations for these stock exchange indexes, in USD, over a time interval from January 1st 2020 to April 1st 2023. The S&P 500, representative for the NYSE (New York Stock Exchange), shows a variation almost sinusoidal around a trend line. The trend of this index is increasing, showing that the NYSE is in a bullish trend (see Table 1 and Figure 1).

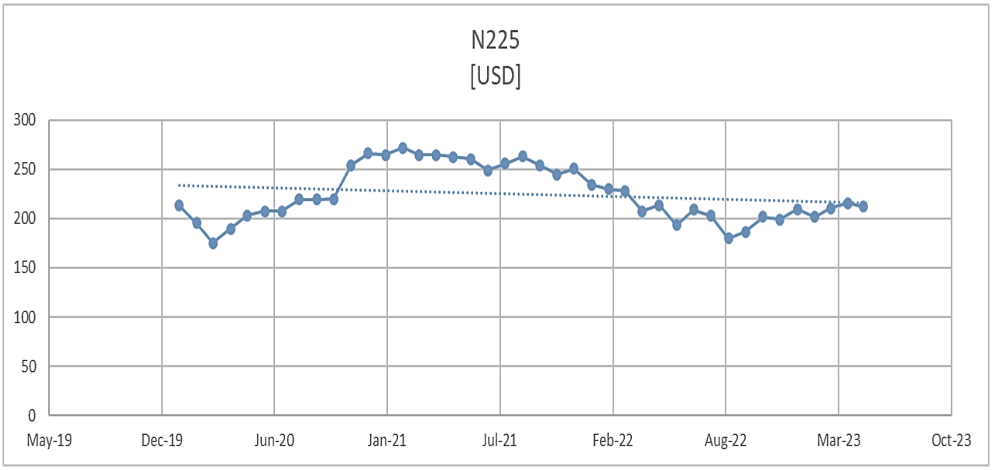
Figure 1. Monthly values for S&P 500 index (New York Stock Exchange)



Source: Author's contribution and research 2023, Yahoo Finance data 2023.

The Nikkei 225 index has a relatively similar curve, but with a slightly decreasing trend, showing some impact in the Japanese economy (see Figure 2).

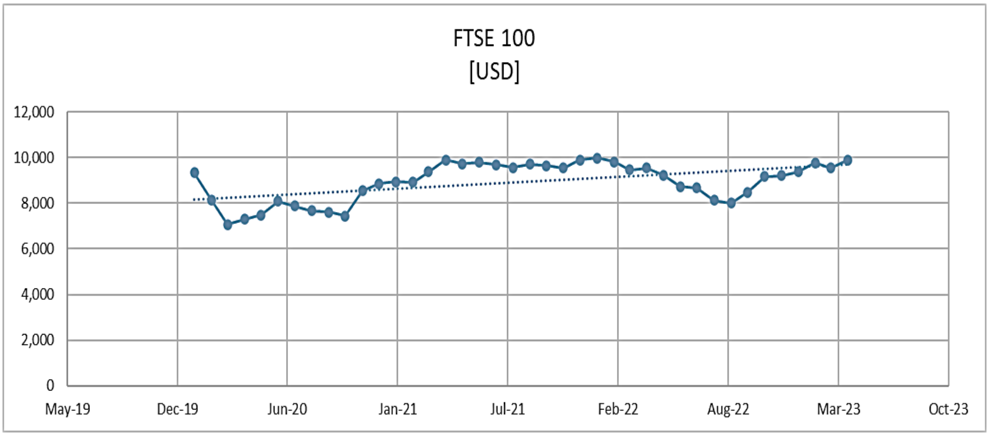
Figure 2. Monthly values for N225 index (Japan)



Source: Author's contribution and research 2023, Yahoo Finance data 2023.

The FTSE 100, representative for the London Stock Exchange, is more correlated with the S&P Index, showing also a slightly increasing trend (see Figure 3).

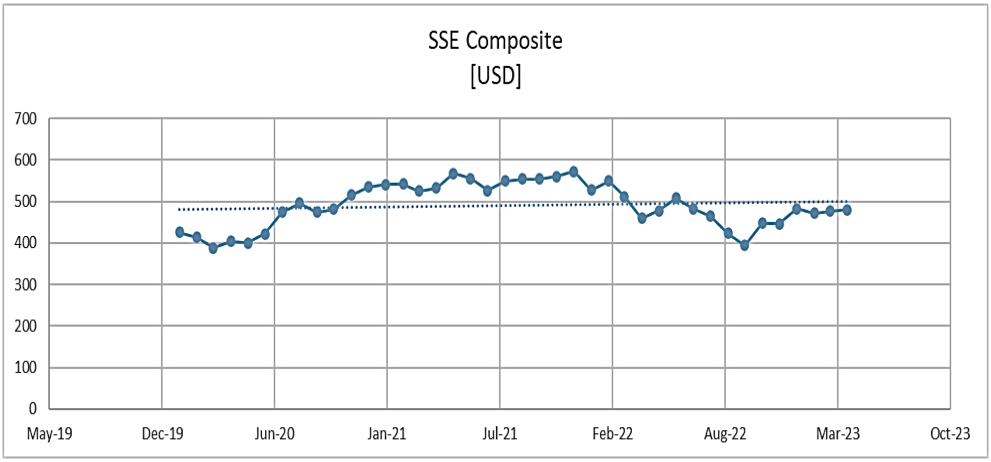
Figure 3. Monthly values for FTSE 100 index (UK)



Source: Author's contribution and research 2023, Investing.com data 2023.

Finally, the Chinese SSE Composite index is more correlated with the S&P 500 and FTSE 100, and has a slightly lower correlation with N225. The trend for SSE is also slightly increasing (see Figure 4).

Figure 4. Monthly values for SSE Composite index (China)



Source: Author's contribution and research 2023, Yahoo Finance data 2023.

The variations of the indexes, which are correlated with the stock exchanges representative for the main world markets, show a strong correlation with each other, a fact that suggests that they are correlated with the global economy. We have tested the correlation between these indexes, and the Pearson correlation coefficients show a strong link between these indexes, with a slightly lower correlation for the N225 index (see Table 2).

Table 2. Correlation between the indexes

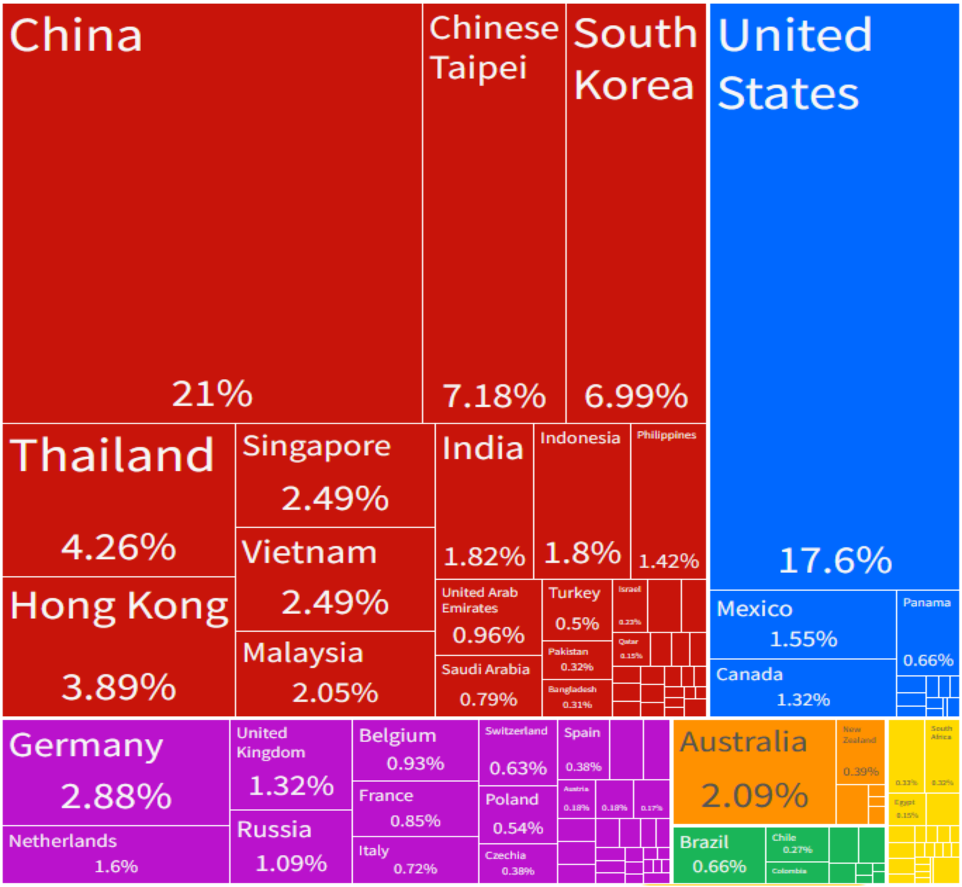
	S&P 500	*N225*	*FTSE 100*	*SSE Composite*
S&P 500	1			
N225	0.5269	1		
FTSE 100	0.8596	0.5388	1	
SSE Composite	0.7420	0.8729	0.6516	1

Source: Author's contribution and research 2023, Yahoo Finance data 2023.

From the study of the correlations between the Stock Exchange indexes, we found the following:

- **S&P 500 with N225 (0.5296)** – the two indexes have the lowest correlation of all the considered indexes. This shows a disconnection between the US and Japan economies; even if the curves are similar, the main difference is in the trend, which is slightly increasing for the S&P 500 and slightly decreasing for N225.
- **S&P 500 with FTSE 100 (0.8596)** the two indexes are strongly correlated. This is in line with the idea that the British economy is strongly linked to the US economy.
- **S&P 500 with SSE Composite (0.7420)** American and Chinese economies are strongly correlated, the explanation being that the US is the most important market for the Chinese companies.
- **FTSE 100 with SSE Composite (0.6516)** the medium correlation shows the degree of connection between the British and Chinese economies, which could be considered as medium as compared to the other indexes.
- **N225 with FTSE 100 (0.5388)** one of the lowest correlations for the considered indexes, this shows a reduced connection between Japanese and British economies.
- **N225 with SSE Composite (0.8729)** the strongest correlation from the selected indexes, it shows the leverage of the Japanese companies on China, in line with the technological profile of Japan and with the fact that Japan has scarce resources. Japan's most important export destination is China (2021), with 153B USD out of a total of 731B USD (See Figure 5).

Figure 5. Main Exports for Japan in 2021



Source: Observatory of Economic Complexity 2023.

6. Conclusions

We have found that the Stock Exchange indexes, for different countries, are strongly correlated, and the occurring fluctuations in the advanced economies can be seen in all the indexes in the same time. One main aspect modifying the world economic shape, inducing fluctuations, is the change due to intelligent economy, to the implementation of new technologies and substituting human contribution in industry. The most important game changer is the spread of machine learning, deep learning and AI techniques, in many businesses. In the last period, we have seen two contractions, one resulting from the Covid 19 pandemic (2021) and one starting in February 2022, hitting the bottom in August 2022 and since then recovery period. The Japanese SE index N225 has a bearish trend, and the Japanese economy is dependent on China, as over 20% of their exports are to this country. In the first part of 2023, China has become the most important oil importing country, as it gets the most part or the oil exported by Russia.

Globalisation has driven dramatic changes around the world. Globalisation has interconnected and turned different markets and economies into a global economy. Economic globalisation is about the global mobility of goods and services, people, technology and capital, it is about the fact of trading blocks and economies, countries and regions become interdependent. As economies depend on each other for commodities, food, services, and various products. There is an interconnection between markets and economies through globalisation and the fluctuation of the stock exchange.

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