ASSESSMENT OF THE FINANCIAL POSITION OF BUSINESSES OPERATING WITHIN A CERTAIN SECTOR OF THE NATIONAL ECONOMY

Marek Nagy*
University of Zilina, Faculty of Operation and Economics of Transport and Communications
marek.nagy@uniza.sk

Katarina Valaskova
University of Zilina, Faculty of Operation and Economics of Transport and Communications
katarina.valaskova@uniza.sk

* corresponding author

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ABSTRACT.
Background: The financial status of a company has a considerable influence on its operational activities, revenue, expenses, and, ultimately, its profit and loss at the conclusion of the economic cycle. **Aims:** The study also highlights the company's financial stability analysis in this industry and verifies its resilience in the Slovak market circumstances. The economic sector NACE H (transport and storage), which ranks as the second most important division in the analysed context, was selected to highlight the significance of forecasting financial well-being. **Methodology:** The research entails assessing the changes in assets and liabilities throughout the observed time of 2020 to 2022, along with computing key ratio indicators such as liquidity, profitability, indebtedness, and activity. The data used in the given study were sourced from professional literature and firm records supplied. **Results:** The study conducted revealed the current deficiencies in the company's management. Based on this, the conclusion provided potential recommendations for improvement in many areas. Financial analysis provides valuable insights into a company's historical performance, identifies areas of concern, and offers predictions for future growth. However, it may not provide definitive answers to all inquiries.

Keywords: financial analysis, bankruptcy prediction, automotive industry, company prosperity

JEL Classification: D22, G33, L25

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Introduction

Every firm that is established with positive intentions aims for success, seeking to distinguish itself from rivals and thrive in the market. Not all businesses are successful in attaining this goal. Various conspicuous but sometimes unexpected aspects influence the achievement of a corporation. Insufficient profitability may lead to a decline in a company's worth and, in extreme cases, even bankruptcy (Ionescu, 2021). Conducting regular financial analyses of the company is crucial for making informed choices that will have a lasting impact on the business operations (Hamilton, 2021). It is essential for the firm to ascertain its current phase and proactively mitigate or eradicate adverse consequences based on the outcomes of the study (Dawson, 2021).

Financial and economic analysis involves gathering, organizing, and interpreting essential data on a company's financial condition. This information is intended to provide senior managers and executives with a more precise assessment of both the historical and current situation. The managers have the discretion to choose how they will use this information and leverage it for the company's future growth. Financial analysis may identify areas of concern within the firm being examined, as well as weaknesses in management and the underlying reasons for a poor scenario. The resolution of the issues ultimately rests on the company's management.

The primary objective of this study is to assess the financial well-being of the chosen production company, ASIMA Slovakia, by utilizing financial-economic ratio indicators and employing the pyramid decomposition of ROA (Return on Assets) during the observed period from 2020 to 2022 within the framework of the market mechanism in the Slovak Republic. While pursuing the primary objective, several secondary objectives were also addressed, including examining ratios, economic indicators, and financial indicators. The study used fundamental research techniques such as analysis, synthesis, and deduction, as well as the examination of indexes, trends, and pyramid analysis.

To achieve the goal, it was necessary to analyses the company's information database, which included the balance sheet and profit and loss statement for the monitored period. Additionally, extensive theoretical and professional materials were consulted, primarily comprising textbooks, professional articles, literature, and scientific journals. The paper is divided into six sections, including an introduction, literature review, data and methods, findings, discussion, and conclusions.

Theoretical background

The practice of financial analysis undoubtedly originated in ancient times and has existed for as long as money itself. The shape and amount of use of it always matched the contemporary era (Marinic, 2007). Previously, proficient traders used computations and financial analyses, although in a simpler manner, which served as the first precursors of financial analysis. Over time, there was a gradual improvement in the structure and depth of individual financial analyses, yet the fundamental ideas behind them remained unchanged (Silaghi, 2018).

Originally, financial analysis focused on demonstrating the exact changes in accounting outcomes (Lazaroiu et al., 2021; Rejnus, 2014). In 1968, Altman constructed his first prototype. It was groundbreaking in the financial industry and the use of biased algorithms (Beerman, 1976). The suitability of the Altman model for our present economic situations is uncertain, given that it was originally established for American economic settings. Consequently, any conclusions obtained from its application should be approached with care (Zavadsky et al., 2019). As stated by Kalouda (2015), it is important to notice that our companies strive to reduce the magnitude of their economic results or profits in contrast to American companies. Over time, it also prioritized evaluating the company's capacity to repay debts. There was a significant focus on liquidity and, naturally, the company's capacity to endure. Subsequently, the focus shifted towards the aspect of generating profit, prompting the emergence of the concern about efficiency (Sumiati, 2020).

Financial analysis is a contemporary technique that was first developed in the United States. In Slovakia, the use of this phrase became more prevalent only after 1989, coinciding with the emergence of the market environment (Jankelova et al., 2021). The fundamental objective of every firm is to maximize the return on invested capital by attaining the highest feasible rate of profit while managing a certain degree of risk (Tasaryova et al., 2021). Hence, in order to achieve success, a corporation must enhance its existing talents, acquire new ones, and excel in areas where its rivals have struggled (Hlawiczka et al., 2021), thereby cultivating expertise in novel aspects of the corporate culture (Kalouda, 2015; Akgun et al., 2021). It is important for him to understand the causes behind the business's success or failure in order to effectively impact the aspects that contribute to its profitability (Podhorska et al.,

2020; Kovacova et al., 2018; Zvarikova et al., 2017). In the field of medicine, it is important to first determine the diagnosis of the corporate entity and then provide a treatment approach (Pereira et al., 2021). The inclusion of financial analysis in the assessment of a company's economic status is mostly due to the significant heterogeneity of economic data, the intricate processing involved, and the lack of universally accepted values for indicators and theoretical models of successful organizations (Neumaier et al., 1995).

The examination of business activity is characterized by its comprehensive and diversified nature, including the understanding of intricate phenomena and processes that occur throughout the transformation process (Pham et al., 2020). The analysis serves as a tool to investigate and evaluate these processes, particularly the circumstances in which they occur, as well as the examination of the influences and causal links at play (Xu et al., 2021). Both theoretically and practically, we come across several interpretations of financial analysis:

- A financial-economic analysis is a document that summarizes and assesses a company's performance during a specific period. It identifies and quantifies the factors that influenced the results, projects future development based on current trends, and proposes measures to achieve the company's goals (Valaskova et al., 2018).
- Financial analysis is the examination of economic activities that involve the significant use of money and time. The focus of the analysis is on varied factual information. An analysis may be conducted either at the micro level, such as inside a specific firm, or at the macro level, such as across an entire industry (Grundy et al., 2020).
- Financial analysis is a substantial component of the financial management system. It is intricately linked to the organization's financial accounting and financial management, serving as a bridge between these two essential components of business administration (Hooda et al., 2021).

It assesses the information from accounting statements and aids in identifying the company's financial management's strengths and shortcomings. It serves as a retrospective analysis while also serving as the foundation for the next company strategy. Every company's management must establish an operational feedback loop to determine the success of their activities. The feedback is derived from accurate and unbiased data extracted from accounting statements. The accurate interpretation of these statistics enables the analysis of present progress, estimation of the financial situation's evolution, and the planning of future firm activities, prospects, and opportunities (Lajtkepova, 2016; Stefko et al., 2020; Bui et al., 2021).

The primary objective of financial analysis is to evaluate the company's present condition, namely its financial well-being (Stryckova, 2017; Sener et al., 2021; Nurcan et al., 2021). A financially healthy organization may be defined as one that has the capacity to effectively achieve its intended objectives at the present time. In a capitalist economy, this essentially implies that it can consistently get the desired rate of return on invested capital (profit rate) as demanded by investors (shareholders).

The primary aim of all managers is to steer the firm towards a clearly defined purpose in the long run. Klepac et al. (2016) state that the company's future objectives are established based on its financial aims (Alexy, 2005; Michalkova et al., 2021). The establishment of goals is primarily determined by factors such as the nature of the company, the geographical location of the current and future market circumstances, and the legal framework of the organization (Lee, 2019). One of the most significant goals is maximizing the firm's long-term market value (Grofcikova, 2020). Financial analysis, as described by Knapkova (2013), involves a comprehensive evaluation of the firm and the subsequent discovery of many deficiencies. These defects include the lack of punctuality in debt repayment, the inappropriate distribution of funds and assets, or the judicious use of assets (Sumani et al., 2020). Various methodologies may be used to do financial analysis (Karpavicius et al., 2019). Every approach serves a certain function and comes with its own set of pros and downsides. The analytical methodologies included in this study consist of ratio analysis, vertical analysis, horizontal analysis, bankruptcy models, and credit models (Ma et al., 2020; Akhtar et al., 2021). Vertical analysis is a method used to express the proportionate distribution of capital and assets in terms of percentages (Gajdosikova et al., 2022).

Kliestik et al. (2019) argue that it is essential to create specific models tailored for each country or categories of economies. The classification capabilities of the model may be influenced by many aspects, such as the model's dimensions, focus on business, and operational geographical location (Chudik et al., 2017). Several models were developed for the Slovak Republic, and a subset of these models were then used for the analytical component of the research. The development of the models necessitated the use of several mathematical and statistical methodologies, together with many variables (Cao et al., 2019; Kliestik et al., 2020; Valaskova et al., 2021). Discriminant and linear regression-based prediction models are often used to predict the financial well-being of a company. Gepp et al. (2015) investigated the capabilities of decision trees by analysing the impact of various market situations on

survival models, cost ratios, and prediction ranges (Wasiuzzaman et al., 2019; Cam et al., 2021; Furlong, 2021).

Methodology

Every astute entrepreneur begins with the objective of achieving prosperity. Nevertheless, according to the recognized corporate life cycles, we acknowledge that the organization will ultimately reach a critical juncture (Valaskova et al., 2018). In order to thrive in the fiercely competitive business environment, the organization must either make adaptations or allocate funds towards investing in novel goods or services. Upon the failure of the firm, it proceeds to the ultimate stage of its life cycle, which involves the cessation of its business operations (Xavier et al., 2020).

The main goal of this research is to evaluate the financial health of the selected production company using the pyramid decomposition of ROA (Return on Assets) and financial-economic ratio indicators for the observed period of 2020–2022 within the framework of the Slovak market mechanism. Numerous subsidiary goals were also pursued in the process of pursuing the main goal, such as the analysis of ratios, financial indicators, and economic indicators. The study examined indices, trends, and pyramid analysis in addition to using standard research methods, including synthesis, analysis, and deduction. For any analysis to be conducted, it is necessary to have data pertaining to the company's historical and present circumstances. To conduct the analysis, it is necessary to obtain and collect relevant financial facts about the organization (the corporate financial data were obtained using the online platform FINSTAT). Corporation ASIMA Slovakia has established its presence in Trnava, a district town located in the Trnava Region. Given its expansive size, it ranks among the most sizable areas of Slovakia. The regional economy encompasses all sectors, with manufacturing, construction, and agriculture playing a key role. The industry has a prominent position in terms of its contribution to the generation of gross product.

Vertical and horizontal analysis of assets and liabilities:

Upon first examination, it is evident that the provided firm experienced more substantial transformations within the observed timeframe. There is evidence of investment activity, which involves acquiring long-term physical assets, as well as significant modifications in the operational domain. Over the course of the three-year analysis, the assets of PA Group Slovakia exhibited a notable upward trend at the start of the monitoring period, followed by a modest decline at the end of 2022. The necessary data for a comprehensive study may be found in Table 1. The company's asset share rose to 679,865 thousand euros over the monitored period, reflecting a growth of 9.74%. In 2021, the firm had a substantial growth in its assets, reaching a value of 702,082 thousand euros. However, in the following year, there was a little decrease in the company's property. The proportion of long-term assets in the asset composition also indirectly indicates the company's adaptability to changes in the production schedule. A larger proportion of non-current assets results in a decreased level of flexibility for the organization. In 2022, non-current assets accounted for 60.17% of the total assets. Due to the rise in value, the proportion of its share in total assets also climbed from 60.17% to 68.63%. The primary driver of fluctuations in non-current assets is long-term tangible assets, while long-term intangible assets have a minor presence in the organization. In 2021, his portion of the overall assets amounted to a mere 0.01%. Mobile assets, classified as active assets, have a significant proportion within the composition of non-current assets. The degree of worker productivity directly impacts the profitability of the firm. The growth in 2022, reaching a level of 196,966 thousand euros, may be seen as encouraging. The value of moveable assets had a significant growth of 79.52% during the years 2020 and 2022. The valuation of real estate fluctuated over the observed timeframe. In 2022, the value of buildings had a notable rise from 166,668 thousand EUR to 205.272 million EUR, resulting in their proportion of total assets increasing from 26.80% to 30.19%. This suggests a potential growth of company operations. The monitored period saw just a marginal growth in the value of buildings. Current assets within the observed firm also contribute to the composition of assets but to a lesser extent than non-current assets. The value of the asset in 2022 amounted to 212,765 thousand EUR, accounting for 31.29% of the total asset value. Over the observed timeframe, the volume of the property declined from 39.77% to 31.29%, which may be attributed to the decline in short-term receivables.

Table 1. The development and structure of the company's assets in the years 2020 to 2022

ASSETS	2020 (th. eur)	2021 (th. eur)	2022 (th. eur)	Difference 2020-2022
Assets together	619,512	702,082	679,865	60,353
Non-current assets	372,805	486,444	466,595	93,790
Intangible assets	142	92	83	-59
Long-term tangible assets	372,509	486,197	466,358	93,849
Lands	57,281	61,890	61,824	4,543
Buildings	166,668	153,198	205,272	38,604
Separate movables	109,717	72,305	196,966	87,249
Other long-term assets	0	0	0	-
Long-term financial assets	154	155	154	0
Current assets	246,441	209,284	212,765	-33,676
Stocks	25,721	76,813	51,828	26,107
Material	24,561	71,341	37,333	12,772
The goods	0	0	0	-
Other inventory items	0	0	0	-
Long-term receivables	0	0	0	-
- Debt. view. from trade relations	0	0	0	-
Short-term receivables	216,378	131,110	158,621	57,757
- short code view from shop intercourse	215,768	128,600	158,044	-57,724
Financial accounts	4,342	1,361	2,316	-2,026
Accrual of assets	266	6,354	505	239
Receivables for subscribed equity	0	0	0	-

Source: own calculations

When examining the composition of funding sources, it is crucial to track the proportion of domestic and international capital in relation to the overall investment in the firm (Table 2). The corporation saw a decline in its internal resources of 59,118 thousand euros compared to the previous year. Equity accounted for the majority of the total capital in 2020, at 57.65% of the total. However, it subsequently declined and represented just 43.84% of the entire capital in the same year. The company's management has consistently yielded very unfavourable results, with an increasing trend each year. The financial report for 2022 shows a net loss of -€573,374 thousand. Furthermore, the economic outcome for the accounting period cannot be appraised favourably since the negative value showed a modest increment in comparison to 2020. In 2020, the management produced a negative result of -41,898 thousand euros. However, in 2022, the loss escalated to -58,522 thousand euros.

Table 2. The development and structure of sources of company liabilities in 2020-2022

LIABILITIES	2020 (th. eur)	2021 (th. eur)	2022 (th. eur)	Difference 2020-2022
Total capital	619,512	702,082	679,865	60,353
Own capital	357,191	298,549	298,073	-59,118
Capital	872,369	872,369	872,369	0
Capital funds	-345	-345	-345	0
Funds from profit	0	0	0	0
The result of management of past periods	-472,935	-514,852	-573,374	-100,421
Management result for the accounting period	-41,898	-577	-58,522	-16,624
Liabilities (broader sense)	261,963	402,824	381,792	119,829
Reserves	1,993	2,225	2,612	619
Long-term commitments	88,083	155,832	151,221	63,138
-debt. liabilities from trade intercourse	0	0	0	0
Short-term liabilities	171,887	244,766	227,959	56,072
- short code. liabilities from trade intercourse	147,125	211,371	205,547	58,422
Loans	0	0	0	0
Long-term bank loans	0	0	0	0
- Ordinary bank loans	0	0	0	0
Short-term financial assistance	0	0	0	0
Accrual of liabilities	358	609	0	-358

Source: own calculations

The proportion of foreign resources in the overall capital provides insight into the company's entire level of indebtedness. In 2022, the proportion of foreign sources had a year-on-year rise and reached 56.15%. The company's indebtedness is mostly composed of short-term obligations, which saw growth throughout the monitored period. The proportion of short-term liabilities in the total capital increased from 27.74% in 2020 to 33.53% in 2022. These statistics indicate a general decline in the company's performance.

Analysis of ratio indicators (Liquidity):

For a clearer presentation and to avoid overloading the analyses of ratio indicators, the presented work presents only liquidity and profitability indicators. Liquidity indicators inform how easily the company can repay obligations from its available resources. This side of the financial situation is the most important and the most monitored not only by the company's management, but also by external entities with which the company is in contact. Information about the level of liquidity is conveyed to us by individual indicators. They belong here:

- Indicators of ready liquidity,
- Indicator of current liquidity,
- Indicator of total liquidity,

- Insolvency of the company.

Table 3. Data for liquidity analysis in the years 2020 to 2022 in th. eur

ITEMS	2020 (th. eur)	2021 (th. eur)	2022 (th. eur)	Difference 2020-2022
Stocks	25,721	76,813	51,828	26,107
Short-term receivables	216,378	131,110	158,621	-57,757
Financial accounts	4,342	1,361	2,316	-2,026
Accrual of assets	266	6,354	505	239
Short-term reserves	1,993	2,226	2,612	619
Short-term liabilities	171,887	244,766	227,959	56,072
Ordinary bank loans	0	0	0	0
Short-term financial assistance	0	0	0	0
Accrual of liabilities	358	609	0	-358

Source: own calculations

Prompt liquidity gives us an insight into current solvency and is used for routine financial management (Table 3). The indicator expresses the company's solvency and is mainly intended for the bank's decision on whether to grant the company a short-term loan or not. It essentially characterizes the company's ability to cover its current needs and short-term debts with its receivables and cash.

$$Ready\ liquidity\ (2022) = \frac{2{,}316}{2{,}612 + 227{,}959} = 0.01 \quad (1)$$

Values of ready liquidity of ASIMA Slovakia are extremely low (2020 – 0.0249; 2021 – 0.0054; 2022 – 0.01), they do not even reach the recommended minimum, which indicates an impaired ability to repay one's obligations immediately. The negative is the decrease in ready liquidity during the monitored period. It is a major shortcoming of the company because the amount of short-term foreign resources greatly exceeds the amount of immediately available funds.

Current liquidity indicates the company's ability to pay its obligations while extending the calculation of immediate liquidity to the value of short-term receivables. With normal liquidity, stocks are not taken into account because they represent the most problematic part of current assets. Significant losses can be associated with their conversion into means of payment. Thus, current liquidity indicates how many times the current assets cover the company's short-term liabilities, which means how many times the company is able to satisfy its short-term creditors if it were to convert all its current assets into cash at a given moment. The higher the value of the indicator, the more likely it is that the company will maintain its solvency. Values range from 1 to 1.5 by default (2020 – 1.2682; 2021 – 0.5606; 2022 – 0.7001). In 2020, the indicator's value was positive overall because if the ratio is 1, the company can pay its liabilities without having to sell them. The values of 2021 and 2022 cannot be evaluated positively because they are relatively low and do not even reach level 1. The decrease is mainly caused by an increase in short-term liabilities. In such cases, the company will have to repay its liabilities if necessary and proceed with the transformation of less liquid assets into cash. Total liquidity is used for the long-term assessment of the development of the company's solvency. Recommended values are 1.5 to 4, but the optimal value is 2.5. In 2021, total liquidity decreased but subsequently increased in 2022, although it did not reach the same values as in 2020 (2020 – 1.4159; 2021 – 0.8709; 2022 – 0.9249). The values of 2021 and 2022 do not reach the recommended values and confirm once again the company's insufficient ability to repay its obligations. Values lower than 1.0 point to the fact that the company would not have enough funds to pay its short-term debts even after the transformation of stocks into cash and would have to sell long-term assets. The low values of the company's liquidity result from a high level of short-term foreign resources and confirm the results of the analysis of the asset structure, sources of asset coverage and the golden balance rule.

Insolvency is calculated as the ratio of liabilities to receivables. It expresses what part of receivables are covered by liabilities and indicates what part could be settled with receivables in the event of an immediate necessity to repay debts.

Table 4. Data for analysis of insolvency in the years 2020 to 2022

ITEMS	*2020 (th. eur)*	*2021 (th. eur)*	*2022 (th. eur)*	*Difference 2020-2022*
Long-term commitments	88,083	55,832	151,221	63,138
Short-term liabilities	171,887	244,766	227,959	56,072
Long-term receivables	0	0	0	0
Short-term receivables	216,378	131,110	158,621	-57,757

Source: own calculations

In all monitored years (2020 – 1.2014; 2021 – 3.0554; 2022 – 2.3904), the insolvency indicator was significantly higher than 1.0 and pointed to the possibility of primary insolvency caused by the insolvency of the company itself because the volume of liabilities exceeds the volume of receivables (Table 4). The negative is that the value of the insolvency of ASIMA Slovakia rises over time.

Analysis of ratio indicators (Profitability):

Profitability analysis allows for the assessment of how a firm assesses the return on its invested cash by comparing the inputs and outputs of the organization. Profitability metrics assess the effectiveness of using invested cash in a firm, irrespective of its origin. Profitability is a measure of how the company's profit is influenced by its liquidity, activity, and debts.

Table 5. Data for profitability analysis in the years 2020 to 2022

ITEMS	**2020 (th. eur)**	**2021 (th. eur)**	**2022 (th. eur)**	**Difference 2020-2022**
The result of management from economic activity	-45,877	-56,960	-22,899	22,978
Management result from financial activity	3,979	-1,552	22,328	18,349
Interest expense	513	2,144	3,856	3,343
Management result from normal activity	-41,898	-577	-58,522	-16,624

Source: own calculations

The return on total capital (ROI), also known as the basic production force, measures the profitability of the total capital invested in a business during a specific period (Table 5). It indicates the amount of profit generated by the company for every unit of capital invested, or, when multiplied by one hundred, it represents the percentage increase in the total capital due to business activity.
The fundamental productive force serves as a measure of the level of activity, reflecting the whole of the capital that has been invested in the organization. It is desirable for its worth to be maximized. During the years 2020 and 2021, this indicator plummeted to very low negative values due to the company's lack of profitability in its economic activities. In 2022, there was a tiny gain in value of 0.47%, resulting in a positive but extremely low value. This indicates that the return on investment for each unit of capital put in the firm yielded a profit of 0.0047 euros. The small increase is attributed to the decrease in the company's economic activity loss from -45,877 thousand EUR in 2020 to -22,899 thousand EUR in 2022. Return on equity (ROE) measures the amount of after-tax profit generated per unit of equity. The indicator's value may be compared to the profitability of state-guaranteed securities since investors can expect a greater return for a higher level of business risk.

Table 6. ROE

YEARs	2020	2021	2022
Management result from normal activity	-41,898	-577	-58,522
Own capital	357,191	298,649	298,073
ROE	-11.72 %	-0.193%	-19.6%

Source: own calculations

The observed capital saw a consistent decline in value during the observed time. Consequently, company managers should interpret large negative readings of this indicator as a bad indication (Table 6). The cause is the substantial indebtedness of the equity capital resulting from the outstanding loss from the previous business quarter. Return on assets (ROA) measures the profitability of a firm by assessing the amount of profit it can create relative to its assets, expressed as the ratio of profit to assets. The indicator distinguishes itself from the ROI metric by including the impact of using foreign resources to fund the company's business operations, including the cost of foreign capital. For a corporation to be considered healthy, the value of this indicator should fall between the range of 0.06 to 0.1 (Kliestik et al., 2019), which is equivalent to 6-10%. From a profitability standpoint, all years may be assessed negatively since the indicator consistently displayed negative values during the monitored period. This is because the economic outcome of regular activity incurs a loss.

Results

Following the implementation of vertical and horizontal analysis, along with the examination of ratio indicators, the next step involves the results section. This part includes the pyramidal breakdown of the ROE indicator and the introduction of two bankruptcy prediction models, namely Altman and Taffler's model.

Pyramid decomposition of the ROA indicator:

The pyramid decomposition of ROE involves the use of the Du Pont equation, which aims to systematically break down the main indication into smaller sub-indicators that significantly impact it. The analysis of assets profitability is straightforward, but it has a significant amount of explanatory power. The statement highlights the strong correlation between profitability and turnover. To enhance asset profitability, it is necessary to address asset turnover. Additionally, if asset profitability remains constant, the company will prioritize either higher turnover with lower profitability or higher profitability with slower turnover. The objective of decomposing return on equity is to discover the key factors that impact this metric. This indicator has three distinct "mechanisms" that may be used to exert effect on profitability. Profitability increase may be attained by increasing at least one of the three factors that determine it. Simultaneously, it is essential to guarantee that the expansion of one entity does not lead to the deterioration of the other, hence causing a reduction in Return on Equity (ROE) (Table 7).

The work presents an analysis of the impact of changes in the analytical indicators of the 1st stage of decomposition on the change in the top indicator:

$$Ix = \frac{-0.0008}{-0.676} = 0.0118 \tag{2}$$

$$Ia = \frac{-0.0013}{-0.1084} = 0.0120 \tag{3}$$

$$Ib = \frac{1.5548}{1.6025} = 0.9702 \tag{4}$$

Table 7. Input and output data for ROA analysis

Grade	Indicators	2020 (th. eur)	2022 (th. eur)	Difference 2020-2022	Index 20/22
0	**Rentability of Assets (ROA)**	-0.0676	-0.0008	0.0668	0.0118
1.1	**Profitability of revenues**	-0.1084	-0.0013	0.1071	0.0120
1.2	**Bonding of assets**	1.6025	1.5548	-0.0477	0.9702
2.1	**Production and consumption costs**	0.8701	0.8122	-0.0579	0.9335
2.2	**Labour costs**	0.0912	0.0977	0.0065	1.0713
2.3	**Depreciation cost**	0.1958	0.0851	-0.1107	0.4346
2.4	**Interest cost**	0.0013	0.0088	0.0075	6.7692
2.5	**Other costs**	0.0094	0.0144	0.0050	1.5319
2.6	**Obligation of non-current assets**	0.9643	1.0670	0.1027	1.1065
2.7	**Obligation of current assets**	0.6375	0.4866	-0.1509	0.7633
2.8	**Bonding of other assets**	0.0007	0.0012	0.0005	1.7143

Source: own calculations

The effect of a change in revenue profitability on a change in ROA: *Absolute Impact: 0.0665; Relative Impact: - 98.42%*. The effect of a change in asset commitment on a change in ROA: *Absolute Impact: 0.0005; Relative Impact: - 6.60%*.

The return on assets of ASIMA Slovakia increased to -0.008 in 2022, compared to 2020, where it reached a value of -0.0676. Its value increased by 0.0668 in absolute terms. This increase is mainly influenced by the management results, which resulted in a decrease in losses for individual accounting periods. The profitability of revenues also recorded an increase, from -0.1084 to -0.0013, i.e., by 0.1071 in absolute terms. The positive development was mainly due to an increase in revenues and a decrease in losses for individual accounting periods. To grow ROA by 0.0668, i.e., by 98.82%, the increase in revenue profitability had a positive effect. This increase caused an increase in ROA of 0.0665, which, in relative terms, represents an increase of 98.42%. The decrease in the value of the asset commitment indicator caused an increase in ROA by 0.0005 in absolute terms. From an economic point of view, such growth in profitability can be evaluated positively, which means an increase in the usefulness of the business. The impact of the alteration in production and consumption costs on the variation in return on assets (ROA) is quantified as an absolute effect of 0.0576, with the relative effect being 85.321%.
The relationship between a change in labour expenses and a change in Return on Assets (ROA) may be quantified as follows: The absolute impact is equal to -0.0065, the relative impact is 9.58%. The impact of a change in depreciation expenditure on a change in return on assets (ROA) is quantified as an absolute value of 0.1102. The relative impact is -163.10%.

The impact of a change in interest expenditure on a change in return on assets (ROA) may be quantified as follows: The absolute impact is -0.0075, indicating a decrease in ROA. The relative impact is 11.05%, representing the percentage change in ROA. The impact of a change in other expenses on a change in return on assets (ROA) is quantified as an absolute value of -0.0050. The relative impact is 7.37%. During the second step of the ROA decomposition, the study of five cost indicators is interpreted in the left phrase. The observed drop in cost throughout the specified time was limited to the production-consumption cost and depreciation cost. The production-consumption cost index had a decline of 0.9335, down from 0.9701 to 0.8122, mostly as a result of cost reductions. This reduction has a beneficial impact on the growth of ROA, resulting in a 0.0576 absolute gain. The labour expenses saw a 7.13% increase, equivalent to a 0.0065 rise, suggesting a potential intensification or enhancement of the activity. Nevertheless, this had an adverse effect on the advancement of the ROA indicator, resulting in

a decline of -0.0065 in absolute terms. The depreciation expense was reduced by a factor of 0.4346, which positively influenced the development of the return on assets (ROA) by 0.1102. There was a substantial rise in the interest cost, rising from 0.0013 to 0.088, indicating a 576.92% increase. The surge in interest has adversely affected the progress of the ROA indicator, resulting in a decline of -0.0075 in absolute value. The rise in interest expenses mostly resulted from an escalation in both long-term and short-term borrowing commitments. The indicator measuring additional expenses had a negative impact on the growth of return on assets (ROA) by a value of -0.0050 in absolute terms. The other expenses had a 17.02% rise, rising from 0.0094 to 0.0144, as shown by an index of 1.1065.
The impact of a modification in non-current assets on a modification in return on assets (ROA) is quantified as an absolute value of 0.0008. The relative impact is a decrease of 10.15%. The impact of altering the dedication of existing assets on the variation in Return on Assets (ROA) may be quantified as an absolute effect of -0.0011. The relative impact is equal to 14.91%. The impact of altering the allocation of other assets on the variation in return on assets (ROA) is quantified as an absolute effect of 0.000004. The relative impact is a decrease of 0.05%.

During the second phase of the ROA decomposition, the examination of the three commitment indicators is interpreted in the correct phrase. A reduction in commitment will positively impact the development of Return on Assets (ROA), whereas conversely, an increase in commitment would have a detrimental effect on profitability. The level of commitment rose for non-current assets and other assets, whereas it decreased for current assets. The non-current asset bonding ratio grew from 0.9643 to 1.0670, indicating a change of 0.1027 or 10.65% rise. This metric was the primary factor in the 10.15% decline in profitability. In contrast, the allocation of present resources reduced from 0.6375 to 0.4866, resulting in a reduction of -0.1509. This corresponds to a profitability rise of 14.91%. The commitment of additional assets resulted in a 0.05% decrease in profitability development. The commitment had a 0.0043 rise, equivalent to a 71.43% growth.

Credit and bankruptcy models (Altman's model):

The outcome of Altman's study is the Z-score credibility equation, often referred to as such. The success criteria are directly proportional to the Z index, indicating that a higher Z index corresponds to a stronger financial position for the firm. The bankruptcy model specifically designed for non-publicly traded enterprises was used for computation in this paper.
It distinguishes itself from creditworthiness by relying on empirical evidence, while creditworthiness is grounded on theoretical knowledge.

Table 8. Altman's model

Altman index	*Weighted value*	*2020*	*2021*	*2022*
Working capital / ***Assets***	***0.717***	*0.116*	*-0.045*	*0.205*
		0.083	*-0.032*	*0.146*
Retained earnings / ***Assets***	***0.847***	*0*	*0*	*0*
		0	*0*	*0*
EBIT / ***Assets***	***3.107***	*-0.066*	*-0.079*	*0.0047*
		-0.205	*-0.245*	*0.014*
Market value of equity / ***Foreign capital***	***0.420***	*1.361*	*0.740*	*0.780*
		0.571	*0.310*	*0.327*
Sales / ***Assets***	***0.998***	*0.680*	*0.555*	*0.607*
		0.678	*0.553*	*0.605*
		1.127	***0.586***	***1.092***

Source: own calculations

Altman's indicator reveals that the organization is experiencing financial difficulties across all three observed periods, which maybe attributed to inadequate adjustment after the impact of COVID-19 (Table 8). In 2020, the corporation operated in a regulatory grey area, making it difficult to predict

its future development with certainty. Altman's index accurately forecasted the company's forthcoming financial difficulties throughout the years 2021 and 2022.

Credit and bankruptcy models (Taffler's model):

This concept is sometimes referred to as the Taffler test or the Taffler bankruptcy model. The publication made its debut in 1997 and includes just four ratio indicators with unchanging weight values. Taffler model is computed via the equation:

$$T = 0.53 \,.\, X1 + 0.13 . X2 + 0.18 \,.\, X3 + 0.16 \,.\, X4 \tag{5}$$

Table 9. Taffler's model

Taffler index	*Weighted value*	*2020*	*2021*	*2022*
EBT/Current liabilities	*0.53*	*-0.2437*	*-0.2391*	*-0.0025*
Current assets/ foreign capital	*0.13*	*0.9394*	*0.5187*	*0.5572*
Current liabilities/assets	*0.18*	*0.2774*	*0.3486*	*0.3353*
Sales/Assets	*0.16*	*0.6853*	*0.556*	*0.6347*
		0.1523	***0.0923***	***0.2330***

Source: own calculations

For this investigation, two bankruptcy prediction models, Altman's model, and Taffler's model, were chosen due to their representation as dependable models for developing economies (Table 9). The selection of ASIMA Slovakia was a deliberate choice, primarily because of its involvement in the automobile industry. The automobile industry is resilient and financially viable, but inadequate leadership and mismanagement may lead to the opposite outcome, as seen in both examples.

Conclusion

It is necessary to monitor various financial situation indicators and financial management indicators. These indicators should be considered in relation to the time period and specific contexts. This evaluation will provide an overview of the company's overall economic situation and help identify the reasons behind it. Each organization ensures its future by examining its history. An analysis of the past will enable us to comprehend the factors that have led the organization to its current condition and the reasons for its current position.

The administration of ASIMA Slovakia, a firm involved in the import of automotive components and replacement parts, was closely watched from 2020 to 2022. This firm's selection was deliberate to illustrate the financial status of suppliers at the Tier2-Tier3 level, which are crucial suppliers to OEM companies. The study was conducted using the formulae that are documented in the professional literature. By using financial analysis techniques, the following facts were uncovered. Based on the vertical and horizontal analysis, it can be concluded that a substantial portion of the company's assets consists of non-current assets. In 2022, this obsolete asset constituted around 69% of the company's overall assets and had marginal growth throughout the specified time. In 2020, it constituted 60% of the overall assets, with a 9% growth during the observed timeframe. The significant proportion of non-current assets over the observed period was mostly comprised of long-term tangible assets, which likewise exhibited a positive trajectory. The investigation revealed that the firm has a poor level of solvency.

Consequently, it lacks sufficient financial resources, impeding the prompt discharge of debts. The liquidity indicators are not within the specified intervals. Due to the delayed payment of receivables, the firm has difficulties in meeting its financial commitments or making advance payments. In order to enhance liquidity, the firm must guarantee that its debtors promptly make payments for the services it offers, hence minimizing the number of outstanding receivables. An ongoing issue that has remained since the company's inception is its consistent failure to generate favourable economic outcomes, resulting in continuous losses. In addition, it is worth noting that enterprises operating in this region had significant financial losses during this period. This was mostly due to the adverse impact of the COVID-19 pandemic, which resulted in a sharp decline in both imports and exports, virtually reaching zero levels. Consequently, the money that might have been allocated for the renovation and

modernization of the property or for further financial support in specific sectors of the corporation was instead redirected to cover the accumulated losses from prior times. The economic outcome in 2006 recorded the largest deficit throughout the observed period. In the future, after the firm has resolved its previous financial losses, it will be able to allocate its finances towards the following priorities: - Restoring and modernizing its property, Reconstructing its machinery and manufacturing equipment, Ensuring regular maintenance to keep everything in working order, and so on.

The aforementioned operations may also be funded via the following means:

1. The company's economic outcome,
2. Borrowed funds,
3. Leasing arrangements.

The empirical aspect of the study highlighted that conducting a financial-economic analysis yields a substantial volume of data for evaluating the company's financial condition. It also brings attention to areas of management that require attention and prompts contemplation on their underlying causes, even though the findings may not be universally deemed dependable. The company's growth and status are influenced by several external variables outside its control, which may not always be accurately captured in financial analysis. The factors that impact this group include, for example, variations in the economic cycle, fluctuations in currency exchange rates, and changes in pricing in foreign markets if the firm exports some of its products. Consequently, the effects of these variables may cause the management outcomes and financial well-being of the organization to diverge from what is assumed in the financial analysis. Although financial analysis may not provide a definitive solution to all inquiries posed by a firm, it greatly aids in assessing historical progress, identifying areas of concern, and forecasting future changes.

In future research, it would be advisable to utilize the models established in the article by Kliestik et al. (2019) and focus primarily on models that incorporate variables such as return on equity, the ratio of working capital to total assets, and current liabilities/total assets. These models can be employed to forecast the financial well-being of companies in the SK NACE H sector (transport and storage) in similar analyses. Although international models such as Altman's and Taffler's may be used to predict a company's financial well-being, authors recommend that financial managers of Slovak enterprises only consider the results as informative data. Despite the comprehensive and unbiased investigation, the study has some limitations. It is important to note that this research was conducted only in a single country. However, it is important to recognize that the socioeconomic environment, culture, and especially the legal environment play a key role in this field of economics. Therefore, this shortcoming may also be seen as significant and beneficial. Our next effort involves analysing and comparing these models in the V4 countries located in Central Europe.

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MANAGEMENT CAPABILITIES AND PERSONAL SAFETY OF EMPLOYEES IN FEDERAL ROAD SAFETY CORPS (FRSC), LAGOS STATE

Olufemi Adewale Ogunkoya
Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria
ogunkoya.olufemi@oouagoiwoye.edu.ng

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ABSTRACT. This research investigates management capabilities and the personal safety of employees. This study's objective is to look into the managerial role in employee safety and also explore the influence of employee commitment on personal safety using the Federal Road Safety Corps (FRSC) as a case theatre. The study adopted a descriptive survey research design because it's suitable for both qualitative and quantitative methods with fewer challenges. The population of this study comprised all staff of the Federal Road Safety Corps (FRSC), Lagos State with the use of a primary source of data. Results of this study have revealed that in the FRSC, there was an established significant and positive effect of the managerial role on employee safety (β = .314, Sig. = .001, $P<0.05$). Also, it further revealed that there was a significant positive effect of employee commitment on personal safety (β = .770, Sig. = .003, $P<0.05$). The study concluded that management capabilities are a fundamental aspect that any organization that seeks to achieve the best from its employees should aim towards. The study therefore recommends that the management should be more inclusive in allowing younger staff members of the Federal Road Safety Corp to contribute their ideas toward employee personal safety

Keywords: *Management Capabilities, Personal Safety, Managerial Role, Employee Commitment, FRSC*

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Introduction

Understanding the uncertainties of a dynamic environment as well as competing in the ever-changing environment depend heavily on an organization's management capabilities. Human, technological, and intellectual capabilities make up management capabilities (Jasen & Koren, 2018). To succeed as an organization and gain a competitive advantage, management skills are more important resources (Carmeli & Azeroual, 2019). According to Zahra, Sapienza, and Davidson (2016), the importance of managerial aptitude has been emphasized as essential for firm performance. Developing and deploying dynamic capabilities is made possible by several key capabilities, including the managerial one. According to Gonul, Murat and Dilek (2019), a dynamic environment necessitates constant modification and redesign of what businesses do to keep up with the environment's shifting demands.

Management should give top priority to employee safety programs because they save lives, boost output, and cut costs. These health and safety programs ought to emphasize employee participation, ongoing observation, and a focus on overall wellness (Tahira, Laura, Claudio & Lindsey, 2016). Workplace safety demands that there shouldn't be a significant risk that employees will become unable to perform their jobs. Accordingly, the goal of workplace safety is to establish the conditions, skills, and behaviors that will allow the workforce and the employee's organization to be able to carry out their tasks effectively while avoiding incidents that could endanger them (Tahira, Laura, Claudio & Lindsey, 2020). It is obvious that secure working conditions possess an impact on employees' habits, which in turn has an impact on productivity. This suggests that workers who are in a safe environment are more favourably and likely to act in a manner that cannot harm them.

To achieve alignment between an organization's competencies and the shifting demands of its environment, management capabilities are essential. Greater technical, human, and conceptual skills are combined in these capabilities to not only build but also integrate and then reconfigure the organization's valuable resources and competencies. However, one of the major assets of an organization is its employees. The safety and well-being of employees in an organization should be the paramount concern of the management. Given that workers are frequently exposed to risks like verbal and physical abuse, workplace health is increasingly becoming a top priority in many manufacturing companies (Hamdan, 2017). Many workplaces contain sources of hazardous substances that can expose workers to them through inhalation, absorption through the skin, splashes in the eyes, and other ways (Hamdan, 2017). Slipping on chemicals or liquid substances is usually one of the most frequent causes of work-related damage and injuries. A musculoskeletal disorder is yet another element that negatively impacts workers (Chanchai, 2016). Typically, this includes harm caused by manual handling. According to Onda, LoBuglio, and Bartram (2012), the employer is primarily responsible for protecting employees from any one or more health risks that could endanger their safety and health. Since the major objective of business is to make a profit and maximize shareholders' interest, organizational management must take cognizance of the safety of its employees by making the workplace conducive and reducing hazard risk to the barest minimum.

The significance of this study cannot be overemphasized. This study will be a vital tool to the management of the Federal Road Safety Corps on the importance of effective management capabilities and the benefits of taking good care of employee safety. The study will offer direction to the Federal Road Safety Corps (FRSC) employees and management at various levels, as well as to those working in related fields. Additionally, there aren't enough studies in the study area looking at management skills and worker personal safety. The management will receive recommendations from this study for further implementation, and it will provide a better understanding of the working conditions at the Federal Road Safety Corps (FRSC). The study will also be helpful to the government in formulating policy. The study will also advance future investigations into human resource management. This study will be very helpful to researchers who want to conduct studies on management skills and personal safety.

Theoretical background

Concept of Managerial Capabilities

A new era in management regarding how businesses compete as well as achieve a sound competitive advantage, especially in a non-predictable and rapidly changing environment has begun with the emerging concept of managerial capabilities. Since Teece first proposed the idea of dynamic capabilities in the 1990s, there have been numerous scholarly discussions and investigations about its significance, function, range, and results. According to Teece (2017), managerial capabilities refer to a company's capacity to develop, integrate, and reorganize its resource base in response to a rapidly and unpredictably changing business environment. This definition sparked some debate that resulted in various interpretations of what exactly dynamic capabilities are, how they are developed, and what they can do for businesses. According to some academics (Zollo & Winter, 2018), the definition of "dynamic capability" is ambiguous.

Di Stefano et al., (2017) noted that the definition is the challenging problem at the heart of the debate over managerial capabilities. The focus of several authors on the results of managerial abilities has broadened the concept's horizons and increased misunderstanding (Helfat & Peteraf, 2019). Numerous definitions have been put forth to explain dynamic capabilities. As a result, there isn't agreement on the definitions (Barreto, 2016). The divergence has been harmonised according to the work of Helfat and Peteraf (2019). The significance of dynamic capabilities in determining a firm's competitiveness in a changing environment is not, however, called into question by the lack of agreement. To increase the firm's competitive advantage, changing skills is fundamentally about renewing the firm's resources, according to Ambrosini, Bowman and Collier (2019). Innovation and adaptability to change have recently been highlighted as essential dynamic capabilities.

Dynamic capability has been defined by Teece, Peteraf and Leih (2016) as a firm's capacity for innovation, adaptation to change, as well as the ability to drive change. In conclusion, the renewal of the company's intangible as well as tangible assets and their alignment with the changing environment form the basis of the managerial capabilities' perspective. Management insight into the dynamic environment and foresight are needed to align the firm's resources to the changing environment.

Managerial Role and Dynamic Capabilities

There has been a lot of discussion about managers' roles in dynamic capabilities, which could give the impression that managers are the focus and concentration of dynamic capabilities. In the dynamic model, according to Augier and Teece (2019), the manager of the firm has a high, and also significant impact and effect on the firm's routines, investment choices, and asset orchestration. In a similar vein, managers' roles have begun to take on more significance in the micro-foundation of dynamic capabilities, as correctly noted by Helfat and Peteraf (2015). According to Helfat et al., (2019), comprehension of organizational and managerial processes is necessary to comprehend how firms adapt to a changing environment. Arndt (2017) added that the manager can adapt the resources to the shifting circumstances thanks to dynamic capabilities. Consequently, the top management's role is crucial to the company's commitment to dynamic capabilities.

Some academics emphasize that managers are the ones who start the process of developing dynamic capabilities. The top management, in accordance with Easterby-Smith, Lyles and Peteraf (2019), establishes the vision and starts the process that results in dynamic capabilities.

Additionally, according to Teece (2014), managers must pay attention to not only the organization's internal but also the external environments from the perspective of dynamic capabilities. While dynamic capabilities are focused on adapting to changes in the external environment, firms' internal dynamics and forces determine how well they can align themselves with that environment. According to academics, there is enough evidence in the literature to conclude that managerial effectiveness has a positive impact on performance (Anzengruber, Goetz, Nold & Woelfle, 2017).

Ambrosini et al., (2019) claim that managers' perceptions of the environment have an impact on their choices concerning dynamic capabilities. Similar to this, Barrales et al., (2016) claimed that if managers notice a high level of dynamism in the external environment, the company will decide to develop dynamic capabilities. Therefore, the successful development, organisation, and deployment of

dynamic capabilities depend on the managerial ability to understand environmental changes that affect the firm. In terms of managerial abilities and human capital, Casillas and Moreno (2017) examined managerial capability. According to other researchers (Helfat & Martin, 2015; Kor & Mesko, 2015), cognitive managerial skills, social capital, and human capital are crucial elements of managerial capability and have an impact on performance.

Variables Influencing the Commitment of Employees to Health and Safety

Workplace Environment

Many elements of a company's workplace environment appear to affect employees' commitment, which in turn affects how satisfied they are with their jobs (Amponsah-Tawiah, Ntow & Mensah, 2016). The impact of employees' perceptions of the workplace being a means of influencing employee outcomes is a crucial area of research. The workplace typically needs to accommodate the physical and mental demands of the employees. Employees are more likely to give their best effort to support the daily operations of their organization in a positive work environment. According to some studies, there is usually a nexus between specific experiential elements found in the workplace environment and employees' reactions, which can be influenced by those things that the employee notices about the conditions and situation at work (Uraon & Raya, 2017). In addition, experiential factors, like workplace accidents, can influence perceptions, which in turn serve as the foundation for broad assumptions about the organizational work environment.

Safety Factor

As a significant factor that can affect employees' commitment, safety concerns have also been identified. Employee retention may be impacted by factors such as maintenance and effective breakage repairs (Schelmetic, 2013). Any production or processing activity must be properly maintained to be successful. Offering a high-quality maintenance service and facility that you can rely on to find systematic errors and propose solid and practical solutions is one of the most important aspects of a good organization. For industrial organizations to achieve overall efficiency, maintenance management has grown in importance and significance (Telang & Telang, 2010). Inadequate maintenance can lead to hazardous cum unsafe situations, accidents, and health issues. Maintenance is a hazardous activity with numerous risks built into the very nature of the job. In all professions and workplaces, maintenance is performed. The computer's unintended malfunction could result in needless personal injury. Injury can be prevented with the help of proper equipment maintenance (Dennis, Muthu Kumaran & Balaji, 2015). However, overlooking maintenance in a business frequently results in breakdowns, which then necessitate expensive repairs and hasten the deterioration of relatively expensive equipment (Telang & Telang, 2010).

Job Stress

According to studies by Mensah and Kosi (2016); Wireko-Gyebi et al., (2017), stress is caused by a variety of pressures workloads and, including situations where work expectations cannot be met because of a lack of resources, like social assistance from supervisors, co-workers, decision-making, the use of skills, and rewards like bonuses. Workplace conditions such as fatigue, disparities in workload, positional conflicts, and uncertainty are all examples of work stress (Nouri & Soltani, 2017). Strong coping mechanisms and work dissatisfaction are also present in high-tension workers, which lowers participation in the organization and raises turnover rates (Hamdan, 2017; Huang et al., 2016). Workplace stress is a common issue across all industries. It contributes significantly to illnesses at work and other associated organizational outcomes. According to Fordjour and Chan (2019), stress is a hidden construct that denotes an increased and amplified nervous system activity state, with coordinated outcomes at the affective, cognitive, and behavioral levels. However, a sense of control over working hours can lessen tension brought on by inconsistent pay and housework demands as well as health problems related to work-related stress. Additionally, it has been demonstrated that high employee working time regulation is associated with better subjective health, lower absenteeism, and a decline in absenteeism caused by stress (Ticharwa, Cope & Murray, 2019).

Managerial Capability in an Organization

Strategic Thinking

Strategic thinking that engages the manager's cognitive abilities is necessary for managerial capability. Managers must make strategic decisions if businesses are to compete and gain a competitive advantage. Managers should be able to create a long-term plan that will support the university's

performance and expansion. According to Kearney, Harrington, and Kelliher (2017), strategic thinking influences how managers interact with their internal and external environments and enhances their managerial capability. Any organization must ensure that its management's strategic decisions and choices support the institution's expansion (Anzengruber et al., 2017). The ability of managers to think strategically is what allows them to create long-term plans for the institution.

Sensing

Managers must have the ability to be able to identify and sense these instability, alterations, and changes in the external environment for the organization to adapt to them. Managers must be aware of environmental trends, according to Teece (2017). Threats and opportunities for businesses are brought on by the changes in the external environment. According to Roberts, Campbell and Vijayasarathy (2016), managerial sensing is crucial for managers to be able to spot opportunities that will accelerate their company's growth. The tendency of managers to look for and seize opportunities is discussed (Pavlou & Sawy, 2011; Teece et al., 2017). The capacity for managerial sensing helps managers become attuned to threats and build the capacity to seize opportunities that can aid in the expansion of universities. A key managerial skill is the management's ability to identify opportunities before competitors (Teece et al., 2016).

Shared Vision

The managerial capability calls for managers to develop and communicate their team's vision. According to Garca-Morales, Jiménez-Barrionuevo and Mihi-Ramrez (2017), the ability to share a vision is a vital one in today's knowledge-driven society. For employees to dedicate themselves to the university's strategic vision, they must fully understand it. The leadership of the university should have a distinct vision for where they want to take the institution. The managers of the university have a big responsibility to develop and communicate a vision that will help the institution deal with and adapt to rapid change. The managers want to see employees who are dedicated to pursuing their vision. Therefore, it is the managers' duty to make sure that the employees share a united and common understanding of the organization's vision. The organization's shared vision prevents division and fosters teamwork (Van Doorn, Jansen, Van Den Bosch & Volberda, 2018).

Theoretical Framework

Dynamic Capabilities Theory

Teece and Pisano's (1994) developed the theory of dynamic capabilities by building upon Barney's (1986, 1991) resource-based view (RBV) of the firm. RBV is considered a static concept that is usually insufficient to explain and justify how firms are to maintain a competitive edge in evolving markets (Priem & Butler, 2001). They posit that firms within each similar industry perform differently due to their diverse resources and capabilities (Barney, 1986, 1991; Peretaf, 1993). The RBV focuses on identifying unique and difficult-to-copy resources that give firms a competitive advantage (Barney, 1986).

Scholars have emphasized that to stay competitive, firms must develop specific capabilities and engage in continuous learning, especially in dynamic markets (Argyris & Schon, 1978; Hammer, 2001; Zott, 2003). Sustaining a competitive advantage is seen as an ongoing and dynamic process (Hung et al., 2010). Failing to cultivate dynamic capabilities, especially in a changing environment, can result in a firm losing its competitive advantage (Gnizy, Baker & Grinstein, 2014). The concept of dynamic capabilities gained prominence in the literature among international ambidexterity scholars (Prange & Verdier, 2011).

Teece, Pisano and Shuen (1997) defined and conceptualized dynamic capabilities as a firm's capacity to blend, enhance, and reconfigure both internal and external expertise to adapt to a rapidly changing environment. Dynamic capabilities have been defined in various ways by prior research. Eisenhardt and Martin (2000) describe them as the process of using existing resources to create new ones that can drive market changes. Markets evolve, emerge, split, or even disappear, and dynamic capabilities result from modifying acquired resources through combinations and reconfigurations to formulate new strategies (Grant, 1996; Pisano, 1994). In essence, dynamic capabilities are a critical factor in developing new sources of profitability, superior performance, and competitive advantage (Henderson & Cockburn, 1994; Teece et al., 1997). Scholars have suggested that dynamic capabilities can address inflexibility in a firm's capabilities and facilitate the utilization and application of knowledge (Easterby-Smith & Prieto, 2008). They also play a pivotal role in how businesses respond to change,

especially within the context of a shifting business environment (Newey & Zahra, 2009). When dynamic capabilities are rare, highly valued, unique, and irreplaceable, they not only enhance a firm's financial position but also provide a sustained competitive advantage over rivals (Ogunkoya, Hassan & Shobayo, 2014).

Methodology

The research main aim is to look into and explore the safety of employees' personal belongings and management abilities. Firstly, examining the managerial impact on employee safety is the primary goal of the specific goals, though. Secondly, explore the influence of employee commitment on personal safety.

The following questions will be answered in the course of the study; Firstly, what is the managerial role on employee safety? Secondly, does employee commitment have any influence on personal safety?

The research hypotheses tested were based on the set objectives of this study and validated in this study as follows:

H_o1: There is no significant effect of managerial role on employee safety

H_o2: There is no significant effect of employee commitment on personal safety

Due to the nature of the research, a descriptive survey research design was used for the study. Quantitative data will be obtained through primary means with the aid of structured questionnaires which will be distributed to the respondents. The study will make use of descriptive statistics as its method of analysis. All employees of the Federal Road Safety Corps (FRSC), Lagos State, made up the study's population. There were 507 respondents in total, making up the study's total population. The Yamane (1967) sampling model is used to determine the sample size for this study and to support its appropriateness. This sampling method makes it easier for researchers to quickly determine an appropriate sample size, especially when time and resources are limited. According to Yamane (1967), sample size can be determined using the formula below:

$$n = \frac{N}{1+N(\alpha)^2}$$

Where: n = sample size

N = population size

α = margin of error

i.e. N = 507; α = 5% (0.05).

Hence, the sample size for the study is two hundred and twenty-four (224) respondents.

Respondents who are employees of the Federal Road Safety Corps (FRSC), Lagos State, will be given questionnaires that are strictly structured to have a thorough and trustworthy source of information. The questionnaire will be split into two sections: section A will cover background information about the respondent's educational background and professional experience, and section B will include questions specific to the study.

Face and construct validity of the instrument will be ensured by the close perusal of my supervisor and other experts in the research field to scrutinize the instrument and modification will be done based on their suggestions. The Cronbach Alpha test will be used to measure internal consistency for the test-retest analysis to assess the instrument's dependability. The rule of thumb for reliability is ≥ 0.7; otherwise, the instrument is not reliable.

Results

The Simple percentage analysis was used in this study to dissect the data that were collected from the respondents. The data's descriptive statistics are displayed below:

Table I: Descriptive Statistics of the Data

Gender	***Male***	***Female***			
	53.5%	46.5%			
Age	***18-25 years***	***26-30 years***	***31-40 years***	***40 years & Above***	
	14.2%	42.6%	24.5%	18.7%	
Educational Qualification	***SSCE***	***OND/HND***	***B.Sc.***	***M.Sc.***	***Others***
	27.7%	36.1%	10.3%	8.5%	17.4%
Working Experience	***1-5 years***	***6-15 years***	***16-25 years***	***26 years & above***	
	40.7%	23.2%	36.1%	0%	
Accident Experience	***Minor***	***Major***	***Occupational Disease***	***No Accident***	
	27.7%	36.1%	10.3%	25.9%	

Source: *Researcher's Field Survey (2023)*

From Table I above, it was revealed that 53.5% of the respondents were male while 46.5% were female. This implied that the study was not gender biased because both males and females were properly represented in the study. Also, 14.2% of the total respondents were between the ages of 18-25 years, 42.6% were between the age of 26-30 years, 24.5% were between the age of 31-40 years and 18.7% were between the age of 40 years and above. In addition, 27.7% of the respondents have SSCE, 36.1% have OND/HND, 10.3% have B.Sc., 8.5% have M.Sc., and 17.4% have others. This indicated that the respondents in this study had different academic qualifications which had allowed them to participate in this study appropriately. Also, 40.7% of the respondents have 1-5 years of working experience, 23.2% of the respondents have 6-15 years of working experience, 36.1% of the respondents have 16-25 years of working experience while 0% of the respondents have 26 years and above working experience. Lastly, 27.7% of the respondents have minor accidents, 36.1% of the respondents have major accidents, 10.3% of the respondents have occupational disease and 25.9% of the respondents have no accidents.

Hypotheses Testing

Research Hypotheses One:
H_o1: There is no significant effect of managerial role on employee safety

Table II: Summary of Regression Results for the effect of Managerial Role on Employee Safety

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.917[a]	.841	.834	.5146847
a. Predictors: (Constant), Managerial Role				

ANOVA						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	527.41	1	5227.41	42.875	.000[b]
	Residual	24.35.4	124	12.300		
	Total	2962.81	125			
a. Dependent Variable: Employee Safety						
b. Predictors: (Constant), Managerial Role						

Coefficient						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		β	**Std. Error**			
1	(Constant)	31.049	1.299		23.900	.000
	Managerial Role	.314	0.35	.321	8.884	.001
a. Dependent Variable: Employee Safety						

Source: *Researcher's Field Survey (2023)*

The coefficient of determination (R^2) is 0.841; the R Square value explains the variation of the independent "managerial role" on the dependent variable "employee safety". It therefore means that the managerial role has 84.1% of the variance in employee safety. The ANOVA result looked into the overall significance of the model. It shows the p-value of the predictor's effect, that is managerial role, on the criterion variable (employee safety). At the 95% confidence level of the model, the significance value (p-value) at 95% confidence level is worked out as .000 which is less than 0.05, and F statistics of 42.875. From the above table, the unstandardized Beta coefficient provides a measure of the contribution of each of the variables to the model. The result shows that (β = .314, Sig. = .001, P<0.05) which is an indication of the significant effect of managerial role on employee safety. The null hypothesis is therefore rejected, while the alternative hypothesis is conclusively accepted that there is a significant effect of managerial role on employee safety.

Research Hypotheses Two:
H_o2: There is no significant effect of employee commitment on personal safety

Table III: Summary of Regression Results of the effect of Employee Commitment on Personal Safety

Model Summary					
Model		**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1		.738[a]	.545	.542	.96267
a. Predictors: (Constant), Employee Commitment					
ANOVA					
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	147.737	1	147.737	159.417	.000[b]
	Residual	123.255	124	.927		
	Total	270.993	125			
a. Dependent Variable: Personal Safety						
b. Predictors: (Constant), Employee Commitment						

Coefficient						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		β	**Std. Error**			
1	(Constant)	.769	.286		21.974	.003
	Employee Commitment	.770	.061	.738	12.626	.000
a. Dependent Variable: Personal Safety						

Source: *Researcher's Field Survey (2023)*

The coefficient of determination (R^2) is .545; the R Square value indicates the extent of which the dependent variable "personal safety" can be explained and described by the independent variable "employee commitment". It means that employee commitment has 54 5% of the variance on personal safety. The ANOVA result assesses the overall and complete significance of the model. It shows the p-value of the predictor's effect, employee commitment, on the criterion variable, personal safety. At the 95% confidence level of the model, the significance value i.e., p-value, at 95% confidence level is generated as .000 which is less than 0.05, and F statistics of 159.417. From the above table, the unstandardized Beta coefficient provides a measure of the contribution of each of the variables to the model. The result shows that (β = .770, Sig. = .003, P<0.05) which is an indication of the significant effect of employee commitment on personal safety. The null hypothesis is categorically therefore rejected, while the alternative hypothesis is accepted that there is a significant effect of employee commitment on personal safety.

Discussion of Findings

The analysis of hypothesis one in this study clearly showed that the managerial role has a significant impact on employee safety. The study by Jonathan and Mbogo (2016) on the role of employees and employers in ensuring a safe working environment lends support to this study's conclusion. According to the study's findings, many secondary school administrators do not take the teaching staff into account when recommending policies and procedures to reduce safety hazards. The results showed that the majority of the teaching staff did not participate in training programs that would have given them workplace safety skills. The majority of them did not participate in discussions about workplace safety regulations.

The study's second hypothesis, which was also subject to analysis, showed that employee commitment has a significant impact on personal safety. The study by Quagrine, Opoku, Allah, and Donkor (2020) on the "influence of health and safety management practices on employee commitment: evidence from the Bottled and Sachet Water Industry" supports the findings of this study. The results imply that a particular risk is to the welfare of the workforce. The study also discovered that particular hazards (chemicals) had the greatest detrimental impact on workers' commitment to their jobs. According to the study, employers must implement suitable health and safety measures to improve employees personal safety while performing their duties.

Conclusion

The study's goal is to evaluate employee personal safety and management skills. This is very significant because an organization's management skills are essential for comprehending the uncertainties of a dynamic environment as well as competing in an ever-changing environment. Greater resources for achieving organizational success and competitive advantage are management capabilities. It has been emphasized that managerial ability plays a crucial role in how well a firm performs. The development and deployment of dynamic capabilities are made possible in large part by the managerial capability. Additionally, it is asserted that a dynamic environment necessitates ongoing revisions and changes to what businesses do to adapt and adjust to the environment.

The study came to the conclusion that strategic thinking, which engages the manager's cognitive ability, is necessary for managerial capability. Managers must make strategic decisions if businesses are to compete and gain a competitive advantage. In order to promote employee safety in the workplace, managers should be able to develop a long-term strategy that can help the organization they are a part of perform and grow. The positive and significant effect of managerial role and employee commitment clearly showed that employees who have absolute commitment and roles in the welfare plans of the organization believe that the organization cares about their safety hence their high performance within the organization. The study therefore concludes that management capabilities are a fundamental aspect that any organization that seeks to achieve the best from its employees should aim towards.

The following policy suggestions are made in light of this study's findings and findings from other studies: firstly, the management of Federal Road Safety Corps continually provides a conducive atmosphere for employees to work without any fear of losing their lives by providing the right protective materials whenever they discharge their duties and responsibilities. Secondly, it is equally recommended that management provide financial support to the right departments in charge of employee welfare to encourage them to give their best to the jobs. Lastly, the management should be more inclusive in allowing younger staff members of the Federal Road Safety Corp to contribute their ideas towards employee personal safety.

The study limitations on management capabilities and personal safety of employees may focus on a specific industry, company size, or geographic location, limiting the generalizability of findings to other contexts. Many studies might adopt a cross-sectional approach, providing a snapshot of management capabilities and safety practices at a specific point in time. This limits the ability to draw conclusions about causation or changes over time.

Future research should explore several key areas to enhance understanding and contribute to the development of effective strategies. Also, it can explore the development and effectiveness of smart

safety systems that leverage real-time data, IoT devices, and automation to proactively identify and mitigate workplace hazards.

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LEVERAGING COMPETITIVE STRATEGIES ON BUSINESS OUTCOMES POST-COVID-19 PANDEMIC: EMPIRICAL INVESTIGATION FROM AFRICA

Timilehin Olasoji Olubiyi *
Department of Business Administration & Marketing,
School of Management Sciences, Babcock University, Ilishan-Remo, Ogun State, Nigeria
drtimiolubiyi@gmail.com

* corresponding author

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ABSTRACT.
Background: The novel coronavirus has damaged the global economy, and business outcomes such as low profitability, poor sales, and weak market share, including intense competition, are widespread within the business ecosystem; however, competitive strategies have been some of the business decisions in recent times. **Aim:** The study, therefore, examined the effects of competitive strategies on business outcomes of selected consumer goods companies listed in Nigeria, the most populous and largest economy in Africa. **Methods and Sample:** The study adopted a survey research design, with a population of 22,466 staff members, comprising regular employees and top- and middle-level managers of twenty consumer goods companies listed on the Nigeria Exchange Group (NGX). The study used a proportionate stratified sampling technique to draw a convenient sample for the analysis. 491 copies of the questionnaire were administered to the respondents, with a response rate of 97.76%. **Results:** Findings showed that competitive strategies significantly and positively affected business outcomes (Adj. $R2 = 0.563$; $F5/1306 = 337.061$, $p<0.05$). **Conclusion:** The study recommended that the consumer goods companies often refer to Fast Moving Consumer Goods (FMCG) listed in Nigeria must have a market-development mindset, invest in consumer education, and integrate an efficient supply chain management model.

Keywords: Cost leadership, Competitive advantage, Differentiation, FMCG, Innovative capability, Nigeria, Organizational performance

JEL Classification: D63, L24, M10, O55, Q01

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Introduction

The novel coronavirus (COVID-19) has damaged the global economy and business ecosystem worldwide. The environment has been characterized by competition, industry volatility, and rapid technological advancements, resulting in fluctuating demand and posing a threat to the survival of non-competitive businesses. There has been a gradual change in consumer behaviour, and business landscape with respect to buying practices, firm behaviour, distribution and supply chain management; largely induced by COVID-19 (Oluwasanmi, 2022; Paul, Moktadir, & Ahsan, 2021). Business outcomes in recent times have been negatively affected globally mainly due to COVID-19 (Akhtaruzzaman, Sabri, Boubaker, & Zaghum, Umar, 2022; Boubaker, Zhenya & Yaosong, 2022; Putri, & Pan, 2022). Business outcomes such as low profitability, poor sales and weak market share, including intense competition, are widespread within the business ecosystem, and competitive strategy, e-commerce and technological change are some of the business decisions in recent times.

Competition is fundamental and central to business outcomes because it has a significant impact on firm behaviour, and overall performance (Karaev, 2023; Kabuoh, Moibi Ademilua, & Sunmola, 2020; Olubiyi 2022; Walumweya, & Phiri, 2022). The competitive environment has increased globally due to the pandemic and economic turbulence. Many countries and businesses the world over continue to experience hydra-headed negative impacts, and these continue to affect the unlocking of business and industry potentials, entrepreneurial development, and job creation, among others. In recent times in Nigeria, we have seen more businesses reporting low or no profit and, in some cases, no revenue due to the advent of COVID-19, and the number of business failures is equally high (Olubiyi,2022). Many of the businesses in the developed nations have resulted in different strategies, e-commerce, and new technologies to stem the tide. COVID-19 is also a crisis of knowledge and strategy adoption (Thumiki, & Jurcic, 2021), in particular competitive strategies (innovative capability, diversification capability, differentiation capability and cost leadership capability), amongst others. There has been less focus on competitive strategies despite the assertions of scholars that competitive strategy and business outcomes must be aligned for synergistic effect (Bagnoli & Giachetti 2014; Karaev, 2023; Su, & Daspit, 2021). In Africa and many other developing nations particularly Nigeria, the adoption of strategies such as diversification, differentiation, cost leadership and innovative capability have been weak and competition continues to grow unabated within the business landscape this keeps getting stricter day by day, particularly amongst the consumer goods industry and listed companies. The advent of globalization has also increased the competition experienced by these consumer goods and large firms (Chaithanapat, & Rakthin, 2021; Kabuoh, Moibi Ademilua, & Sunmola, 2020; Inegbedion, Inegbedion, Obadiaru, Asaleye, Putri, & Pan, 2022; Su, & Daspit, 2021). As a consequence of the heightened competition, businesses are battling to maintain control of their sector, documenting, among other issues, a decline in customer patronage, market share, profitability, and sales. Studies have been conducted on competitive strategies and business outcomes in different countries but the different contexts in which these studies have been done varied (Enobong, Ekpenyong-Effa, Obong, Hammed, & Isong, 2022; Farida, & Setiawan, 2022; Exposito, Sanchis-Llopis, 2018; Gbolagade, Adesola, & Oyewale, 2013; Matthews, MacCarthy, & Braziotis, 2017; Moskovich,2020; Niyi, Rita, & Mathew 2022; Onufrey, Bergek, 2021; Parnell, & Brady, 2019; Porter, 1985; Nyaberi, 2021). Apart from the foregoing development, previous studies on competitive strategies and business performance largely concentrated on developed economies and under different environmental conditions (Alnidawi & Omran, 2016; Crespo, Crespo, & Calado, 2022; Erol & Kirpik, 2022; Kabuoh, Moibi Ademilua, & Sunmola, 2020; Karaev, 2023; Kharub, Mor, & Rana, 2022; Putri, & Pan, 2022; Sharma, 2020; Trivedi, & Srivastava, 2022; Wangui, Kifleyesus, & Mote, 2021) and on small and medium-sized enterprises (SMEs) and manufacturing sector (Ates, 2022; Kharub, Mor, & Rana, 2022; Mokbel, Koliby, Abdullah, & Mohd, 2022; Laban, & Deya, 2019). However none of these studies examined the effect of competitive strategy on business outcomes within emerging nations like Nigeria and they mostly measured performance and business outcomes using financial measures (Alhassan & Memunda, 2020: Gabriel, & Osazuwa, 2020).

As a result, this paper aims to fill the gap by providing background information on competitive strategies and business outcomes and examining the relationship in selected listed companies in Nigeria, the most populous and the largest economy in Africa. Therefore, this study aims to investigate the effect of competitive strategies (innovative capability, diversification capability, differentiation capability, and cost leadership capability) on business outcomes (profitability, sales growth, customer satisfaction, and business growth) of selected listed consumer goods companies in Nigeria. The study also seeks to contribute to a greater understanding of the relationship between the independent (technological capability) and dependent (business performance) variables. This study will measure business outcomes using subjective (non-financial) measures (profitability, sales growth, customer satisfaction, and business growth) while competitive strategies will be measured (innovative capability,

diversification capability, differentiation capability, and cost leadership capability). The focus of this study and the measures adopted for the variables will help the stakeholders of the consumer goods industry to relate to the findings easily and also make appropriate decisions whenever there is a change in the policy rate.

Theoretical background

Historical Context of the Nigerian Consumer Goods Industry

According to records and details from the Nigerian Stock Exchange(NSE), the consumer goods sector is one of the most active in Nigeria's economy. Before approximately fifty years ago, the distribution channels for fast-moving consumer goods in Nigeria consisted of large foreign-owned wholesale and retail outlets (such as Leventis, Kingsway, G. B. Olivant, etc.) and small individual retailers operating in open-air markets. Over time, the sector has expanded to become a massive and significant part of the nation's economy. The consumer goods industry in Nigeria is comprised of a large number of products that are frequently purchased and used by consumers daily. The country's large population is one factor that attracts businesses to the sector. In addition, the sector has evolved to recognize and cater to the diverse demographic characteristics of the consumer goods industry available for varying levels of income and preferences. The industry is also one of the largest employers in the nation. Utilizing the country's population and vast market space, firms in this industry have continuously expanded into remote towns and villages to increase their market share and promote growth. Several other sectors of the economy, such as agriculture, supply chain, and support industries like packaging, media, etc., have also felt the sector's influence. Currently, the consumer goods industry in Nigeria is comprised of foreign players, robust Nigerian players, and a large number of small domestic players. The consumer goods sector on the Nigeria Stock Exchange which is now referred to as Nigeria Exchange Group Plc, consists of automobiles/auto parts, beverages brewers/distillers, beverages-non-alcoholic, food products, food products-diversified, household durables and personal/household products companies. The sector currently has twenty companies listed with a market capitalization of N4.69 trillion, representing 13.35 per cent of the NSE market capitalization as of 31st July 2023. The consumer goods industry is a substantial component of Nigeria's manufacturing economy. As with all other manufacturing sectors, the consumer goods business is characterized by poor production value added. According to many reports, the sector faces a wide range of difficulties, including post-pandemic consequences, such as a lack of access to raw materials, scarcity of foreign exchange, as well as expensive bank fees. Given the size of the Nigerian consumer goods sector and the dwindling opportunities and lack of infrastructure, there is a need to look at strategies to improve the business outcomes of the companies operating in the sector.

Competitive Strategies

Firms compete for customers, revenue, and market share in a rapidly changing economic and business environment. The essence of strategy formulation is coping with competition. Putri, & Pan, (2022) and (Farida, & Setiawan,2022) describe strategy as a collection of managerial decisions and actions taken to achieve superior company performance relative to competitors. Strategy implies the exploitation of the organization's unique advantages in facing the environmental challenges (Ramaswamy & Namakumari, 1996; Trivedi, & Srivastava, 2022). Competitive strategies are adopted to create and increase market share over the competition. The application of said strategies affects business outcomes in terms of profitability, customer acquisition or retention and revenue growth. Firms require competitive strategies to enable them to overcome the competitive challenges they face in their operating environment. A competitive strategy allows a company to gain a competitive advantage over its competitors and sustain its market success (Enobong, Ekpenyong-Effa, Obong, Hammed, & Isong, 2022; Gloria & Ding, 2015). Competitive strategies are various strategies that an organization can use to achieve competitive advantage and gain sustainable competitive advantage over their competitors and over time. The competitive strategy establishes a profitable and sustainable position for the firm against threats from industry competition (Gwangwava, 2021; Njuguna, & Waithaka, 2020). Competitive strategy is the process of developing competitive advantage and earning above-average returns for stakeholders.

Business Outcomes

In measuring business outcomes, the organization's overall health is evaluated (Makinde, Akinlabi, & Ajike 2015). According to Folan and Browne (2005), business outcome is the analysis of a company's accomplishments in relation to predetermined objectives and goals. Business outcome

depends on many factors: the strategy of the business, structure, resources and capabilities of the business (Krishnan, 2017). The business outcome has been defined as the ability of an organization to fulfil its mission through sound management, strong governance and a persistent rededication to achieving results. Kowo, Sabitu, and Adegbite (2018) defined it as the act of techniques used to measure success in meeting goals in a business context. Business outcome endorses a process perspective in which the emphasis is placed on the intended process of quantifying the effectiveness and efficiency of action using a set of metrics. The measures and individual actions that serve as substitutes or proxies for organizational phenomena. Business outcome measurement is comprised of management and control systems that generate information for internal and external users (Karaev, 2023; Khan, 2022). The business outcome can be primarily based on non-financial measures and financial measures. Performance can be measured in different forms – a measurement based on financial indicators such as Return on Assets (ROA), Return on Sales (ROS), Leverage (LEV), level of Risk (SROA), Returns on Investment, Net income/Revenues, Returns on Equity while the non-financial indicators include quality, loyalty, customer satisfaction, market share growth, and stakeholder's satisfaction (Sindhu, Haz, Ali & Ali, 2014; Nyaingiri & Ogollah, 2015; Hasby, Buyung & Hasbudin, 2017; Putri, & Pan, 2022; Oyadiran, Ahmed & Gimba, 2015; Su & Tsang, 2015). Business outcome at the operated or individual level typically involves processes such as statistical quality control, whereas organizational-level performance typically calls for softer forms of measurement, such as customer satisfaction surveys, which are used to obtain qualitative information about performance from the customers' perspective (Barney,1986). Non-financial indicators are long-term oriented nonfinancial metrics that assess the ability of the firm to guarantee shareholders of sustained value and growth (Saunders, 2000). This study adopted the perceptual measures of business outcome by measuring business outcome indicators with profitability, sales growth, customer satisfaction and business growth. Business outcomes allow for benchmarking when evaluating a company. It is essential to benchmark and determine how a company can compare its business outcomes to its industry competitors (Kowo, Sabitu, & Adegbite 2018). Benchmarking is the comparison of one's company procedures and performance metrics to industry bests and/or other industries' best practices. Typical measurements include quality, time, and cost. Learning is doing things better, more quickly, and more cheaply. Malburg (2000) asserts that to achieve a low-cost advantage, an organization must have a low-cost leadership strategy, manufacturing, and a workforce committed to the low-cost strategy that cost leadership strategy can provide.

Theoretical Review - Theory of Competitive Strategy

According to Porter (1998), competitive strategy is the pursuit of a favourable competitive position within an industry, the primary arena where competition occurs. Because these barriers to imitation are continuously eroding, the company must continue to invest in maintaining or enhancing its positional advantage in order to ensure its continued viability. The choice of a company's competitive strategy will be determined by its capacity to generate and maintain competitive advantage. Competitive advantage is the condition that enables a company to operate in a more efficient or otherwise superior manner than its competitors, resulting in advantages accruing to that company (Bryson, 1995). Essentially, the strategy involves determining where your business will go and how to get there. A precise definition is based on competitive advantage, the objective of the vast majority of corporate strategies: The source of a firm's competitive advantage is when the value it creates for its customers exceeds its cost of creation. Superior value is achieved by offering lower prices than competitors for equivalent benefits or by providing distinctive benefits that more than compensate for a higher price. Cost leadership and differentiation are the two fundamental types of competitive advantage (Porter, 1985). A company's relative position within an industry is determined by its selection of competitive advantage (cost leadership versus differentiation) and competitive scope. Competitive scope distinguishes between businesses that target broad industry segments and those that target a narrow segment. Generic strategies are advantageous because they define strategic positions at the most basic and general level. According to Porter, in order to achieve a competitive advantage, a company must choose the nature and scope of its competitive advantage. There are different risks associated with each generic strategy, but "being everything to everyone" is a surefire recipe for mediocrity — "getting stuck in the middle."

Empirical Review - Relationship between Competitive Strategies and Business Outcomes

According to the conventional strategy literature, firms with a clear and consistent strategy will outperform those without such strategies (Porter, 1991). As previously stated, the resource-based perspective supplements this strategic paradigm by proposing that a firm's chosen generic strategy must be congruent with its available resources in order to achieve a successful competitive position (Barney, 1991). This framework is regarded as applicable to both large and small businesses (Porter, 1980). However, smaller firms tend to compete more frequently in niche markets (Porter, 1980) and are

consequently more likely to adopt innovative, distinctive strategies (Trivedi, & Srivastava, 2022). In addition, firms with fewer scale advantages may find it harder to achieve cost leadership ((Laban, & Deya, 2019; Benko, David, & Farkas,2022). Thus, differentiation may be viewed as the most promising path to growth for smaller businesses (Covin, 1991). The empirical evidence, however, remains inconclusive (Farida, & Setiawan, 2022). Several studies indicate that a specific strategy has no impact on performance (Kowo, Sabitu, & Adegbite 2018; Omaliko, & Okpala, 2022), while others indicate that differentiation has a greater impact (Karaev, 2023) and cost leadership has higher returns on assets(Laban, & Deya, 2019). These contradictory results may be due to context dependence. Prior studies have indicated that competitive strategies appear to be gaining traction in modern organizations post-pandemic. Still, few researchers have examined their relevance to business outcomes and effectiveness, particularly in the COVID-19 pandemic. Consequently, this study sought to bridge the gap and hypothesized thus:

> **H_o:** There is no significant relationship between competitive strategies and business outcomes of selected companies listed in Nigeria post-pandemic.

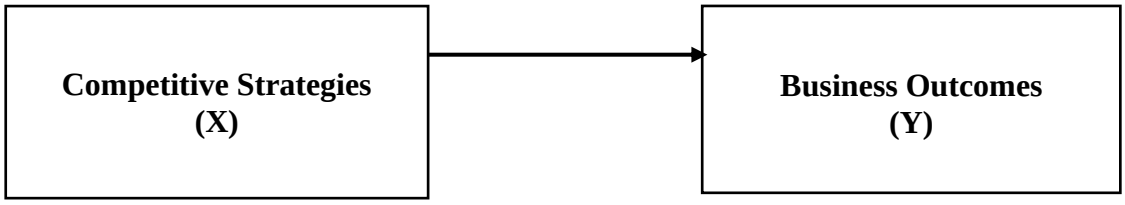

Figure 1. Conceptual Model
Source: *Author's Conceptual Model (2023)*

The model sheds light on the relationship between competitive strategies and business outcomes, which is the research framework. This research's independent and dependent variables are competitive strategies (X) and business outcomes (Y), respectively. The independent variable, competitive strategies (X) is measured using the following dimensions: innovative capability, diversification capability, differentiation capability and cost leadership capability, while business outcomes (Y) are measured using profitability, sales growth, customer satisfaction, and business growth.

Model Specification

The model sheds light on the relationship between competitive strategies and business outcomes which is the research framework. Given, the mathematical derivative function which gives the value of the slope at any value(x-------x_n) since intuition explains that as $\Delta x \rightarrow 0$, then $\Delta y \rightarrow 0$. This can be deduced mathematically since a firm's business outcomes are a function of competitive strategies; $Y=f(x_1$----------$x_n)$.

The model specification is given as follows: competitive strategies as they relate to Innovative Capability (IC), Diversification Capability (DC_1), Differentiation Capability (DC_2), and Cost Leadership capability (CL). This can be expressed in a functional relationship as $BO=f$ (IC, DC_1, DC_2, CL). The functional relationship was tested using the Pearson product-moment correlation. The functional relationship is therefore stated;

$$BO = f(IC, DC_1, DC_2, CL) \quad \text{(eq.i)}$$

Where:

BE = Business Outcomes
IC = Innovative Capabilities
DC_1= Diversification Capabilities
DC_2 = Differentiation Capabilities
CL= Cost Leadership capabilities

Methodology

The research context is the consumer goods companies listed, and the study adopted the survey research design. The justification for adopting the survey is its usefulness in assessing the thoughts, opinions, and feelings of different groups of individuals and allowing them to give more valid and honest feedback on the area of study. This paper relied on the prior study methodology of Olubiyi, Adeoye, Jubril, Adeyemi, and Eyanuku, (2023), Adeyemi, and Olubiyi, (2023). Olubiyi, Egwakhe, and Akinlabi (2019), Olubiyi, Egwakhe, and Egwuonwu, (2019), Olubiyi, Egwakhe, Amos, and Ajayi (2019), Olubiyi, Lawal, and Adeoye, (2022). Olubiyi (2019), Olubiyi, Lawal, and Adeoye, (2022), Olubiyi, (2022a), Olubiyi, (2022b), Olubiyi, Jubril, Sojinu, and Ngari, (2022), Ukabi, Uba, Ewum, & Olubiyi, (2023) and Uwem, Oyedele, and Olubiyi, (2021). Olubiyi, Jubril, Sojinu, and Ngari, (2022), Olubiyi, (2022), Uwem, Oyedele, and Olubiyi, (2021) with cross-sectional have adopted this method in their respective studies and found it useful. For the study population the regular employees, top and middle-level managers in the listed consumer goods companies on the Nigerian Stock Exchange which is now referred to as Nigeria Exchange Group (NGX) were considered. The study was contextualized to the consumer goods companies in Nigeria due to the fierceness of competition within the country, multinational operations, large population, and more because of data availability. Nigeria is also the continent's largest economy; the country's population accounts for twenty percent of Sub-Saharan Africa's overall population. For the purpose of this study, seven (7) out of the twenty (20) consumer goods companies listed on the Nigerian Stock Exchange which is now referred to as Nigeria Exchange Group were selected from the population. This is based on the capitalization criteria derived by multiplying the share price at the close of trading on the 31st of July 2023 by the number of shares in the issue and also the dividend payment trend. BUA Foods Plc, Nestle Nigeria Plc, Nigerian Breweries, Dangote Sugar, Guinness Nig. Plc, Flourmills Nig. Plc, International Breweries, and Unilever Nig. Plc represents the seven (7) most capitalized consumer goods companies listed on the Exchange and the companies have been consistent with dividend payments. The justification for the selection was that the seven companies represent 93.08% of the sector's total market capitalization of N4.69 trillion and that each of the companies has above N100 billion capitalization as of the cutoff date of 31st July 2023. The sampling units are the regular employees and top and middle-level managers of the selected consumer goods companies listed on the Nigerian Stock Exchange. The population comprised 22,466 staff of the market-leading consumer goods companies. The Research Advisors Table was adopted in determining the sample size, which gave 491 respondents and proportionate sampling was used in arriving at the number of respondents per company. Table 1 and Table 2 below present the information :

Table 1. Company list

S/N	Name of company	Market Capitalization	Number of Staff
1	BUA foods Plc	₦2.44Tr	1,890
2	Nestle Nigeria Plc	₦ 793bn	2,194
3	Nigerian Brew Plc	₦375bn	2,740
4	Dangote Sugar Refinery Plc	₦ 327bn	2,253
5	Guinness Nig Plc	₦131bn	839
6	Flour Mills Nig Plc	₦116bn	11,964
7	International Brew Plc	₦116bn	586
	Total Population		**22,466**

Table 2. Proportionate Sample Size

Companies	No of Employees	Proportionate Sample Size	%
BUA foods Plc	1,890	42	8.4
Nestle Nigeria Plc	2,194	48	9.8
Nigerian Brew Plc	2,740	60	12.2
Dangote Sugar Refinery Plc	2,253	49	10.0
Guinness Nig Plc	839	18	3.7
Flour Mills Nig Plc	11,964	261	53.3
International Brew Plc	586	13	2.6
Total	**22,466**	**491**	**99.97**

Results

Response rate is the percentage of people who responded and administered the copies of the questionnaire in the survey. The researcher distributed 491 copies of the questionnaire to the respondents: From the 491 copies of the questionnaire distributed by the researcher and trained research assistants, a total of 480 copies of the questionnaire were filled and returned for analysis representing a response rate of 97.76%. The rest were either unreturned or had missing responses, the detail of the responses is shown in Table 3

Table 3. Response Rate

Response Rate	Frequency	Percentage
Fully filled and returned	480	97.76%
Incomplete or unreturned	11	2.24%
Total	491	

Restatement of Research Objective and Research Question

Objective: To investigate the effect of competitive strategies (innovative capability, diversification capability, differentiation capability, and cost leadership capability) on business outcomes (profitability, sales growth, customer satisfaction, and business growth) of selected consumer goods companies listed in Nigeria.

Research Question: How does the effect of competitive strategies (innovative capability, diversification capability, differentiation capability, and cost leadership capability) affect business outcomes (profitability, sales growth, customer satisfaction, and business growth) of selected consumer goods companies listed in Nigeria?

Restatement of Hypothesis (H_{01}): Competitive strategies do not significantly affect the business outcomes of selected consumer goods companies listed in Nigeria. In order to test the hypothesis, the researcher used multiple regression analysis. The dependent variable is business outcomes, while the independent variable is competitive strategies. The data for competitive strategies was generated by summing responses of all items for the sub-variable. The data for business outcomes was generated by summing together scores of customer satisfaction, profitability, sales growth, and business growth. The results of the multi-regression are presented in Table 4

Table 4. Summary of multiple linear regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	54.471	2.120		25.696	0.000		
	Innovative capability	0.045	0.048	0.020	0.942	0.346	0.768	1.302
	Diversification capability	0.461	0.068	0.173	6.773	0.000	0.512	1.955
	Differentiation capability	0.429	0.063	0.211	6.842	0.000	0.353	2.835
	Cost leadership capability	0.165	0.091	0.049	1.825	0.068	0.462	2.166
$R = 0.751$; $R^2 = 0.564$; Adj. $R^2 = 0.563$; $F_{5/1306} = 337.061$; $p = 0.000$								

Note: (N = 480)

Dependent Variable: Business Outcomes

Table 4 presents a summary of the results of multiple regression analysis on the combined effect of competitive strategies on business outcomes of selected listed consumer goods companies in Nigeria. The findings of the analysis revealed that competitive strategies have a significant combined effect on business outcomes selected listed consumer goods companies in Nigeria (Adj. $R^2 = 0.563$; $F_{5/1306} = 337.061$, $p<0.05$). The Adjusted R^2 value of 0.563 indicates that 56.3% of the variations in business outcomes of selected listed consumer goods companies in Nigeria are attributed to competitive

strategies (innovative capability, diversification capability, differentiation capability and cost leadership capability) of selected listed consumer goods companies in Nigeria leaving 43.7% to be predicted by other factors. The p-value was 0.000 which is less than 0.05 adopted for this study. The results therefore indicate that innovative capability, diversification capability, differentiation capability and cost leadership capability are significant predictors of business outcomes of selected listed consumer goods companies in Nigeria. Therefore, the null hypothesis (H_{01}) which states that competitive strategies have no significant combined effect on business outcomes of selected listed consumer goods companies in Nigeria is hereby rejected. The fitted model explaining the variation in business outcomes of selected listed consumer goods companies in Nigeria due to competitive strategies was stated as follows:

$$Y = 54.471 + 0.020x_1 + 0.173x_2 + 0.211x_3 + 0.049x_4 \quad (1)$$

Where: Y= Business Outcomes
x_1= Innovative capability
x_2= diversification capability
x_3= differentiation capability
x_4= cost leadership capability

The regression equation above revealed that taking all factors into account (innovative capability, diversification capability, differentiation capability, and cost leadership capability) as constant at zero, the business outcomes of selected listed consumer goods companies in Nigeria will be 54.471. The findings further show that taking all other independent variables at zero, a unit increase in innovative capability will lead to a 0.020 unit increase in business outcomes of selected listed consumer goods companies in Nigeria; a unit increase in diversification capability will lead to 0.173 unit increase in market patronage of selected listed consumer goods companies in Nigeria; a unit increase in differentiation capability will lead to 0.211 unit increase in business outcomes of selected listed consumer goods companies in Nigeria; and a unit increase in cost leadership capability will lead to a 0.049 increase in business outcomes of selected listed consumer goods companies in Nigeria. Finally, the result showed that innovative capability (t= 12.665, p=0.000) contributes most to business outcomes of selected listed consumer goods companies in Nigeria, followed by diversification capability (t=6.842, p=0.000), differentiation capability (t= 6.773, p= 0.000), and cost leadership capability (t= 1.825, p= 0.068), contributed the little to business outcomes of selected listed consumer goods companies in Nigeria.

Discussion

The finding of the hypothesis revealed that competitive strategies have a significant combined effect on the business outcomes of selected listed consumer goods companies in Nigeria. This implies that the combined effect of innovative capability, diversification capability, differentiation capability, and cost leadership capability will influence the business outcomes of consumer goods companies in Nigeria. The finding is supported by the study of Mutinda, and Mwasiaji, (2018), Uchegbulam, Akinyele, and Ibidunni, (2015), Farida, and Setiawan, 2022, Ngugi, and Murugi, (2022) and Karaev, 2023 which found that effective competitive strategies can be viable tools for effective and efficient growth and business outcomes of listed firms in Kenya. The research also established that diversification, differentiation, focus differentiation and a cost leadership strategy have a positive and important effect on listed companies' performances. These findings are in line with the recommendations by Olson, and Slater, (2015) that the more aligned the competitive strategies with the corresponding internal and external competitive forces are, the higher the ability of the given firm to utilize the competitive force to its favour or its defence. Therefore, the finding of this study, supported by the above discussion and other findings from the previous studies, shows that competitive strategies significantly influence business outcomes of selected listed consumer goods companies in Nigeria. The findings revealed that innovative capabilities (t= 12.665, p=0.000) contribute most to business outcomes of selected listed consumer goods companies in Nigeria, followed by diversification capability (t=6.842, p=.000), differentiation capability (t= 6.773, p= 0.000), and cost leadership capability (t= 1.825, p= 0.068), contribute to business outcomes of selected listed consumer goods companies in Nigeria. Based on the findings and supporting literature, the study rejects the null hypothesis (H01) that competitive strategies

have no significant combined effect on business outcomes of selected listed consumer goods companies in Nigeria, with a p-value of 0.000, less than 0.05.

Conclusion and recommendation

The study's major findings are that competitive strategies significantly affect the business outcomes of selected consumer goods companies listed in Nigeria (Adj. R2 = 0.563; F5/1306 = 337.061, p<0.05). The study concluded that competitive strategies are a necessary tool for achieving business outcomes of selected listed consumer goods companies in Nigeria. The low-cost capabilities are related to economizing operations processes of productions that make it possible to produce products/services with low cost. In contrast, differentiation capabilities are related to the uniqueness of operational processes on the value chain that make it possible to produce products/services uniquely, increasing the value of its products. As a result of this, the price of its products is increased as well. The study's findings imply that management experts should emphasize competitive strategies in developing training programmes to improve business outcomes. The study recommends that consumer goods companies should formulate and implement competitive strategies. More so, develop mindsets that will help the firms discover and exploit adequate competitive strategies to gain competitive advantage, thereby expanding their business. A supply chain management integration model is also necessary at the corporate strategy level so that there is a flow of information from suppliers to the consumer point of sale. This study recommends that the consumer goods industry work with universities and other academic and research institutions to research the problems they face so that the best solutions can be derived for strategic management. Existing and prospective businesses and organizations should consider the outcomes of this study by understanding and embracing its conclusions. Consumer goods companies can grow their firms by employing competitive strategies to increase business outcomes and increase sales.

Limitations and future directions

The study focused on only consumer goods companies listed on the Nigerian Stock Exchange and this is a limitation, a focus on different industry segments within the listed companies might yield further insights. It is recognized that the findings and implications of this paper are situated within Nigeria, and primarily consumer goods companies were the focus, which may limit the generalizability of the findings. Therefore, the cross-sectional nature of the paper prevents the author from making strong claims of causality. The study could be expanded with similar studies conducted across large businesses or publicly traded companies in Nigeria or other countries. The sample size can be raised by considering more respondents with innovative data-gathering techniques to achieve more generalizability and trustworthiness. Nonetheless, the limitations of this research, can be recognized as research gaps for future studies, and further replicated studies across different samples, regions, and countries are recommended.

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ALIGNED ECONOMIC CYCLE OF GLOBAL ECONOMIES

Martin Vozar
Comenius University Bratislava, Department of Economics and Finance, Slovakia
martin.vozar@fm.uniba.sk

Jana Kajanova*
Comenius University Bratislava, Department of Economics and Finance, Slovakia
kajanova8@uniba.sk

Natalia Bartekova
Comenius University Bratislava, Department of Economics and Finance, Slovakia
bartekova40@uniba.sk

* corresponding author

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ABSTRACT
Background: The alignment of economic cycles is created naturally, by the gradual harmonization of the economic development of economies that are open and cooperating with each other, which gradually over decades has led to their significant economic interconnection, to the creation of the so-called global economy. **Aims:** The main aim of this paper is to analyze the impact of individual financial crises on economic cycle alignment as well as the naturally increasing correlation between interacting economies themselves. **Methods:** We have analysed the impact of individual financial crises on economic cycle coherence as well as the naturally increasing correlation between interacting economies. **Sample:** We examined the historical evolution of the correlation on ten-year periods from 1961 to 2020. **Results:** The calculated correlations of the percentage GDP growth of the selected 40 countries with the global percentage GDP growth over the last 61 years have shown that the interconnectedness of major economies has reached an advanced level. **Conclusions:** The higher the correlation of GDP growth of the selected countries with global GDP growth, the higher the effect of economic booms as well as recessions will be multiplied. **Implications:** This analysis has so far failed to include the impact of the admittedly extremely short but extremely sudden and fully global recession caused by COVID 19.

Keywords: GDP, economic cycle, correlation, countries

JEL Classification: F44, F62, O11

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Introduction

The economic cycle can also be suddenly and strongly linked by exogenous shocks in the form of economic crises, such as the recent COVID crisis or the Global Financial Crisis in 2007-2008. Exogenous global shocks cause a sudden and unexpected drop-in economic activity across continents and countries. However, economic downturns are generally followed by subsequent strong economic growth.

The main tools of research will include gross domestic product, which will be ex-pressed both in nominal and percentage terms, and the calculated correlations of percentage GDP growth between the selected economies. For the correlation analysis, correlation matrices calculated over the whole selected period and average correlations for specific selected time horizons and countries will be used.

Gross Domestic Product (GDP) is a macroeconomic indicator that measures the economic performance of a national economy. Gross Domestic Product represents the market output of all goods and services produced in one year by the factors of production in the territory of a given country.

Correlation is used to determine the statistical dependence of a dependent variable that we need to find from an independent variable that we know or can adjust. Correlation is usually used to estimate the value of the dependent variable, that is, to predict a certain state. Correlation can be simple, then we are establishing a relationship between one independent variable and one dependent variable. It is the most common type of correlation. More complex are the so-called multiple correlations, describing the relationship of one dependent variable from several independent variables. The correlation describes a purely statistical dependence, not a causal one. There may be no direct relationship at all between the independent and dependent variables.

The main aim of this paper is to analyse the impact of individual financial crises on economic cycle alignment and the correlation of interacting economies.

Partial aims are:

- to analyse the evolution of gross domestic product in the selected economies, to examine the historical evolution of the correlation of GDP change over the period 1961 - 2020, to identify correlations for all selected countries to global GDP growth,
- to identify correlations of percentage GDP growth among selected economies,
- to highlight the steadily increasing correlation of the annual percentage change in GDP of global economies and identify the impact of different economic crises on this trend.

Theoretical background

Economic growth as measured by GDP (Gross Domestic Product) has always been a popular macroeconomic indicator and is of great importance for policymaking. In addition, GDP forecasting has become an important task for countries, but the trend of economic fluctuations as well as anti-globalization complicates GDP forecasting, this is also mentioned by Ge and Tang (2020), Cepni et al. (2019), Soufi et al. (2022), Leimbach et al. (2017), Kopoin et al. (2013), Funashima et al. (2020), Chen (2021), Lange (2018).

Gross Domestic Product (GDP) is the value of goods and services produced by a country's population minus the value of goods and services consumed in production. Due Dynan and Sheiner (2018) GDP is also equal to the sum of personal consumption expenditures, gross private domestic investment, net exports of goods and services, and government consumption expenditures and gross investment.

Samuelson and Nordhaus (2007) assess GDP to be the most comprehensive measure of the total output and input of goods and services. They describe the gross investment of government purchases of goods and services, the sum of the monetary values of consumption and net exports produced in a country during a given period.

Changes in a nation’s share in the world GDP is determined by variables that represent international rivalry, such as a nation’s share in exports and financial flows and the typical growth variables in share form. Currency undervaluation is also correlated negatively with GDP share changes mentioned Park et al. (2019), Wang et al. (2022). Due Larionova and Varlamova (2014) influence of economic crisis changes correlation force between macroeconomic factors and indicators of a banking system. Stock market movements are dependent on real-time GDP developments, it is written by Ball and French (2021), Hao et al. (2022), Dong et al. (2021).

Over the past decades, both import and export flows have increased much faster than GDP for almost all countries in the world. This march toward more open economies has been accompanied by a

reorganization of the world's production across different locations: as a share of world GDP, both trade in intermediate inputs and in final goods increased sharply. The increase in the overall density of the world trade network suggests that complex patterns of international propagation could be at play. Empirical studies demonstrate the interdependence of economies at both the economic and the monetary level too. According to Soyres and Gaillard (2022), Himounet (2022), Castañeda and Cendejas (2022), Feldkircher (2015), Engel (2016), Lee and Werner (2018), Hayo and Mierzwa (2022), Lewis et al. (2022) the consequences of these changes in trade patterns for the synchronization of economic activity are important because they can have implications for macroeconomic policies.

The world economy has been undergoing transformational changes in recent decades. Every financial crisis affects the global economy, and the Covid-19 crisis was one of them. The drivers of change are now not only confined to technological progress and globalization trends but also the increasing influence of emerging economic powerhouses, this topic is mentioned by Privara (2022), Liu et al. (2021), Alberola et al. (2021), Jena et al. (2021), Silva et al. (2016), Vu (2020), Ibn-Mohammed et al. (2021), Maital and Barzani (2020), Caruso et al. (2019). According to Dimitras et al. (2015) the empirical study provide evidence that financially distressed companies reduce earnings management manipulation during recession.

Frankel and Rose (1998), Baxter and Kouparitsas (2005), Imbs (2004), Kose and Yi (2006), Calderón et al. (2007), Inklaar et al. (2008), Di Giovanni and Levchenko (2010), Duval et al. (2016), Liao and Santacreu (2015) mentioned that the sensitivity of GDP comovement to an increase in bilateral trade flows evolves over time. An increase in trade intensity is associated with an increase in cross-country GDP correlation.

Methodology

The methodology for this research follows a structured approach, delineated into discrete units to enhance clarity. The three main sections are:

1. Research Intent:
   - The study aims to examine the historical evolution of correlation between global economies over ten-year periods from 1961 to 2020.
   - The primary focus is on understanding the impact of economic crises on the correlation and identifying patterns in the annual percentage change in GDP.
2. Sample Description:

   Selection Criteria:
   - Economies with a significant GDP level (>200 billion USD) are included.
   - The analysis is limited to 40 countries.
   - Data points cover 61 years, but countries with missing data for periods longer than 10 years are excluded.
   - Specific exclusions: Canada (28 years), Russia (29 years), Switzerland (20 years), Poland (30 years), Israel (26 years), Vietnam (24 years), Romania and the Czech Republic (both 30 years).

   Groupings:
   - Correlation analysis is conducted among economies based on GDP levels and political classifications (e.g., High Income, Middle Income, Low Income, Upper Middle Income, OECD, EU, Latin America & Caribbean).
3. Analytical Methodologies:

   Data Source:
   - Annual percentage change in GDP is obtained from the World Bank (2022), utilizing data on GDP growth at market prices based on constant local currency and expressed in U.S. dollars.
   - GDP values for ranking and analysis are derived from the World Bank (2022) at purchaser's prices, expressed in constant 2015 prices in U.S. dollars.

   Software:
   - The analysis is conducted in MS Excel.

   Correlation Analysis:
   - The impact of individual financial crises on economic cycle coherence is assessed.
   - Correlation analysis is performed before and after each crisis.

   Data Handling:
   - Imputed data substitutions are applied for missing values in some countries, using the average GDP growth over the entire reporting period.

- World aggregate GDP percentage growth is calculated for 220 countries.
- The number of reporting years used in the analysis is 61, resulting in a total of 2,501 data points (1.16% imputed as substitutions).

Summary Calculations:

- Simple arithmetic mean and median are employed for correlation summary calculations due to the homogeneity and low dispersion of values in the dataset.

The Bloomberg database serves as the primary source for the data used in this analysis.

This methodology ensures a systematic and comprehensive approach to exploring the correlation evolution among global economies and the impact of economic crises over the specified period.

Results and discussion

The first results of the analysis carried out include the identification of correlations for all selected countries to global GDP growth. The average correlation for all selected countries to global GDP growth reached the following levels in each ten-year period, which we have recorded in Figure 1.

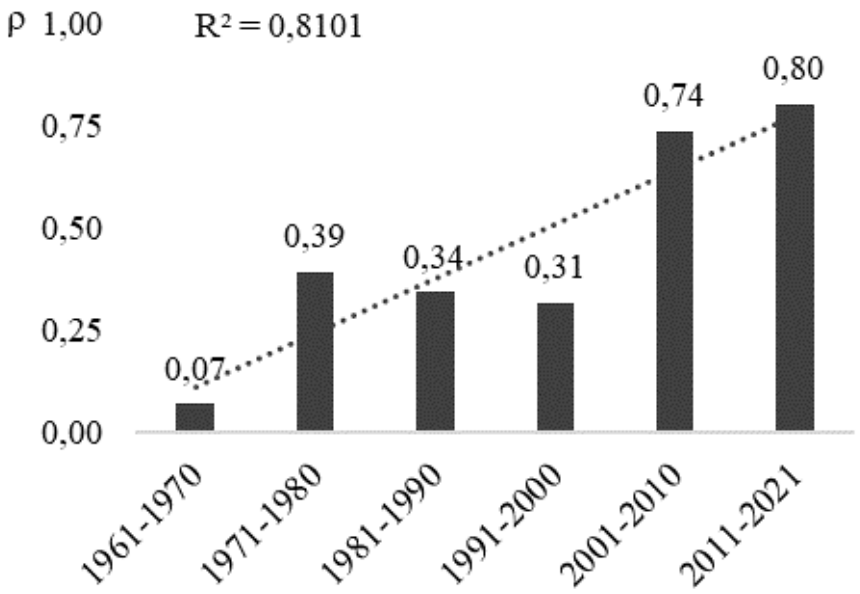

Figure 1. Evolution of the average correlation for all selected countries to global GDP growth, showing the slope of the linear regression line and the R-squared value
Source: *authors, (based on World Bank data)*

The gradual harmonisation of the evolution of the GDP correlation for all selected countries to global GDP growth is also evidenced by the gradually decreasing number of countries with a negative correlation over time. In the period 1961-1970, 15 countries (which is 37.5% of the total number of countries) achieved a negative correlation of GDP to world GDP growth, in the period 1971-1980 10 countries (25.0%), in the period 1981-1990 6 countries (15.0%), 10 countries (25.0%) in the period 1991-2000, 1 country - Nigeria (2.5%) in the period 2001-2010, and 1 country - Egypt (2.5%) in the period 2011-2021, which, however, achieved a negative correlation only at the minimum level of -0.02. The correlation of percentage GDP growth for the selected countries with global GDP growth in the selected time periods is shown in Figure 2.

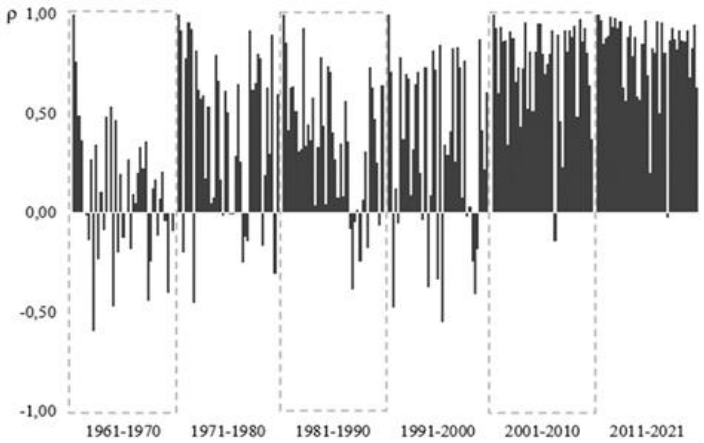

Figure 2. Evolution of the correlation of GDP for all selected countries to global GDP growth for each 10-year period
Source: *authors, (based on World Bank data)*

During global economic crises, there is a gradual "realignment" of economic development as globally interconnected economies experience mutual economic stagnation and then mutual economic boom. Since the 1990s, this development has been significantly boosted by the increasing interconnectedness of the individual economies themselves and by monetary easing, i.e., so-called unorthodox monetary policy (Modern Monetary Theory- MMT) by Mankiw (2020).

The US economy had the largest nominal GDP of the countries analysed throughout the period under review and thus had the largest impact on the global economy. For this reason, we have selected for economic crises those that occurred in the US during the period under review.

The economic crises that were added to the analyses are recorded in Table 1 according to National Bureau of Economic Research (2022).

Table 1. Economic crisis in the USA.

Recession	from	to	Number of Days of Recession
COVID-19	01.02.2020	30.04.2020	89
Great Recession	01.12.2007	30.06.2009	577
dot-com	01.03.2001	30.11.2001	274
Early 1990s recession	01.07.1990	31.03.1991	273
Energy Crisis	01.07.1981	30.11.1982	517
W-shaped Recession	01.01.1980	31.07.1980	212
Oil Crisis	01.11.1973	31.03.1975	515
Recession	01.12.1969	30.11.1970	364
Recession	01.04.1960	28.02.1961	333

Source: *National Bureau of Economic Research (2022)*

Japan started monetary easing - Quantitative Easing - in the 1990s. The Modern Monetary Policy started to be used by the US FED as well as other central banks after the onset of the US Subprime mortgage crisis in 2007. A key tool of The Modern Monetary Theory was the extensive use of quantitative easing (QE), Bernanke (2020). The balance sheets of the key central banks, the FED, the ECB and the BOJ, reached the highest levels ever measured as of 31 May 2021, at 36.6% of GDP, 66.5% of GDP and 133.2% of GDP respectively. QE made it possible to keep interest rates at low levels, stabilise the banking financial system and, through the purchase of corporate bonds, to provide crisis financing to other parts of the economy.

In Figure 3 significant rise in the correlation of percentage GDP growth occurred especially in the 1990s. In the first thirty years (1961 to 1990), the correlation of per-centage GDP growth reached

an average level of 0.37. Over the following thirty-one years (from 1991 to 2021), the correlation in percentage GDP growth averaged 0.62. Thus, over this period, the correlations of the percentage growth of GDP of the selected countries to world GDP increased by 67.6% or 0.25 points.

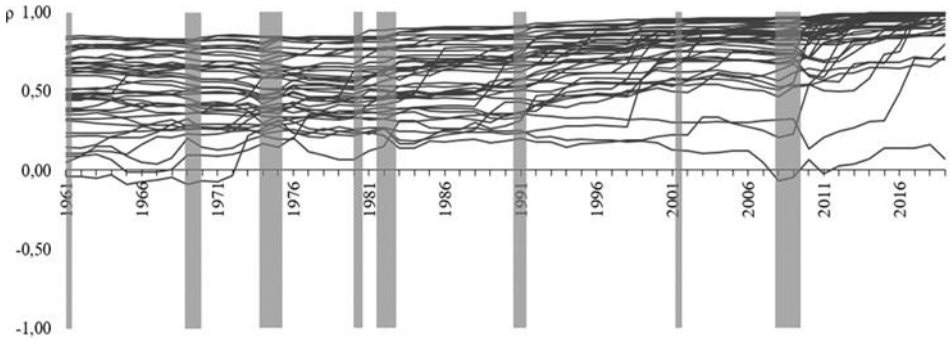

Figure 3. Evolution of the continuous correlation of GDP over time for all countries analyzed to global GDP growth, showing the beginning and end of economic crises in the US.
Source: *authors, (based on data from World Bank and National Bureau of Economic Research)*

However, after prolonged global economic crises (defined by us as 500 or more days of recession in the USA; three in total were recorded in the period ana-lysed), the GDP correlations "kicked in" and then increased significantly as follows:

1. The average correlation of countries' GDP to world GDP was 0.34 between 1961 and 1975 (i.e., until the end of the Oil Crisis recession, which lasted 515 days).
2. The average correlation was 0.42 between 1976 and 1982 (i.e., until the end of the recession - the so-called Energy Crisis, which lasted 517 days).
3. The average correlation increased further, reaching 0.47 between 1983 and 2009 (i.e., until the end of the Great Recession, which lasted 577 days).
4. In the period from 2010 to 2021, the average correlation strengthened further and reached its maximum value of 0.78.

In the following section, we focus on tracking the median correlation of GDP growth for all selected countries to global GDP growth, over three-time intervals. The median correlation over these periods increased by 0.56 points in Table 2.

Table 2. Median of correlations of GDP for all selected countries to global GDP growth for selected time periods.

For the Period	Median
1961-1982	0.28
1983-2009	0.46
2010-2021	0.84

Source: *authors, (based on World Bank data)*

The largest growth in participation in the global economy (i.e., growth in correlation with the global economy) between the 1961-1990 and 1991-2021 periods (calculated as the difference in average correlations between the selected periods) was achieved by India. Conversely in Figure 4, the largest negative growth was recorded by Nigeria. The average value for all countries was 0.25.

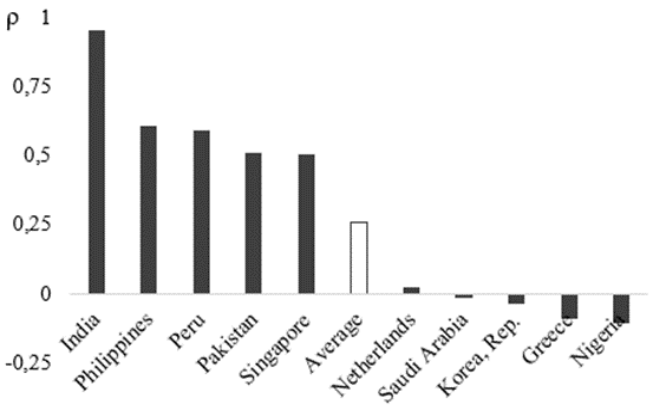

Figure 4. Difference of average GDP correlations for 10 selected countries (out of the total of 40 countries analysed) to global GDP growth (5 reached the maximum level and 5 reached the minimum level) in the time periods 1961-1990 and 1991-2021.
Source: *authors, (based on data from World Bank)*

The increasing continuous correlation of GDP of selected countries with global GDP on the one hand, and the decline in the overall cumulative percentage GDP growth on the other hand, point to a trend where the highly harmonised development of the global economy is gradually exhausting its growth potential. Deglobalization may be the answer to this trend in Figure 5.

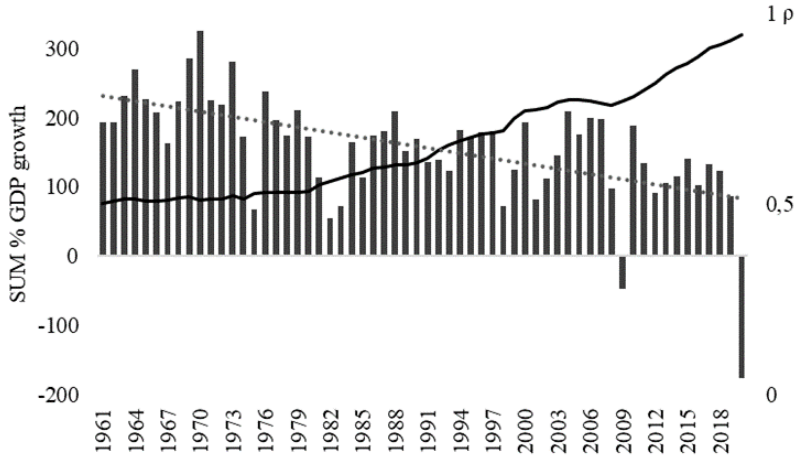

Figure 5. Evolution of the correlation of GDP of selected countries with global GDP, calculated continuously (right Y-axis) and total cumulative percentage GDP growth (representing sum of all percentual GDP growth numbers for selected countries for given year), showing the slope of the linear regression line (left Y-axis) for the time period 1961-2021
Source: *authors, (based on data from World Bank)*

From the calculated correlations it is clear that over the last 61 years there has been a significant alignment of economic development on a global basis, or a harmonization of the percentage GDP growth of individual major as well as minor global economies with the global percentage GDP growth. Globalization, together with deep economic crises and the subsequent economic recovery, has thus significantly aligned the eco-nomic development of countries over the course of the last 61 years.

A political analysis of the distribution of countries into political, economic and geographical clusters as defined by the World Bank confirms that (a) participation in the global economy increases

the wealth of countries, (b) the overall average correlation has increased significantly over time in Table 3.

Table 3. Average correlations of GDP of selected country groupings to global GDP growth for specified time periods.

For the period	High income	Middle income	East Asia & Pacific	Upper middle income	Latin America & Carribean	Africa Eastern and Southern	Lower middle income	Sub-Saharan Africa	Heavily indepted poor countries	Africa Western and Central	Average
1961-1970	0.91	0.47	0.78	0.56	0.22	0.35	0.14	0.15	0.37	0.05	0.40
1971-1980	1.00	0.54	0.78	0.38	0.52	-0.15	0.39	0.13	0.00	0.24	0.38
1981-1990	0.99	0.66	0.80	0.63	0.56	0.36	-0.15	0.75	0.02	0.59	0.52
1991-2000	0.97	0.87	0.18	0.82	0.14	0.79	0.61	0.80	0.62	0.55	0.64
2001-2010	0.98	0.90	0.90	0.90	0.91	0.91	0.78	0.82	0.80	-0.03	0.79
2011-2021	1.00	0.96	0.96	0.93	0.89	0.89	0.93	0.81	0.79	0.58	0.88
Average	0.97	0.73	0.73	0.70	0.52	0.52	0.45	0.58	0.43	0.33	

Source: *authors, (based on World Bank data)*

The average correlation of the GDP of the selected clusters with world GDP was 0.40 in the period 1961-1970, but in the period 2011-2021 it was already 0.88, a difference of 0.48 points, or a growth of 118%.

The poorest cluster of countries, Africa West and Central (28 countries in total), had a correlation of only -0.03 to 0.59 between 1961 and 2021, or 0.33 on average. The GDP of this political grouping reached 835.8 billion in 2021. This is only 1.41% of the GDP of the countries included in the High-income economic cluster (79 countries in total), which reached a total GDP of 59.4 trillion USD in 2021. (The World GDP reached 96.1 trillion USD in 2021).

The calculated correlations of the percentage GDP growth of the selected 40 countries with the global percentage GDP growth over the last 61 years have shown that the interconnectedness of major economies has reached an advanced level. The high correlation has been fostered over time both by globalisation itself and by major economic recessions. The involvement of individual countries in the global economy has been shown to increase the economic wealth of countries and vice versa. At the same time, we have highlighted the risks of globalization and the gradually depleting sources of economic growth for countries heavily involved in the global economy.

The article provides a comprehensive analysis of the correlation of GDP growth for selected countries with global GDP growth over a period of 61 years, from 1961 to 2021. While the research contributes valuable insights into the evolving nature of global economic interdependence, there are certain limitations and potential avenues for future research.

Limits of the research:

- Focus on Correlation: The study primarily relies on correlation analysis to understand the relationship between individual countries' GDP growth and global GDP growth. Correlation, while informative, does not imply causation. The study could benefit from further exploring causal mechanisms and underlying factors driving the observed correlations.
- Limited Scope of Economic Crises: The analysis centers on economic crises in the United States, and the inclusion of only the U.S. economic crises might not fully capture the global economic landscape. Future research could expand the scope to include crises in other major economies, providing a more comprehensive understanding of the global economic dynamics during challenging periods.
- Simplification of Correlation Metrics: The article focuses on average and median correlation values, which may oversimplify the complex relationships between GDP growth at the national and global levels. Further exploration of variations and outliers in correlation values could provide a more nuanced perspective.

Link to future research developments:

- Causation and Mechanisms: Future research could delve deeper into the causal relationships between economic crises and the observed changes in GDP correlations. Identifying specific mechanisms through which global economic events influence national economies would enhance the understanding of the dynamics at play.
- Regional and sectoral analysis: The study currently aggregates data for selected countries without exploring potential regional or sectoral variations. Future research could

investigate how different regions or economic sectors contribute to or deviate from the observed trends, providing a more detailed and nuanced analysis.

- Impact of Short-Term Shocks: The article acknowledges the impact of the COVID-19 pandemic but suggests that correlations cannot be reliably calculated for short periods. Future research could employ sophisticated methodologies to analyze the short-term impact of global shocks on GDP correlations, offering insights into the resilience or vulnerability of economies to sudden disruptions.
- Deglobalization Trends: The article briefly touches on the trend towards deglobalization, citing factors such as tariffs and geopolitical events. A more in-depth investigation into the drivers and implications of deglobalization, particularly in the post-COVID-19 era, could be a fruitful avenue for future research.
- Cross-disciplinary Perspectives: Integrating insights from political science, sociology, or other disciplines could enrich the analysis. Exploring how geopolitical events, social dynamics, or policy decisions influence the observed economic correlations would provide a more holistic understanding of the interconnectedness of global economies.

Conclusion

It can be concluded that the higher the correlation of GDP growth of the selected countries with global GDP growth, the higher the effect of economic booms as well as recessions will be multiplied. If most of the world's economies have a high correlation of GDP to world GDP in the long term, then identical economic changes will affect a larger number of countries, multiplying the resulting risk.

This analysis has so far failed to include the impact of the admittedly extremely short but extremely sudden and fully global recession caused by COVID 19 (correlations cannot be reliably calculated for short periods). The economies of virtually all developed countries have synchronously stopped and then reopened in “post-Covid" euphoria. This event will be the subject of our next research. However, we can hypothesize that the COVID-induced economic shock further deepened the correlations of countries' GDP with global GDP, as has been the case in previous major economic crises in the past.

At the same time, however, there are also contradictory developments at work here. The trend towards deglobalisation has multiplied in the wake of the COVID 19 crisis. The trend may continue because COVID 19 is still evolving as a disease and has the potential to continue to constrain economic activity. Also, various forms of tariffs and tariffs at global level, the restriction of trade between the US and China and the war in Ukraine are factors that strongly support the deglobalisation trend. The above will also be the subject of our further research in this area.

In conclusion, while the article provides valuable insights, addressing the identified limitations and exploring the suggested avenues for future research would contribute to a more comprehensive and nuanced understanding of the evolving dynamics of global economic interdependence.

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FINANCIAL MANAGEMENT IN THE HEALTHCARE INDUSTRY OF THE SLOVAK REPUBLIC

Sylvia Jenčová*
University of Presov,
Prešov, Slovakia
sylvia.jencova@unipo.sk

Marta Miškufová
University of Presov,
Prešov, Slovakia
marta.miskufova@unipo.sk

* corresponding author

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ABSTRACT. Background: Healthcare is one of the most monitored areas of human activity. The healthcare segment, especially healthcare, drug development and manufacturing are among the defensive sectors that thrive even in times of uncertainty. **Aims:** The aim of the paper is to apply methods of financial analysis in the financial management of hospitals in NACE 861 – Hospital activities, to assess and increase competitiveness and financial performance. **Sample:** The research sample consists of medical facilities under the jurisdiction of the Ministry of Health of the Slovak Republic transformed into joint-stock companies and hospitals under the jurisdiction of the Ministry of Health of the Slovak Republic, the Ministry of Defense of the Slovak Republic, and the Ministry of the Interior of the Slovak Republic according to NACE 861 – Hospital activities. **Methods:** We use basic thought operations and selected mathematical-statistical methods in the paper. The financial analysis of the hospitals will be carried out based on the data taken from the financial statements available in the Register of Financial Statements of the Slovak Republic for the years 2007 - 2022. **Results:** The results show that the geometric mean for the period 2008 - 2020 for costs is G = 1.01 and for revenues is G = 1.02. **Conclusions:** Financial aspects are key factors in the company's development process. Knowledge regarding the financial health of the company can help the company in its competitiveness. In the framework of business management, many decisions are influenced by financial and economic analysis. Every manager should strive to understand financial theory. **Implications:** The benefit will be an evaluation of the financial situation and insight into the competitiveness of the healthcare industry.

Keywords: hospital, healthcare, financial management, financial indicators

JEL Classification: I19, G39

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Introduction

The term management was first used and defined at the turn of the 19th and 20th centuries by Taylor (1983) as: knowing exactly what you want your people to do, later investigating whether they do it best and cheapest. The person who manages is in charge of one activity or section within the company, or successfully performs one complex activity.

A healthcare manager with any specialization must be familiar with the basic concepts, principles and documents of financial management. Knowledge is necessary to ensure a sufficient amount of financial resources necessary to cover the needs of the organization as well as to ensure profit or at least to cover costs. A financial manager can suggest that financial management and its results are an important indicator for predicting whether a healthcare organization is able to remain in a competitive environment.

The management and financing of the healthcare system is largely determined by the history, cultural customs and experiences of each country, therefore there is no uniform mechanism that would represent a single adequate system suitable for all countries. Based on this argument, the financing of healthcare is exclusively within the competence of the governments of individual states.

Theoretical background

Financial management of a healthcare organization is defined as a process of providing an overview of daily financial operations, as well as planning long-term financial flows in a given organization (Jakušová, 2016). Financial management consists in choosing the optimal option for obtaining internal and external sources of financing and their use in terms of the basic financial goals of the business. Financial credibility in the field of healthcare in Slovakia was evaluated by Petruška et al. (2019), Štefko et al. (2017).

Grigoli (2012), Jourmard (2010), Luigi et al. (2014), Gavurová & Kočišová (2018) dealed with the analysis of healthcare performance and the development of inefficiency in healthcare in OECD countries using the DEA method.

A study by Cleverley (1989) examined all hospitals in the United States and found that profitability, short-term cash holdings and capital structure were indicators with high explanatory power. Whitcomb & Cleverly (1993) emphasized working capital flow, net income to shareholders' equity and cash flow as the indicators reflecting hospital characteristics.

A study by Chu et al. (1991) provided evidence to suggest that analysts should pay more attention to the two aspects of hospital financial performance:

a) the hospital's equity in relation to total assets, net income, working capital flow and cash flow;

b) the flow of working capital in the hospital as a separate aspect of the flow of hospital assets, and not just cash flow and/or net income plus depreciation. In fact, hospitals' cash flow did not differ from net income adjusted for depreciation.

Trinh & O'Connor (2000) argued that profitability, fixed asset efficiency, capital structure, fixed asset purchase years, working capital efficiency, liquidity and debt service coverage ratio are the indicators that can accurately explain the financial performance of hospitals.

Goldstein et al. (2002) analyzed the differences in financial ratios between the manufacturing industry and hospitals and selected eight vital financial ratios: return on assets, cash holdings, debt structure, working capital flow, net income to shareholders' equity, short-term liquidity, debt collection and cash flow.

Eckel et al. (2002) formulated a risk model for predicting financial risk. The forecasting model combines accounting data, hospital information and changes in the macroeconomic environment to generate forecast accuracy and practical value.

Bolon (2005) argued that profitability, capital structure, working capital efficiency, fixed asset efficiency, fixed asset acquisition period, liquidity, net income to shareholders' equity and debt service coverage ratio are important financial indicators.

Encinosa & Bernard (2005) empirically studied the relationship between operating margin and patient safety and found that declining hospital profitability was negatively associated with nursing and surgical patient safety indicators, but not with mortality.

Bazzoli et al. (2007) investigated the relationship between the financial situation of individual hospitals and their business strategies. They found that increasing financial pressures, as measured by income and cash flow, lead to reduced investment in health facilities and reduced compliance. Similarly, Bazzoli et al. (2008) showed that hospitals with lower cash to revenue ratios report higher excess

incidents. In a slightly different context, Weech-Maldonado et al. (2003a, 2003b) reported a positive association between quality of care and operating profit margin in the home nursing industry.

Wagstaff et al. (2008) analyzed annual financial data of a public hospital and developed a support vector machine (SVM) model with a radial basis function (RSVM) for predicting financial distress. Empirical results show that RSVM is always better than the other models in prediction of financial risk.

In a study by Burda et al. (2009) an analysis of income and expenditure for the year 2006 was carried out in a department of general surgery in a French hospital.

Dong (2015) used panel regression to determine the relationship between hospital care quality and financial status. The research sample consisted of cardiovascular hospitals in the US between 2005 and 2010. There is a statistically significant relationship between hospital financial performance and quality of care. Hospital profitability, financial leverage, asset liquidity, operational efficiency, and costs appear to be important determinants of healthcare quality. In general, public hospitals provide lower quality care than their nonprofit counterparts, and urban hospitals report better quality scores than hospitals located in rural areas. The results suggest that when a hospital made more profit, had the capacity to finance investments with debt, paid higher wages presumably to attract more qualified nurses, its quality of care would generally improve. A lack of financial strength may result in a lower level of health services.

The study by Lee (2015) dealed with the financial analysis of national university hospitals using final accounts reports from 2008 to 2011. This study used liquidity, stability, growth, activity and profitability. A comparison of 2008 and 2011 showed that there was a general decrease in total assets, an increase in liabilities, and a decrease in total medical revenues with a continuous deficit in many hospitals.

Nakagawa et al. (2017) investigated changes in the financial indicators of 143 hospitals in Japan from 2004 to 2015. They focused on indicators of cash flow and operating profit per monetary unit of personnel costs.

Methodology

Research Aim, and Methods

The paper aims to apply methods of financial analysis in the financial management of hospitals in NACE 861 – Hospital activities, to assess and increase competitiveness and financial performance.

Table 1. Basic financial indicators

Relationship	Calculation (line number of financial statement)	Required trend
Cash Ratio	l. 51 (l. 052 until l. 056)/ l. 87 (l. 088 until l. 096)	<0,2 – 0,8>
Quick Ratio	l. 55+ l. 42 (l. 043 until l. 050)/ l. 87 (l. 088 until l. 096)	<1,2 – 1,5>
Total liquidity	l. 29 (l. 030+ l. 037+ l. 042 + l. 051)/l. 87 (l. 088 until l. 096)	<2,0 – 2,5>
Total Debt	l. 30 l. 031 until l. 036 l. 074 (l.075 + l.079 + l.087 + l.097)/ l. 60 (l. 001 + l. 029 + l. 057)	decline
Times-Interest-Earned	l. 75+ (l. 74 – l. 38)/l. 19	increase
Financial Leverage	l. 60 (l. 001 + l. 029 + l. 057)/ l.61 (l. 062+ l. 068 + l. 072 + l. 073)	decline
Total Assets Turnover	(l. 39+l. 40+l. 41+l. 59+l. 61)/ l. 60 (l. 001 + l. 029 + l. 057)	increase
Turnover time due payment of current liabilities	l. 30 (l. 031 until l. 036)/ (l. 39+l. 40+l. 41+l. 59+l. 61)	decline
Daily Sales Receivables	l. 37+l. 42/(l. 39+l. 40+l. 41+l. 59+l. 61)	decline
Wage demands to performance	l. 8/l. 74	decline
Return on Assets	l. 75+ (l. 74 – l. 38)/ l. 60 (l. 001 + l. 029 + l. 057)	increase
Return on Equity	l. 78 (l. 75 - (l. 76 + l. 77)) (+/-)/ l. 61 (l. 062+ l. 068 + l. 072 + l. 073)	increase
Return on Salles	l. 75+ (l. 74 – l. 38)/ (l. 39+l. 40+l. 41+l. 59+l. 61)	increase

Source: *own processing*

When processing data within the healthcare industry and its decision-making units, the data are obtained from the Ministry of Health of the Slovak Republic; National Center for Health Information; Statistical Office of the Slovak Republic, based on data from the STATdat, Slovstat, DATAcube databases; FinStat Premium databases; Health Yearbooks 2009 – 2022; The Cribis database, which will be used to process the values of financial metrics for the healthcare industry. The financial analysis of the hospitals is carried out on the basis of data taken from the financial statements available in the Register of Financial Statements of the Slovak Republic for the years 2007 - 2022. The state indicators were obtained from the Financial Statements of the Slovak Republic. Financial ratios were calculated based on absolute indicators. Table 1 shows the relationships for the calculation of the basic financial indicators. The software excel was used for calculations.

Research Sample

In the conditions of the Slovak Republic, there are 115 hospitals, of which 11 are large state hospitals and 33 are private hospitals in section NACE 861 - Hospital activities. The research sample consists of medical facilities under the jurisdiction of the Ministry of Health of the Slovak Republic transformed into joint-stock companies and hospitals under the jurisdiction of the Ministry of Health of the Slovak Republic, the Ministry of Defense of the Slovak Republic, and the Ministry of the Interior of the Slovak Republic according to NACE 861 – Hospital activities. The research sample consists of 28 largest non-financial corporations of the Slovak healthcare industry.

Results

The healthcare industry in Slovakia belongs to the so-called strongly feminized industries. In 2021, the share of women was 78.1%, while the share of female doctors was 58.9% of the total number of doctors and dentists. The number of workers in the healthcare sector in 2015 was 181,000 persons (27.4 thousand men; 153.6 thousand women), in 2016 it was an increase of 500 persons (30.5 thousand men, 151 thousand women). Employees in the healthcare sector (numbering 107.9 thousand in 2011) made up approximately 4.6% of the total number of employees in the Slovak economy.

In 2021, 20,667 doctor and dentist jobs were created in health facilities of the Slovak Republic. It was a year-on-year growth of 2.9%. There were 8,411 doctor positions in general hospitals and 1,637 doctor positions in specialized hospitals. There were 23,653 beds in general hospitals and 6,121 beds in specialized hospitals. For comparison, in 2014, 19,685 jobs were created in medical facilities (42.3 thousand beds), 7,785 jobs were created in general hospitals (24.351 thousand beds), and 1,157 jobs were created in specialized hospitals (5.754 thousand beds).

There were 273 inhabitants per doctor in 2021, compared to 296 inhabitants in 2007 and 303 inhabitants in 2011. The number of residents per doctor has been decreasing since 2000. In 2021, there were 1,891 inhabitants per dentist. Reaching the EU average of 3.9 doctors per 1,000 inhabitants; 8.4 nurses per 1,000 inhabitants would require 1,200 new doctors and 14,000 new nurses.

Changes in the number of workers have been influenced by several factors. These are primarily: changes related to the restructuring and change in the number of healthcare facilities, migration of healthcare workers, remuneration conditions (and the differentiation of wages in individual healthcare facilities), efforts by healthcare facilities to comply with the minimum standards of staffing in direct relation to the limits regulated by the Labor Code (labor time, work availability, provision of rest), but also the simultaneous conclusion of several employment relationships with different employers.

The average nominal monthly wage of an employee in the industry in 2021 was 1,211 euros, which is an increase of 78 euros compared to the previous period. For comparison, in 2015 it was 858 euros. In 2020, the index of real wages grew the most since 2007 (1.13); since 2012 it has been around 1.26. The average rate of growth of the share of the nominal monthly wage in the healthcare sector on the monthly wage in the economy expressed by the geometric mean is G=1.061.

Since 1990, payment for performance or the use of the DRG classification system of "groups of related diagnoses" has been increasingly promoted in hospital care. The DRG (Diagnosis-Related Groups) system is gradually becoming the main tool for financing acute hospital care. The system is an objective and transparent mechanism for improving the management and financing of provided institutional health care. It contributes to ensuring fairer financing of inpatient health care and to comparing the overall performance of hospitals.

Healthcare financing is regulated and defined by legal standards. The cardinal source of funding for healthcare in Slovakia is public health insurance. In connection with the financing of healthcare facilities, in addition to the main operating income of most healthcare facilities (except private

specialized ones, e.g. aesthetic surgery), which are payments from health insurance companies, each healthcare facility also has other sources, namely: sales for medical procedures paid for by direct payments from patients or businesses; sales for the so-called above-standard care; income for special operations for insurance companies; income from sales of non-health care services (e.g. rental of premises); income from the sale of goods (e.g. buffets); sponsorship gifts; grants; subsidies (Ozorovský & Vojteková, 2016).

In 2019, the revenues of the healthcare sector amounted to 6.3 billion euros (6.7% of GDP), which was an increase of 0.4 billion euros compared to the year 2018. In the Slovak healthcare system, the capital income offered by the European funds, or the recovery plan is calculated. For the period 2016, the revenues of medical facilities were approved at 1,344.375 million euros, expenses of medical facilities total 1,273.551 million euros. The total surplus represents 70.824 million euros, but after considering the year-on-year change in the state of liabilities, the total deficit of medical facilities was -50.16 million euros.

Table 2. Development of expenditure in the healthcare sector (million euros)

Year	a = b + e	b	c	d	e	f	g	h
2004	3 197.08	2 317.50	267.14	2 050.36	879.58	708.66	137.86	33.06
2005	3 326.35	2 504.28	253.86	2 250.42	822.07	785.34	1.66	35.08
2006	3 861.19	2 702.16	246.89	2 455.27	1 159.03	1 026.62	31.38	101.03
2007	4 533.46	3 141.66	285.28	2 856.38	1 391.79	1 240.82	20.06	130.91
2008	5 102.10	3 595.87	319.37	3 276.50	1 506.23	1 333.67	26.92	145.65
2009	5 408.70	3 743.56	359.02	3 384.53	1 665.15	1 456.52	53.21	155.42
2010	5 589.80	3 790.82	356.32	3 434.50	1 798.98	1 520.01	90.75	188.22
2011	5 239.36	3 865.62	379.30	3 486.32	1 373.74	1 235.00	52.20	86.54
2012	5 550.07	4 005.45	376.89	3 628.56	1 544.62	1 289.45	84.95	170.22
2013	5 583.37	4 143.16	371.58	3 771.58	1 440.21	1 302.13	81.78	56.30
2014	5 256.33	4 217.01	210.27	4 006.74	1 039.32	946.56	71.29	21.48
2015	5 418.25	4 319.22	234.86	4 084.35	1 099.03	999.32	83.87	15.83
2016	5 666.47	4 669.45	151.76	4 401.84	1 112.87	1 030.95	47.24	34.69
2017	5 721.14	4 573.41	138.32	4 435.09	1 147.73	1 070.56	53.24	23.93
2018	5 991.41	4 801.14	137.89	4 663.25	1 190.26	1 132.84	46.32	11.10
2019	6 534.21	5 213.86	158.49	5 055.38	1 320.34	1 251.91	55.64	12.79
2020	6 659.30	5 345.51	301.96	5 043.54	1 313.79	1 248.73	51.73	13.33
2021	6 858.00	-	-	-	1 231.20	-	-	-

Source: *own processing based on data from the ŠÚ SR*
Note: *a - Current expenditure on health care, b - Government institutions total, c - Government institutions, d - Social security funds, e - Private sector total, f - Direct expenditure of private households, g - Non-profit institutions serving households, h - Businesses (other than health insurance companies)*

Total current expenditures on health care in 2020 reached 6.66 billion euros, in 2015 they reached 5.418 billion euros, in 2014 they reached 5.25 billion euros and in 2013 (5.7 billion euros) compared to 2004, they increased by an index of 1.65. The development of total expenditure on healthcare in the Slovak Republic is shown in Table 2.

State hospitals increased the negative economic results. By the end of 2016, overdue liabilities reached over 442 million euros, overdue liabilities of faculty and university hospitals reached 527 million euros, even though at the end of 2011 they were debt free. Regardless of how much money goes to healthcare, hospitals increase their debt by an average of 100 million euros per year. The consequence is inefficiency in purchases, in the organization of work, in management, in the number of people.

Financing of hospitals is still carried out through prospective budgets, where the amount of monthly payment for inpatient care is contractually agreed in advance for the following period. The prospective budgets reimbursement mechanism is suitable for a transitional period.

Costs within the entire industry grew year-on-year until 2015, when costs decreased from 2,741.85 million euros in 2014 to 1,205.15 million euros for the year 2015. The base index in 2014 in relation to the base year 2008 reached 1.42. The revenue change index is 1.07 in 2014 and 0.48 in 2015. Since 2016, costs have been increasing and in 2020, they reached 2,094.57 million euros. The geometric mean for the period 2008 - 2020 for costs is G = 1.01 and for revenues is G = 1.02.

Liabilities in the healthcare sector as of 31 December 2020 amounted to 450.06 million euros, inventory 50.99 million euros. Liabilities in the entire industry at the end of 2014 amounted to 1,136.53 million euros, in 2015 they amounted to 276.83 million euros. Inventory grew from 31.94 million euros in 2008 to 56.66 million euros for the year 2014, then a decrease to 22.23 million euros was recorded in 2015 and from 2016 growth to 50.99 million euros in 2020.

In terms of ratio financial indicators, the industry in 2015 achieved a level of total liquidity of 2.16. The median maturity of liabilities was 65.89 days and the total indebtedness was 38.68%. Within the NACE 861 – Hospital activities, on average, 93 cents of current assets accounted for one euro of short-term liabilities, so that the financial indicator of total liquidity reached low values based on the trend analysis. The maturity period of receivables was 66.5 days and liabilities 78.15 days. 88 cents of foreign resources were allocated for one euro of total capital, in 2014 it was up to 93 cents. The share of value added in sales was almost 63% and the share of EBITDA in sales was 4.09%.

The development of the median values of the ratio financial indicators in NACE 861 – Hospital activities is shown in Table 3. The negative status of the indicators is shown in bold. The industry's profitability had a variable tendency, the median asset profitability indicators reached a negative value in 2010 and 2011. On the contrary, the largest asset profitability was 6.63% in 2019 and 6.02% in 2020. The operating profit margin (ROS) reached almost 4.6% in 2020 followed by an undesirable drop in the indicator. The share of value added in sales reached 62.26%. In the analysis of indebtedness, the median for the industry reached a total indebtedness of 74.97%. Almost seventy-five cents of foreign resources accounted for one euro of total capital. In the years 2007 - 2021, total liquidity is not in the range of recommended values (Table 3, bold). Figure 1 shows the development of the average values of the indicators of the maturity period of receivables and liabilities, the turnover period of receivables and liabilities from trade relations of the NACE 861 – Hospital activities.

Table 3. Development of the median of financial indicators

FI 861	L_3 (coef.)	TA (coef)	TI (%)	E/L	ROE (%)	ROA (%)	ROS (%)	VA/S (%)	EBITDA/ S (%)
2007	**1.05**	2.7	67.78	-	21.29	3.57	1.72	58.91	5.03
2008	**0.99**	2.1	72.23	-	3.68	0.68	0.62	59.55	2.61
2009	**1.04**	2.16	68.5	**0.07**	0.20	0.29	0.48	57.60	4.85
2010	**0.80**	2.16	**93.66**	0.12	**−9.31**	**−1.80**	**−1.14**	60.27	3.50
2011	**0.82**	2.61	**91.93**	0.30	**−14.56**	**−1.45**	**−0.30**	60.45	2.78
2012	**1.02**	2.16	81.10	0.30	15.17	2.22	0.96	59.72	5.49
2013	**0.98**	1.9	79.86	0.25	26.74	3.29	3.09	65.37	7.78
2014	**0.85**	2.64	**92.14**	0.11	11.19	3.69	2.02	65.69	3.85
2015	**0.93**	2.59	**88.00**	0.14	17.12	3.68	2.02	62.89	4.09
2016	**0.91**	2.51	**88.78**	0.13	23.97	4.81	2.05	64.92	4.15
2017	**1.07**	2.15	**84.49**	0.25	24.52	5.63	3.48	67.08	4.79
2018	**1.17**	1.87	78.44	0.44	15.58	5.66	3.36	66.13	4.67
2019	**1.31**	1.85	79.55	0.31	25.77	6.63	3.62	64.85	5.94
2020	**1.34**	1.68	74.27	0.58	13.56	6.02	4.56	66.75	5.76
2021	**1.30**	1.62	74.97	0.59	15.48	5.33	3.49	62.26	4.28

Source: *own processing*

The analysis of activity indicators generally points to an unfavorable financial situation within the entire industry, which caused that the efficiency of the hospital process has an immediate reflection in the economic result and in the basic production power of the decision-making unit. However, on the other hand, it is necessary to continue to monitor the indicators of the maturity period of short-term trade receivables (DSL), where the median in the section reached a positive decrease from 61 days in 2019 to 53.37 days in 2020. On the other hand, hospitals pay their liabilities earlier (27.19 days).

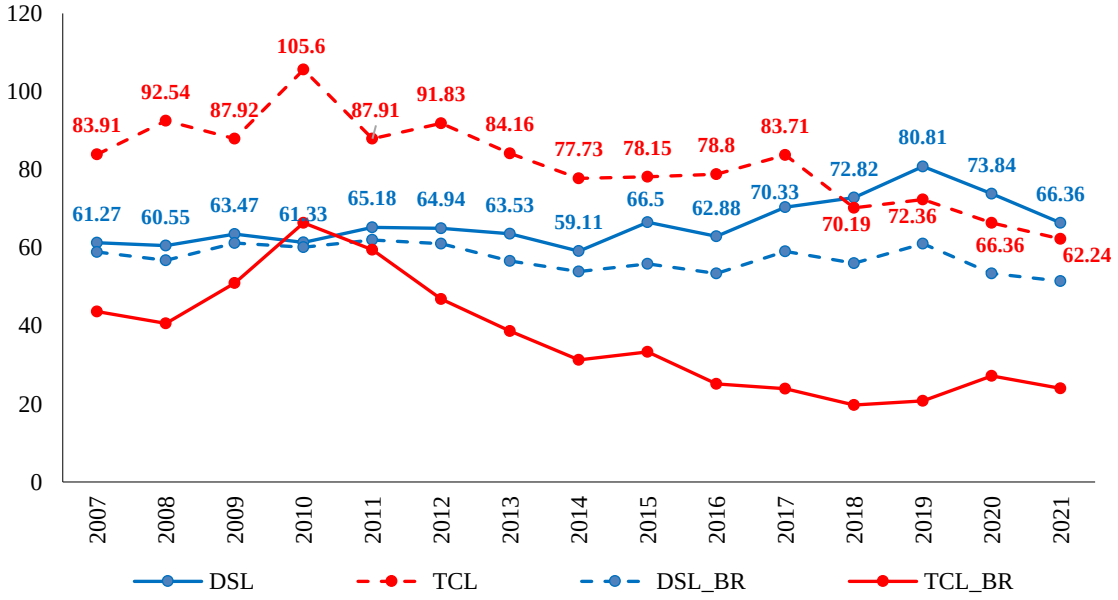

Figure 1 Development of the mean values of activity indicators (days) of NACE 861
Source: *own processing based on data from the Slovak Credit Bureau 2007-2021*

Based on publicly available information, FinStat (2022) evaluates the financial health of companies using its own credit model for assessing the risk of bankruptcy in the next accounting period, called the FinStat score. The model includes total indebtedness, degree of self-financing, financial accounts/assets, return on assets and the period of repayment of liabilities in relation to sales. For the year 2021, out of the total number of enterprises in the Slovak Republic, 8% of companies show a high probability of bankruptcy. Based on the evaluation of companies in individual sectors according to the share of FinStat score categories, we can say that the largest representation of financially stable companies is in public administration (88%), information technology (80%), **healthcare** (77%), design and engineering (76%), but also in education and training (75%). These are mainly industries that are financed by long-term income and are not largely affected by seasonality.

As part of our analysis, we focused on the most important financial indicators that most affect the financial position and competitiveness of hospitals in Slovakia. We analyzed liquidity, specifically the indicator of total liquidity, similarly to studies by Petruška et al. (2019), Trinh & O'Connor (2000), Bolon (2005), Dong (2015), Lee (2015). Further, we analyzed the activity, specifically the turnover of assets (Štefko et al., 2017), the turnover period of receivables and liabilities. We also analyzed the indebtedness of hospitals, where we focused on the indicator of total indebtedness (Cleverly, 1989; Trinh & O'Connor, 2000; Goldstein, 2002). As part of the profitability, we examined the indicators ROA (Goldstein, 2002), ROS (Štefko et al., 2017), ROE (Štefko et al., 2017).

Conclusion

Financial aspects are key factors in the company's development process. Knowledge regarding the financial health of the company can help the company in its competitiveness. In the framework of business management, many decisions are influenced by financial and economic analysis. Every manager should strive to understand financial theory.

We aimed to apply methods of financial analysis in the financial management of hospitals in NACE 861 – Hospital activities, to assess and increase competitiveness and financial performance. The research sample consisted of medical facilities under the jurisdiction of the Ministry of Health of the Slovak Republic transformed into joint-stock companies and hospitals under the jurisdiction of the Ministry of Health of the Slovak Republic, the Ministry of Defense of the Slovak Republic, and the Ministry of the Interior of the Slovak Republic according to NACE 861 – Hospital activities. We used basic thought operations and selected mathematical-statistical methods in the paper. The financial analysis of the hospitals was carried out on the basis of data taken from the financial statements available in the Register of Financial Statements of the Slovak Republic for the years 2007 - 2022.

This paper has several limitations because we do not consider all companies from Healthcare sector in the Slovak Republic. Besides that, we can consider the regional segmentation of companies and other qualitative data. We could also take into account the size of companies. In further research, we could divide the sample of companies into small, medium and large and find differences in the results.

Knowing the financial situation allows for more effective business management. This paper can be a starting point to improve financial health, prosperity, and competitiveness of analysed businesses. Our analysis is an important prerequisite for developing a realistic financial plan for companies operating in the NACE 861 – Hospital activities. The presented results are the basis for further modelling and at the same time a source of stimulus for further discussion.

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ANALYTICAL PERSPECTIVE ON THE IMPORTANCE OF ONLINE SHOPPING VIA SMARTPHONE IN E-COMMERCE CONDITIONS

Jakub Horvath
University of Presov, Faculty of Management and Business, Presov, Slovakia,
jakub.horvath@unipo.sk

Jaroslav Vojtechovsky*
Comenius University, Faculty of Management, Bratislava, Slovakia,
jaroslav.vojtechovsk@fm.uniba.sk

* corresponding author

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ABSTRACT.
Background: The development of e-commerce in the last twenty years has revolutionized the retail industry. For the first time in history, today consumers have access to a globally connected marketplace where they can offer goods anywhere in the world, at any time of the day. Consumers have access to a lot of information about the offered products from the comfort of their homes. **Aims:** The objective of this post is to identify the importance of online shopping through smartphone. **Methods:** The data were evaluated by descriptive statistic. **Sample:** The survey sample consisted of representatives of generation Y, or millennials. **Results:** Based on the results, it can be concluded that online shopping via smartphones is important for representatives of the generation in question. **Conclusions:** The growing potential of mobile marketing represents an enormous customer potential, as well as a great business opportunity for businesses. **Implications: T**he results of the conducted survey can serve as a basis for the preparation of marketing strategies at the level of mobile marketing.

Keywords: e-commerce, mobile commerce, generation Y

JEL Classification: M30, M31

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Introduction

The fundamental technology that enabled the current boom of electronic commerce is the internet. From a purely technical standpoint, the internet can be defined as the "network of networks," meaning a collection of communication networks with defined rules for interconnecting partial networks and rules specifying how individual network elements communicate. The internet can also be described as a global information system characterized by the following features (Gala, Pour a Sediva 2015): communication of system elements using the TCP/IP protocol, decentralization – no one owns or controls the internet, real-time data transmission, global access, anyone can contribute content to the internet, availability of additional services through the internet.

The most significant contribution of the internet remains its ability to connect people and communities worldwide in real-time. The internet has thus become a fundamental platform for e-commerce, facilitating commercial transactions and bridging the supply and demand of goods and services, regardless of location (Chaffey a Smith 2017; Stefko et al. 2018).

Similarly to e-business, the concept of e-commerce is defined in various ways in professional literature. In general, definitions can be divided based on the perception of e-commerce in a broader and narrower sense. In a narrower sense, electronic commerce is understood as the buying, selling, or exchanging of goods, services, and information through the internet or other communication networks. In a broader sense, electronic commerce also includes customer service, collaboration, and the exchange of information among business partners, as well as other electronic transactions within a company or between companies (Lee 2012).

Theoretical background

The development of e-commerce has a fundamental impact on contemporary society. Nowadays, companies can easily offer their services globally and are not limited to local markets, as was the case in the past. Consumers have immediate access to an unlimited amount of information regarding products and services they are interested in (Kumar 2014).

Global connectivity and information openness are fundamental factors that are changing the shopping behavior of both consumers and businesses. Most of the consequences of the continually growing popularity of electronic commerce can be considered positive, but there are also certain risks associated with transaction anonymity and increased technical complexity (Majerol 2015).

Electronic commerce has a positive impact on the volume of cross-border commercial transactions. However, the increasing volume of cross-border trade also implies higher competition in local markets, as new companies from abroad enter, for whom such expansion would have been cost-prohibitive in the past (Kotler 2017; Tomkova, Ondrijova & Ratnayake – Kascakova 2021).

The development of e-commerce also brings pressure to reduce product prices, increase the overall quality of services, and simultaneously expand the range of products. In smaller economies, this effect may be stronger because foreign online retailers can now offer goods that are not commonly available in the local market. E-commerce thus has a positive impact on customer utility, satisfaction, and overall household consumption (Chaffey 2014).

Another fundamental change brought about by the gradual digitization of the retail sector is the connectivity and continuous availability of services and information to customers. It can be said that in today's retail markets, thanks to the growing popularity of e-shops, there is the most competitive environment in history. Merchants can no longer passively showcase their products through an online catalog but must be constantly open to two-way communication with customers. At the same time, they are exposed to the pressure of increasing competition as market entry barriers continue to decline due to the opportunities provided by the internet (Laudon a Traver 2016; Ondrijova, Ratnayake-Kascakova & Tomkova 2020).

The growing potential of mobile marketing represents tremendous customer potential and, at the same time, a significant business opportunity for enterprises. Mobile commerce, or m-commerce, can be defined as a type of commercial transaction that is at least partially conducted through mobile communication means (Nastisin et al. 2019; Stefko, Bacik & Fedorko 2015).

According to the authors Gala, Pour, and Toman (2006), mobile commerce is part of mobile business (m-business), which they define as the sum of all activities, processes, and applications in a business that are executed or supported by mobile technologies.

Currently, the use of wireless and mobile networks and devices is a common part of life for the majority of the population in Slovakia. Advanced wireless and mobile technologies facilitate electronic

commerce, originally conducted through cable networks. From this perspective, mobile commerce can be perceived as a subset of electronic commerce (e-commerce) (Holes 2020; Rigelsky & Ivankova 2020).

Methodology

The aim of this paper is to identify the importance of online shopping through smartphones in the context of e-commerce.

This study utilizes a cross-sectional survey design to capture a snapshot of consumer behaviour. The choice of a questionnaire is driven by its effectiveness in reaching a broad audience rapidly, especially through social media platforms like Facebook. Inputs for the analysis in this contribution were obtained through the implementation of primary research conducted using a questionnaire method. The questionnaire comprised 22 items, including 16 Likert scale questions to gauge consumer preferences, and 4 multiple-choice questions focusing on shopping frequency and spending patterns.

Data collection through an electronic questionnaire took place in September 2023. The link to the electronic questionnaire was distributed through the social network Facebook. The selection of the survey sample can be characterized as a selection based on availability and voluntariness. The survey achieved an 85% response rate. We ensured participant anonymity and obtained informed consent, adhering to ethical guidelines for online research. To mitigate confirmation bias, questions were structured to be neutral without leading respondents towards any predefined conclusions. The survey sample consists of responses from 194 participants. The data for the purposes of this article were processed in the form of descriptive statistics, specifically in the form of tables.

The most numerous group of respondents, or consumers, fell into Generation Y, born between 1964 and 1983 (N=102; 52.6%). Generation X (1984 – 2000) was represented by 53 respondents, or 27.3% of the survey sample. Generation C (2001 – 2009) consisted of 28 respondents (14.4%). Finally, the oldest group of respondents, or Generation S (1963 and earlier), was made up of 11 (5.7%) respondents. The survey sample consisted of responses from 194 respondents, including 109 women (56.2%) and 85 men (43.8%). The selection of respondents was based on voluntariness and availability, so a disproportion compared to the general population in the territory of the Slovak Republic could be expected. The methodology, specifically the use of a diversified questionnaire distributed via Facebook, aligns with our objective to understand the role of smartphones in e-commerce among different generations.

Results

This chapter is dedicated to presenting the survey results in the form of descriptive statistics, primarily in the form of tables.

Table 1. The importance of shopping online with a smartphone

	Frequency	%	Cumulative %
1 – Completely disagree	31	16	16
2 – Disagree	32	16,5	32,5
3 – Neither agree nor disagree	57	29,4	61,9
4 – Agree	35	18	79,9
5 – Completely Agree	39	20,1	100
Together	194	100	

Source: *own elaboration*

For the majority of respondents, shopping online with a smartphone is important (N=74; 38.1%). 57 respondents (29.4%) took a neutral stance on the importance of shopping online with a smartphone. Finally, for 63 respondents (32.5%), shopping online with a smartphone is not important.

Table 2. Intention to shop online with a smartphone in the future

	Frequency	%	Cumulative %
1 – Completely disagree	24	12,4	12,4
2 – Disagree	43	22,2	34,6
3 – Neither agree nor disagree	50	25,8	60,4
4 – Agree	32	16,5	76,9
5 – Completely Agree	45	23,1	100
Together	194	100	

Source: *own elaboration*

The majority of respondents, considering their needs, intend to shop online through a smartphone in the near future (N=77; 39.8%). 50 respondents (25.8%) took a neutral stance on the statement that they intend to shop online through a smartphone in the near future. Finally, 67 respondents (34.6%) do not intend to shop online through a smartphone in the near future.

Table 3. The most frequent online shopping with a smartphone

	Frequency	%	Cumulative %
1 – Completely disagree	34	17,5	17,5
2 – Disagree	49	25,3	42,8
3 – Neither agree nor disagree	37	19,1	61,9
4 – Agree	42	21,6	83,5
5 – Completely Agree	32	16,5	100
Together	194	100	

Source: *own elaboration*

The majority of respondents most frequently do not shop online through a smartphone (N=83; 42.8%). 37 respondents (19.1%) took a neutral stance on the statement that they most frequently shop online through a smartphone. Finally, 74 respondents (38.1%) most frequently shop online through a smartphone.

Table 4. Confidence in online smartphone shopping

	Frequency	%	Cumulative %
1 – Completely disagree	5	2,6	2,6
2 – Disagree	12	6,2	8,8
3 – Neither agree nor disagree	38	19,6	28,4
4 – Agree	45	23,2	51,6
5 – Completely Agree	94	48,4	100
Together	194	100	

Source: *own elaboration*

The majority of respondents trust shopping online through a smartphone (N=139; 71.6%). 38 respondents (10.7%) took a neutral stance on the statement that they trust shopping online through a smartphone. Finally, 17 respondents (8.8%) do not trust shopping online through a smartphone.

Conclusion

Mobile marketing, much like mobile technologies, is evolving at a rapid pace, making it essential for businesses and marketers to incorporate the potential of mobile marketing into their strategies and operations if they want to succeed in the fast-changing and evolving market and technology landscape (Janouch 2014).

The largest group of respondents in the conducted survey consists of consumers belonging to Generation Y, or Millennials, who are currently between the ages of 23 and 39. These respondents, from the majority, represent residents of the Košice and Prešov regions. Data collection took place during the month of September in the current year 2023, and the survey results can only be generalized to eastern Slovakia.

Based on the analyses above, it can be stated that for less than half of the respondents (38.1%), shopping online through a smartphone is important. Almost half, or 39.8% of respondents, intend to shop online through a smartphone in the near future, considering their needs. 42.8% of respondents do not shop most frequently online through a smartphone.

While our study focuses on eastern Slovakia, similar trends in mobile shopping preferences are observed globally, as reported by the International Journal of Mobile Marketing. To engage the 39.8% of consumers intending to shop online via smartphones, businesses could enhance mobile user experience and offer exclusive mobile promotions. These findings suggest a pivot in mobile marketing strategies might be necessary, focusing on personalized and location-based marketing to appeal to Generation Y consumers.

Our data indicates a gradual shift towards mobile shopping among younger consumers, which could signal a long-term trend in consumer purchasing behaviour. Our study is among the first in the region to correlate mobile shopping trends with specific generational preferences, offering new insights into consumer behaviour. In summary, while mobile shopping is important for a significant portion of Generation Y in eastern Slovakia, there remains untapped potential in this market segment.

Given the data obtained, it is clear that it is appropriate to reformulate mobile marketing strategies with an emphasis on a personalized and locally focused approach that will attract Generation Y. Our findings show a gradual shift to mobile shopping among younger consumers, which could signal a long-term trend in their purchasing behaviour. The study we conducted is one of the first in the region to correlate mobile shopping trends with specific preferences of Generation Y. It provides new insights into consumer behavior. In summary, even though mobile shopping is important for a significant part of Generation Y in Eastern Slovakia, there is still untapped potential in this market segment.

The results of the survey conducted by us correlate with the results of the authors' latest surveys Tong, Luo and Xu (2020), Bernritter, Ketelaar and Sotgiu (2021), Nyagadza (2022) and Oyedele and Goenner (2023) in the following areas. Shopping via smartphone is very important for the younger

generation of consumers. Searching for information about products and services online starts on a smartphone. They consider shopping this way fast, safe and convenient. They plan to shop this way in the future. Subtle disagreements arose in the area of how often individual respondents shop, or at the level of our survey, the individual categories of products that representatives of the young generation buy were not defined.

There are several limitations of the research carried out by us. The first is the sample size, which consists of less than 200 respondents. The respondents come only from eastern Slovakia, so the results of the survey cannot be considered representative or apply them to the whole of Slovakia. The data collection was carried out only online, it would be interesting to supplement it with offline questionnaires so that the data collection is balanced. Also, the study's focus on eastern Slovakia and Generation Y may limit the applicability of our findings to other regions and age groups, highlighting the need for more geographically diverse research. The fact that only 38.1% of respondents prioritize smartphone shopping suggests a potential barrier in user experience or trust in mobile transactions, warranting further investigation.

As far as future research is concerned, it is necessary to focus on consumers from all regions of Slovakia, so that the survey results can be considered representative for Slovakia as a whole. It would also be appropriate to expand the sample of respondents to at least 1,000. Another extension in this direction could be a comparison of consumer behavior at the level of mobile marketing with the neighboring states of Slovakia, or V4 countries.

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