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THE EFFECT OF THE COVID-19 PANDEMIC ON THE FINANCIAL PERFORMANCE OF THE 15 TOP LISTED GREEK COMPANIES AND ON ENTREPRENEURSHIP

Even companies with high stock market values suffered financial setbacks due to the COVID-19 pandemic that swept the globe in early 2020. During the COVID-19 period, the environment was characterized as hostile and complex, where the confluence of rapid technological developments on the international chessboard and the rapid globalization of markets brought about universal changes in the status of businesses and their ability to survive in an increasingly and constantly changing competitive global environment. Entrepreneurship is the pillar of business survival, prosperity, and economic growth and is the most critical factor in reducing this negative phenomenon.

The study examines the evolution of key accounting indicators found in the financial statements of the fifteen largest companies by market capitalization listed on the Greek stock exchange in 2021. The results of the survey revealed that the fuel production companies HELLENIC PETROLEUM and MOTOR OIL as well as the vehicle rental company AUTOHELLAS were the most negatively impacted due to the significant decline in turnover. The study analysed data before and during the pandemic in 2018–2019 and 2020–2021. PPC (public power corporation), on the other hand, benefited greatly from the pandemic as a result of lower electricity generation costs from falling oil prices.

Keywords: Greek Stock Exchange, Greek Economy, Pandemic, Financial Ratios, Entrepreneurship, COVID-19.

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ВПЛИВ ПАНДЕМІЇ COVID-19 НА ФІНАНСОВІ ПОКАЗНИКИ 15 ПРОВІДНИХ ГРЕЦЬКИХ КОМПАНІЙ ТА НА ПІДПРИЄМНИЦТВО

Навіть компанії з високою вартістю на фондовому ринку зазнали фінансових невдач через пандемію COVID-19, яка охопила світ на початку 2020 року. Протягом періоду COVID-19 середовище характеризувалося як вороже та складне, де злиття швидкого технологічного розвитку у міжнародному середовищі та швидка глобалізація ринків призвели до універсальних змін у статусі підприємств та їхній здатності виживати в глобальному конкурентному середовищі, що постійно змінюється. Підприємництво є запорукою виживання бізнесу, процвітання та економічного зростання та найважливішим фактором у зменшенні цього негативного явища.

Дослідження вивчає еволюцію ключових облікових показників, які містяться у фінансовій звітності п'ятнадцяти найбільших компаній за ринковою капіталізацією, які

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котируються на грецькій фондовій біржі у 2021 році. Результати опитування показали, що компанії з виробництва палива «HELLENIC PETROLEUM» і «MOTOR OIL», а також компанія з прокату транспортних засобів «AUTOHELLAS» зазнала найбільшого негативного впливу через значне падіння обороту.

У дослідженні проаналізовано дані до та під час пандемії: у 2018–2019 та 2020–2021 роках. В той же час «PPC» (публічна енергетична корпорація) отримала значну вигоду від пандемії в результаті зниження витрат на виробництво електроенергії через падіння цін на нафту.

Ключові слова: грецька фондова біржа, грецька економіка, пандемія, фінансові показники, підприємництво, COVID-19.

1. Introduction. The coronavirus, also known by its scientific name SARS-CoV-2, caused a pandemic that started in China at the end of 2019 and quickly spread throughout the world. As a result of the measures taken to stop the virus's spread, the global economy suffered. The COVID-19 pandemic caused a very deep economic recession that was the global worst since World War II (The World Bank, 2020). The crisis triggered by COVID-19 brought structural changes in business to the fore (UN, 2020). COVID-19 directly affected self-employed individuals more than employees (Belitski et al., 2022) and small businesses more than large businesses, both in Europe and the US (Digitally Driven, 2020, 2021). In 2020, the European Union and its institutions, through the European Stability Mechanism, the Pan-European Guarantee Fund, and the SURE program, took measures to protect businesses and their viability as well as to revitalize the economies of the member states (Barkowski et al. 2021).

This article examines how the COVID-19 pandemic affected businesses' financial standing in the country of Greece, a member of the European Union. Since our study focuses on the 15 largest companies by market capitalization, listed on the Greek stock exchange as of 2021, we conduct this analysis using numerical indicators. The numbers gathered and examined relate to the years leading up to the pandemic, namely, 2018–2019, and their change in the following two years, 2020–2021. Since the end of the first quarter of 2020, the COVID-19 pandemic has severely impacted the Greek economy, abruptly breaking the upwards trend in economic activity that had begun the year. According to the data, the pressure peaked in the second quarter of 2020 with a 15.2% year-over-year decline in GDP, a sharp decline in domestic demand, and declining exports amid increased uncertainty with the early implementation of necessary containment measures.

The first signs of recovery started to emerge in some economic sectors at the end of the second quarter and then picked up steam in July and August as restrictions and uncertainty started to fade, but the tourism industry was still hit hard. The economy was supported by timely actions taken by the government, including labour and insurance cost subsidies, payment of benefits to employees with contract suspension, interest rate subsidies, and the suspension of tax payments and insurance obligations, which supported the Greek economy and entrepreneurship (<https://www.e-forologia.gr/cms/viewContents.aspx?id=221191>).

The COVID-19 pandemic may have precipitated the worst economic crisis to hit the world in more than a century. Inequality both within and between nations has dramatically increased as a result of the crisis, and it appears that emerging economies will take much longer to recover from the income losses brought on by the pandemic.

As a result, the evolution of these indicators following the pandemic's shock is investigated. These indicators are used to interpret the financial statements of a company, spot trends over time, and assess its financial health. These indicators can also help lenders and investors decide whether it is worthwhile to lend money or make investments and help develop entrepreneurship. Therefore, companies that carefully examine these indicators will be able to spot their weak points right away and take corrective action.

2. Literature Review. Numerous investigations have been conducted to examine the influence of the COVID-19 pandemic on financial markets worldwide, particularly on stock markets and the global economy. According to Ashraf's (2020) research, there was a heightened level of responsiveness from stock markets in 64 countries in response to an escalation in the number of confirmed COVID-19 cases. Moreover, He et al. (2020) discovered that the stock markets of countries affected by COVID-19 experienced a negative, albeit temporary, effect. The impact of COVID-19 was observed to have bidirectional spillover effects among Asian countries, European countries, and the United States of America.

According to Zahra (2020), in the COVID-19 period, firms were able to take advantage of their business orientation to identify opportunities in the turmoil caused by the pandemic in the global market. Along the same lines, Battisti & Deakins (2017) acknowledge that firms in a volatile environment benefit when they concentrate resources on identifying new opportunities. The global economic environment during the COVID-19 pandemic was characterized as highly complex and hostile, which signals for firms the emergence of significant opportunities to exploit (Shane & Venkataraman, 2000; Wennekers & Thurik, 1999), to manage uncertainty and environmental instability (Schultz, 1979), to cultivate high levels of adaptation (Ashmos, Duchon & McDaniel, 2000) and to maintain a competitive advantage (Arend, 2013).

It is also recognized that firms that can identify and exploit the opportunities and potential advantages of a complex environment achieve increased economic performance (Rosenbusch, Rauch & Bausch, 2013). Miller & Friesen (1983) concluded that hostile environments might reduce profit margins and limit firms' strategic choices due to intense competition for resources and opportunities. The characteristics of a complex and hostile environment include limited access to necessary inputs, fierce intraindustry competition, labour and material resource shortages, severe regulatory constraints, adverse demographic trends, and government intervention (Caruana, Ewing & Ramaseshan, 2002; McGee et al., 2012; Shirokova et al., 2016; Rasiyah et al., 2023). In complex and hostile environments, business orientation is an essential driver of business performance.

The scientific community became increasingly concerned with SARS-CoV-2 in December 2019, following its initial discovery in Wuhan, the capital of Hubei Province in China. Subsequently, the virus spread to Greece, with the first confirmed case reported on February 26, 2020. Following the confirmation of the initial three cases in Greece, a series of measures were gradually implemented to suspend events. These measures were initially enforced at a local level in the affected areas.

In March 2020, the emergence of COVID-19 cases in various regions of Greece prompted the nationwide closure of educational institutions, followed by a gradual

closure of restaurants, shops, and places of worship. The Ministry of Health began providing daily televised updates on March 16, 2020, regarding the pandemic's progression in Greece and the government's exceptional measures to address it. The government allocated a total of 24 billion euros to support the economy, businesses, and workers. This amount is equivalent to 14% of the nation's GDP. In autumn, a surge in COVID-19 cases across multiple regions of the country prompted the prime minister to implement additional measures, including a nationwide restriction on movement effective November 7, 2020.

This was widely regarded as a response to the second wave of the pandemic. At the conclusion of June 2021, Greece entered its third wave of the pandemic, coinciding with the commencement of vaccinations. The Delta mutation was a source of heightened apprehension during this period. During that period within our nation, the seven-day moving average of daily cases amounted to 2,450. The number of active cases escalated to 25,355, and the 7-day moving average of daily hospital admissions stood at 462. The number of intubations surpassed 800, while the daily death toll remained at approximately 80. Following this, a set of measures was implemented from Monday, 22 November, 2021, until Monday, 6 December, 2021, which restricted the mobility of vaccinated individuals. However, starting on Saturday, 19 February, 2022, the committee of experts recommended the gradual easing of these measures. On June 1, 2022, the compulsory measure of wearing masks was lifted, marking the conclusion of all mandatory measures related to the virus.

The current tally of cases in Greece stands at approximately 2,385,300, with an estimated 25,600 fatalities documented since the onset of the epidemic. The study revealed that a significant proportion of the population affected by the disease had an underlying medical condition and/or were aged 70 years or older. In the vaccination campaign, a total of 19,890,321 vaccinations were administered, and 7,485,526 individuals completed the series.

In relation to the economic ramifications of COVID-19 within the nation, it has been observed that the pandemic has had a direct impact on companies that account for 69% of the overall revenue generated by Greek companies. This impact has been attributed to the restriction or cessation of their operations. Specifically, companies that generate a total revenue of E32.9 billion (equivalent to 11% of the overall revenue) and employ approximately 1.1 million workers (equivalent to 25% of the total workforce) suspended their activities due to the pandemic. Furthermore, the GDP of the country notably decreased by 9.78% between 2019 and 2020, from E183.351 billion in 2019 to E165.406 billion in 2020.

3. Data and Methodology

Our sample consists of the fifteen largest Greek companies by market capitalization (on the basis of data from 2021) and covers the period 2018-2021. The companies in our sample are presented in Table 1.

The companies under consideration were sourced from the Data Prisma database (ICAP). The accounting variables presented in Table 2 were collected for the years 2018-2021.

Table 1. The fifteen largest Greek companies, author's

Company Name	Company Ticker
JUMBO S.A.	BELA
ELVALHALCOR HELLENIC COPPER AND ALUMINIUM INDUSTRY	ELHA
HELLENIQ ENERGY HOLDINGS S.A.	ELPE
GEKTERNA HOLDINGS, REAL ESTATE, CONSTRUCTION S.A.	GEKTERNA
ATHENS WATER SUPPLY AND SEWERAGE COMPANY S.A.	EYDAP
KARELIA TOBACCO COMPANY INC.	KARE
MOTOR OIL (HELLAS) CORINTH REFINERIES S.A.	MOH
MYTILINEOS S.A.	MYTIL
ORGANIZATION OF FOOTBALL PROGNOSTICS S.A.	OPAP
HELLENIC TELECOMMUNICATIONS ORGANIZATION S.A.	HTO
AUTOHELLAS S.A.	OTOEL
PUBLIC POWER CORPORATION S.A.	PPC
TERNA ENERGY S.A.	TENERGY
TITAN CEMENT INTERNATIONAL S.A.	TITC
VIOHALCO S.A.	VIO

Table 2. Accounting variables of the companies, author's

Profit or Loss for the Financial Year
Total Current Liabilities
Shareholders' Equity
Sales/Revenue
Current Assets
Gross Profit
Total Assets

Utilizing the aforementioned accounting variables, we have derived significant metrics that delineate the profitability, efficiency, liquidity, and capital structure of corporations. Table 3 displays the aforementioned indicators.

Table 3. Metrics that delineate the profitability, efficiency, liquidity, and capital structure of corporations, author's

CURRENT RATIO (total current assets/total current liabilities)
GROSS MARGIN RATIO (gross profit/total revenue)
RETURN ON ASSETS (net income/total assets)
EQUITY RATIO (shareholders' equity/total assets)
NET PROFIT MARGIN (net income/total revenue)
RETURN ON EQUITY (net income/shareholders' equity)

The examination of the indicators was conducted across a span of four years, specifically from 2018 to 2021, to observe their fluctuations between the prepandemic years of 2018-2019 and the postpandemic years of 2020-2021. The seven indicators are individually presented as follows:

The return on equity ratio is a metric that indicates the effectiveness of a company in utilizing its capital to generate supplementary revenue or profit. The metric serves as a gauge of a firm's effectiveness, specifically in terms of its ability to produce earnings through the deployment of its shareholders' invested resources, including share capital and reserves.

The net profit margin ratio is a financial metric utilized to determine the proportion of profit that a business generates from its overall revenue. The metric quantifies the ratio of a company's net profit to its revenue. The net profit margin can be calculated by dividing the net profit (also referred to as net income) by the total revenue and then expressing the result as a percentage.

The return on assets ratio is a metric used to evaluate a company's profitability in relation to its overall assets. The aforementioned ratio serves as an indicator of a company's performance, as it measures the net income generated in relation to the total capital invested in assets. Greater performance levels are indicative of enhanced productivity and efficiency in the management's utilization of the financial resources at the disposal of the organization.

The equity ratio is a financial metric that evaluates the proportion of total assets that are financed by shareholders' equity. It is computed by dividing the total shareholders' equity by the total assets. The ratio is a crucial determinant of the residual claim of shareholders in a company, as it specifies the portion of the company that shareholders are entitled to claim in the event of liquidation.

The current ratio is a financial metric that evaluates a firm's capacity to fulfil its immediate financial obligations, typically within a year. The ratio considers the relative values of aggregate current assets and current liabilities. This statement highlights the significance of assessing a company's financial well-being and its ability to optimize the liquidity of its present assets for the purpose of discharging its debts and obligations.

The gross margin ratio is a financial metric utilized to assess a company's profitability by comparing its gross profit margin to its revenue. The statement indicates the extent of the earnings a firm has produced subsequent to settling the expenses incurred in the production of goods. The ratio indicates the proportion of revenue that a company retains as gross profit per dollar. Thus, a higher gross margin ratio is considered favourable.

4. Results

Net Profit Margin Ratio. Table 4 displays the net profit margin ratio for each company during the reviewed period.

Initially, a comparison is made between the mean ratio values of the two pre-pandemic years (2018–2019) and the ratio values observed during 2020, which coincided with the implementation of the most stringent measures to address the pandemic, resulting in significant economic repercussions.

Based on the observed alterations in the ratio, it can be inferred that the net profit margin of three companies experienced an upsurge during the pandemic, while it remained relatively stable in three other companies. However, the net profit margin of nine companies witnessed a decline, where an increase or decrease of more than 1% was considered for the analysis.

Table 4. The net profit margin ratio for each company, author's

NET PROFIT MARGIN (net income/total revenue)						
Company Ticker	2018	2019	2020	2021	AVERAGE BEFORE	AVERAGE AFTER
BELA	20,06%	20,95%	19,98%	26,03%	20,50%	23,01%
ELHA	3,00%	2,02%	1,39%	3,88%	2,51%	2,64%
ELPE	2,17%	1,81%	-6,85%	3,66%	1,99%	-1,59%
GEKTERNA	0,32%	2,02%	0,66%	7,46%	1,17%	4,06%
EYDAP	14,86%	17,94%	-20,01%	8,50%	16,40%	-5,76%
KARE	8,22%	6,48%	4,92%	7,43%	7,35%	6,18%
MOH	2,70%	2,43%	-1,83%	1,97%	2,57%	0,07%
MYTIL	9,46%	6,53%	6,86%	6,12%	8,00%	6,49%
OPAP	20,58%	27,89%	35,80%	30,23%	24,24%	33,02%
HTO	6,76%	14,52%	6,79%	14,45%	10,64%	10,62%
OTOEL	8,13%	7,96%	3,21%	7,64%	8,05%	5,42%
PPC	-19,07%	-34,28%	0,42%	-0,32%	-26,67%	0,05%
TENERGY	15,36%	17,23%	21,55%	17,72%	16,30%	19,63%
TITC	3,61%	3,16%	0,07%	5,38%	3,39%	2,72%
VIO	1,73%	0,20%	0,56%	3,63%	0,96%	2,09%

The sole energy company in our sample, PPC (public power corporation), exhibited the most substantial rise in net profit margins. The rise in PPC can be attributed to the enhancement of the gross profit margin, which was facilitated by the decrease in natural gas prices on the wholesale market. The impact of the COVID-19 pandemic further reinforced this trend. Additionally, the reduction in lignite production resulted in a lower volume of CO₂ emissions, which had a favourable impact.

The company OPAP exhibited a significant increase in the ratio, which ranked second in magnitude and was comparable in significance with the impact on PPC. However, this presents a paradox, as the organization experienced a notable decline in its revenue in 2020. The reason for the notable impact on OPAP's financial outcomes and operational efficacy is because the entirety of the company's revenue is derived from its chain of stores. The COVID-19 pandemic had a significant effect on the group's performance, as the stores operated by OPAP were closed for a duration of nearly four months, while the PLAY stores (VLTs) were closed for nearly five months throughout 2020. Upon examining the financial statements of the company, it is evident that a substantial sum of revenue was recorded in fiscal year 2020 pertaining to profit from the revaluation of previous equity rights, which is unrelated to the pandemic. Consequently, in the absence of this revenue, the company would experience a decline in this metric.

The rise in TERNA ENERGY's profits can be attributed to gains from the sale and appreciation of assets rather than pandemic-related factors.

In contrast, the majority of companies in the sample experienced a decline in their net margins ranging from 1-4%, except for four companies. Notably, EYDAP observed a significant decrease in the ratio of 36%, while HELLENIC PETROLEUM, MOTOR OIL, and AUTOHELLAS witnessed decreases of approximately 8%, 4.5%, and 4.5%, respectively.

Regarding EYDAP, the primary cause for the aforementioned decrease is not associated with the pandemic but rather stems from the recalibration of the price of untreated water received during the 2013-2020 period. This recalibration was necessitated by the provision made for the supplementary expense incurred during the aforementioned period. A portion of the decrease in revenue can be attributed to the impact of the pandemic, which brought about notable modifications in the client demands of the enterprise. This, in turn, necessitated the establishment of an extra allowance for the devaluation of monetary resources.

A noteworthy reduction in the ratio is observed in the firms MOTOR OIL, HELLENIC PETROLEUM, and AUTOHELLAS, which operate in the fuel trading and vehicle rental industries, respectively. This outcome is anticipated, as these industries experienced a significant impact from the pandemic and the corresponding mitigation efforts. The implementation of pandemic containment measures and the adoption of telecommuting policies resulted in a substantial reduction in vehicular mobility, consequently leading to a significant decrease in the demand for fuel. Similarly, owing to the substantial decline in tourist influx amid the pandemic, the utilization of vehicle rentals was curtailed for identical reasons.

The remaining companies experienced a decline in their net profit margins that was primarily attributed to the substantial reduction in the nation's economic activity resulting from the pandemic and, more specifically, the measures implemented to address it.

In analysing the comparison between the timeframes of 2018-2019 and 2020-2021, it is evident that there has been a notable shift in trends towards a return to prepandemic levels of profitability in the latter period. This reversal of trends is observable across a majority of cases.

Return on assets ratio

Table 5 displays the return on assets ratio for each company during the reviewed period.

Table 5. Return on assets ratio for each company, author's

RETURN ON ASSETS (net income/total assets)						
Company Ticker	2018	2019	2020	2021	AVERAGE BEFORE	AVERAGE AFTER
BELA	11,53%	11,65%	8,25%	12,48%	11,59%	10,37%
ELHA	3,98%	2,42%	1,56%	5,44%	3,20%	3,50%
ELPE	2,99%	2,28%	-5,71%	4,64%	2,64%	-0,54%
GEKTERNA	0,11%	0,56%	0,13%	1,80%	0,34%	0,97%
EYDAP	3,11%	3,76%	-4,17%	1,85%	3,43%	-1,16%
KARE	13,72%	11,15%	8,72%	13,06%	12,44%	10,89%
MOH	8,92%	7,21%	-3,25%	4,90%	8,07%	0,82%
MYTIL	4,41%	3,94%	3,20%	3,58%	4,17%	3,39%
OPAP	8,03%	10,09%	8,77%	10,09%	9,06%	9,43%
HTO	3,72%	7,34%	3,62%	8,78%	5,53%	6,20%
OTOEL	4,94%	5,12%	1,75%	5,30%	5,03%	3,53%
PPC	-5,89%	-11,33%	0,13%	-0,11%	-8,61%	0,01%
TENERGY	2,76%	2,73%	2,62%	3,84%	2,75%	3,23%
TITC	1,97%	1,78%	0,04%	3,43%	1,87%	1,74%
VIO	1,97%	0,20%	0,52%	4,10%	1,09%	2,31%

Initially, we conduct a comparative analysis of the mean ratio values of the prepandemic years (2018-2019) and the ratio values observed in 2020, a year marked by the implementation of stringent measures to combat the pandemic, which had a significant impact on the economy.

The alterations in the ratio indicate that the asset efficiency of one company experienced an upsurge in the pandemic, whereas in five other companies, it remained relatively stable. However, in nine companies, asset efficiency underwent a decline.

These particular results align with the outcomes of the preceding proportion. As a consequence of the pandemic, the majority of companies experienced a decline in profitability. It is evident that only PPC experienced a rise in asset efficiency as a result of a substantial increase in profitability, attributed to the decline in oil prices impacting the cost of power generation. The remaining firms experienced a decline or negligible alteration in the profitability of their assets, attributed to the decrease in their earnings. In relation to data for 2021, the majority of instances have seen a recuperation of the ratio to prepandemic levels. Furthermore, in several cases, the ratio value in 2021 surpassed the mean value of 2018 to 2020. The projected rise in corporate profitability in 2021 is expected to be of great significance, potentially resulting from a substantial increase in consumption. This increase in consumption may include postponed consumption from 2020, which was hindered by restrictions.

Current Ratio

Table 6 displays the ratio of current assets to short-term liabilities, which is commonly referred to as the immediate liquidity ratio, for each company during the reviewed period.

Table 6. Current assets to short-term liabilities, which is commonly referred to as the immediate liquidity ratio, for each company, author's

CURRENT RATIO (total current assets/total current liabilities)						
Company Ticker	2018	2019	2020	2021	AVERAGE BEFORE	AVERAGE AFTER
BELA	293,23%	607,14%	715,92%	642,02%	450,19%	678,97%
ELHA	167,67%	166,70%	152,18%	171,14%	167,18%	161,66%
ELPE	121,18%	116,14%	106,87%	89,47%	118,66%	98,17%
GEKTERNA	130,77%	144,68%	224,55%	241,79%	137,73%	233,17%
EYDAP	956,79%	1106,64%	307,21%	251,31%	1031,72%	279,26%
KARE	488,16%	516,22%	659,75%	559,47%	502,19%	609,61%
MOH	197,90%	176,52%	153,27%	156,00%	187,21%	154,64%
MYTIL	169,93%	202,61%	188,39%	162,01%	186,27%	175,20%
OPAP	123,74%	268,33%	171,87%	176,74%	196,03%	174,30%
HTO	88,03%	81,82%	66,29%	71,65%	84,93%	68,97%
OTOEL	56,03%	74,15%	91,13%	69,12%	65,09%	80,12%
PPC	74,01%	76,26%	85,67%	139,62%	75,14%	112,65%
TENERGY	134,37%	174,86%	219,48%	208,51%	154,61%	213,99%
TITC	135,14%	142,27%	122,08%	143,77%	138,70%	132,92%
VIO	119,16%	117,20%	115,19%	131,40%	118,18%	123,30%

The data presented in the table indicate that the majority of companies exhibit a favourable general liquidity indicator prior to and amidst the pandemic, with only a minor exception for three companies that demonstrate a fluctuation of approximately 70%. Upon comparing the year 2020, which was marked by the pandemic, with the two preceding years, the liquidity of half of the companies, i.e., eight out of the total, exhibited an improvement, whereas the remaining half experienced a decline. Thus, it can be inferred that the impact of the pandemic on companies was not uniform, as each company was affected differently based on its unique characteristics. No discernible trend was observed across all companies. In relation to the comparison between the timeframes of 2018-2019 and 2020-2021, the majority of businesses experienced a resurgence in liquidity levels to those observed prior to the pandemic during 2021.

Return on Equity Ratio

The return on equity ratio for each company during the reviewed period is presented in Table 7.

Table 7. Return on equity ratio for each company, author's

RETURN ON EQUITY (net income/shareholders' equity)						
Company Ticker	2018	2019	2020	2021	AVERAGE BEFORE	AVERAGE AFTER
BELA	14,95%	15,65%	11,41%	16,99%	15,30%	14,20%
ELHA	9,28%	5,64%	3,73%	14,32%	7,46%	9,03%
ELPE	9,12%	7,01%	-19,55%	17,53%	8,06%	-1,01%
GEKTERNA	0,92%	4,78%	1,17%	15,26%	2,85%	8,21%
EYDAP	5,07%	6,11%	-7,43%	3,73%	5,59%	-1,85%
KARE	17,76%	13,69%	10,37%	15,31%	15,73%	12,84%
MOH	24,29%	19,90%	-10,21%	18,43%	22,09%	4,11%
MYTIL	10,02%	9,55%	8,41%	10,63%	9,78%	9,52%
OPAP	19,94%	27,41%	27,44%	31,40%	23,68%	29,42%
HTO	10,99%	21,89%	10,93%	24,53%	16,44%	17,73%
OTOEL	16,05%	16,31%	5,57%	16,64%	16,18%	11,10%
PPC	-18,93%	-48,42%	0,63%	-0,45%	-33,68%	0,09%
TENERGY	11,97%	12,78%	11,76%	15,86%	12,38%	13,81%
TITC	3,99%	3,68%	0,09%	7,15%	3,83%	3,62%
VIO	6,68%	0,70%	1,77%	14,83%	3,69%	8,30%

Initially, we conduct a comparative analysis of the mean ratio values between the pre-pandemic period spanning two years (2018-2019) and 2020, which witnessed the implementation of the most stringent measures to address the pandemic, resulting in significant economic repercussions.

The correlation between the behaviour of the aforementioned indicator and the net profit indicator is nearly complete.

Based on the observed alterations in the ratio, the net profit margin of two companies experienced an upsurge during the pandemic, while it remained relatively sta-

ble in one company. Conversely, the net profit margin of twelve companies underwent a decline (whereby an increase or decrease of more than 1% is deemed significant).

OPAP and PPC are the companies that experienced an improvement in equity efficiency. The aforementioned surge in net margin ratio has contributed to a notable upswing in the profitability of the aforementioned companies.

In contrast, a vast majority of the companies included in the sample experienced a decline in their net margin ranging from 1% to 4%, with only three exceptions. Notably, EYDAP exhibited a significant decrease in the ratio of 13%, while HELLENIC PETROLEUM, MOTOR OIL, and AUTOHELLAS experienced declines of approximately 28%, 32%, and 11%, respectively. The factors that were discussed in relation to the alteration of the net margin ratio are the underlying causes for these modifications.

In the comparison between the time frames of 2018-2019 and 2020-2021, there is a discernible shift in the trend in the latter period, with a tendency towards a return to prepandemic levels of profitability in most instances.

Equity Ratio

Table 8 displays the equity ratio of each company during the reviewed period.

Table 8. Equity ratio of each company, author's

EQUITY RATIO (shareholders' equity/total assets)						
Company Ticker	2018	2019	2020	2021	AVERAGE BEFORE	AVERAGE AFTER
BELA	77,94%	71,60%	73,05%	73,89%	74,77%	73,47%
ELHA	42,92%	42,70%	41,19%	35,23%	42,81%	38,21%
ELPE	33,33%	31,88%	26,44%	26,48%	32,60%	26,46%
GEKTERNA	12,13%	11,51%	11,13%	12,48%	11,82%	11,80%
EYDAP	62,04%	60,97%	51,42%	47,95%	61,51%	49,68%
KARE	80,49%	82,41%	85,87%	84,83%	81,45%	85,35%
MOH	38,95%	34,01%	29,62%	24,43%	36,48%	27,02%
MYTIL	45,21%	37,98%	38,10%	30,26%	41,60%	34,18%
OPAP	40,83%	33,65%	30,39%	33,74%	37,24%	32,06%
HTO	34,78%	32,23%	34,07%	37,74%	33,50%	35,91%
OTOEL	30,63%	32,06%	30,90%	32,78%	31,34%	31,84%
PPC	25,73%	20,92%	20,99%	27,11%	23,33%	24,05%
TENERGY	23,02%	20,12%	24,61%	23,78%	21,57%	24,19%
TITC	48,43%	48,25%	46,64%	49,25%	48,34%	47,95%
VIO	28,89%	29,31%	28,77%	26,76%	29,10%	27,76%

Initially, a comparison is made between the mean ratio values of the two prepandemic years (2018-2019) and the corresponding ratio values observed in 2020. The analysis reveals that the equity to total assets ratio declined for nine companies, rose for two, and remained relatively stable for the remaining four. Among the companies that exhibited the most substantial reductions, EYDAP, HELLENIC PETROLEUM, MOTOR OIL, and OPAP were the most prominent. The rationale behind the decrease in value pertaining to the initial trio of firms is attributed to their substantial

operational deficits in 2019, as previously expounded upon, as opposed to any financial reorganization through the acquisition of fresh loans. Regarding OPAP, the decline observed in comparison to the prior year is primarily attributable to the allocation of dividends.

The companies that exhibited an increase are KARELIA and TERNIA. The decrease in their liabilities in 2020 resulted in a reduction.

Upon comparing the data from the timeframes of 2018-2019 and 2020-2021, it can be observed that the findings remain consistent. Thus, it can be inferred that there was no substantial alteration from the course set in 2020 during 2021.

Gross Margin Ratio

Table 9 displays the gross margin ratio for each company during the reviewed period. Broadly speaking, it can be posited that the fluctuation of the ratio among the corporations included in our sample is contingent upon the fluctuation of the net margin ratio.

Table 9. Gross margin ratio for each company, author's

GROSS MARGIN RATIO (gross profit/total revenue)						
Company Ticker	2018	2019	2020	2021	AVERAGE BEFORE	AVERAGE AFTER
BELA	49,23%	48,64%	46,46%	51,78%	48,94%	49,12%
ELHA	8,02%	6,86%	6,40%	7,99%	7,44%	7,20%
ELPE	9,42%	8,13%	-2,42%	8,46%	8,77%	3,02%
GEKTERNA	17,14%	20,22%	22,09%	23,71%	18,68%	22,90%
EYDAP	47,63%	47,77%	49,57%	50,24%	47,70%	49,91%
KARE	10,93%	10,77%	10,05%	10,17%	10,85%	10,11%
MOH	6,93%	6,30%	3,43%	5,74%	6,61%	4,59%
MYTIL	18,95%	14,16%	16,84%	13,53%	16,56%	15,19%
OPAP	53,57%	54,63%	46,81%	60,01%	54,10%	53,41%
HTO	33,16%	19,39%	26,07%	40,36%	26,28%	33,21%
OTOEL	21,86%	20,01%	16,33%	21,75%	20,94%	19,04%
PPC	-8,86%	-1,22%	4,30%	4,90%	-5,04%	4,60%
TENERGY	42,23%	42,66%	46,73%	34,65%	42,44%	40,69%
TITC	19,46%	18,63%	19,25%	17,54%	19,05%	18,40%
VIO	9,07%	8,10%	8,83%	10,80%	8,58%	9,82%

Initially, the comparison is made between the mean ratio values of 2018-2019 and the ratio values of 2020, which was characterized by the implementation of the most stringent measures to address the pandemic, resulting in significant economic repercussions.

Based on the observed alterations, the net profit margin of four companies experienced an upsurge during the pandemic, while six companies maintained a relatively stable margin. Conversely, the net profit margin of six companies underwent a decline (wherein an increase or decrease of over 1% is deemed significant).

PPC has exhibited the most significant increase in its ratio, which can be attributed exclusively to the decrease in the expenses incurred in generating electricity, as

previously expounded. Due to similar factors, there has been a rise observed in the corporations GEK TERNA and TERNA ENERGY.

Conversely, due to the aforementioned net margin ratio considerations, there is a notable reduction in the ratio of MOTOR OIL, HELLENIC PETROLEUM, and AUTOHELLAS corporations.

Moreover, in the case of the corporation OPAP, it is evident that the impact of the pandemic is manifested in a particular metric that exhibited a noteworthy decline (in contrast to the net margin metric that demonstrated an upsurge owing to the inclusion of exceptional gains). As previously stated, the decline in the organization's revenue can be attributed to the significant reduction in turnover, coupled with the lack of commensurate cost-cutting measures.

In the comparison between 2018-2019 and 2020-2021, there is a discernible shift in the trend in the latter period towards a resurgence of profitability, with a tendency to approach levels that were prevalent prior to the pandemic.

5. Conclusions

The preceding information indicates that Greek enterprises have been notably impacted by the pandemic. The pandemic mitigation strategies implemented by the Greek government, such as lockdowns and telecommuting, have had an impact on the Greek economy and its commercial enterprises. The COVID-19 pandemic has created a hostile and complex business environment and has had a significant impact on the financial performance of HELLENIC PETROLEUM and MOTOR OIL, both of which are fuel production companies, as well as AUTOHELLAS, a vehicle rental company. These companies were unable to adapt to the hostile, complex and volatile environment that resulted from the pandemic and have experienced substantial losses. The curtailment of travel amidst the pandemic and the significant decline in tourism in 2020 had an adverse impact on the revenue of these firms, leading to a substantial reduction in their profitability and efficacy. The profitability and efficiency of these companies experienced a significant decline. Conversely, the pandemic proved to be advantageous for PPC, as it managed to adapt to the complex and hostile environment, as evidenced by a substantial increase in its gross profit and profitability, attributable to a significant price reduction in its oil-based raw materials.

With respect to liquidity, no discernible pattern was evident across all firms. Furthermore, the majority of companies exhibited positive liquidity and did not encounter any liquidity-related challenges, irrespective of any fluctuations.

Firms that develop the individual dimensions of entrepreneurial orientation are expected to maintain and improve their business performance in complex and hostile environments, as the potential benefits may enable them to discover and exploit opportunities. Otherwise, there is a risk of losing market share and deteriorating financial performance. Overall, entrepreneurial orientation can be considered the means by which businesses generate organizational adaptation to different environments (Hameed & Ali, 2011; Khandwalla, 1976; Kamal, et al., 2019; Hussain et al., 2021). For businesses to be sustainable and identify appropriate ways to cope with these new environmental challenges (Tetenbaum, 1998; Pereira et al., 2021), they must constantly adapt, discovering new elements for their survival and well-being.

In complex and hostile environments, entrepreneurship is the pillar of the survival and economic growth of firms (Baumol, 1990; 2002; Hayek, 1948; Estrin et al.,

2019). It is considered to be absolutely linked to prosperity, the creation of new firms and jobs (Gartner, 1988; Belchior et al., 2021), competitiveness and employment (Birch, 1987; Fulster, 2000; Storey, 1994; Scarborough & Cornwall, 2019; Singh, R. 2020), the development of innovation (Schumpeter, 1934; Mehmood et al., 2019), entry into new markets (Burgelman, 1983; Lumpkin & Dess, 1996; Wales et al., 2019) and economic booms (Acs, 2006; Acs et al., 2004; Audretsch & Keilbach, 2004; Carree & Thurik, 2003; van Praag & Versloot, 2007; Hayek, 1948; Urbano et al., 2019).

1. Acs, Z.J. (2006). How is Entrepreneurship Good for Economic Growth? *Innovations*, 1(1), 97-107.
2. Acs, Z.J., Audretsch, D.B., Braunerhjelm, P. & Carlsson, B. (2004). The Missing Link: The Knowledge Filter and Entrepreneurship in Endogenous Growth. Discussion Paper, 4783. London: Center for Economic Policy Research.
3. Arend, R. J. (2013). Ethics-focused dynamic capabilities: A small business perspective. *Small Business Economics*, 41(1), 1–24.
4. Audretsch, D. & Keilbach, M. (2004). Entrepreneurship Capital and Economic Performance. *Regional Studies*, 38(8), 949-959.
5. Ashmos, D.P., Duchon, D. & McDaniel Jr, R.R. (2000). Organizational Responses to Complexity: The Effect on Organizational Performance. *Journal of Organizational Change Management*, 13(6), 577-595.
6. Ashraf, B. N. (2020). Stock markets' reaction to COVID-19: Cases or fatalities? Research in International Business and Finance, 54, 101249. Available at: <https://doi.org/10.1016/j.ribaf.2020.101249>.
7. Ba kowski, K., Ferdinandusse, M., Hauptmeier, S., Jacquinet, P. and Vilj m, V. 2021. The macroeconomic impact of the Next Generation EU instrument on the euro area. [Online]. Occasional Paper Series 255, European Central Bank. Available at: <https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op255-9391447a99.en.pdf>
8. Battisti, M., & Deakins, D. (2017). The relationship between dynamic capabilities, the firm's resource base and performance in a post-disaster environment. *International Small Business Journal*, 35(1), 78–98.
9. Baumol, W.J. (1990). Entrepreneurship, Productive, Unproductive and Destructive. *Journal of Political Economy*, 98(5), 893-921
10. Belchior, R. F., & Lyons, R. (2021). Explaining entrepreneurial intentions, nascent entrepreneurial behavior and new business creation with social cognitive career theory—a 5-year longitudinal analysis. *International Entrepreneurship and Management Journal*, 17(4), 1945-1972.
11. Belitski, M., Guenther, C., Kritikos, A. S., & Thurik, R. (2022). Economic effects of the COVID-19 pandemic on entrepreneurship and small businesses. *Small Business Economics*, 1-17.
12. Birch, L.D. (1987). Job creation in America. London: Free Press.
13. Burgelman, R.A. (1983). A Process Model of Internal Corporate Venturing in the Diversified Major Firm. *Administrative Science Quarterly*, 28, 223-244.
14. Carree, M.A. & Thurik, A.R. (2003). The Impact of Entrepreneurship on Economic Growth. D.B. Audretsch & Z.J. Acs (Eds.), *Handbook of Entrepreneurship Research*, . 437-471, Boston/Dordrecht: Kluwer Academic.
15. Caruana, A., Ewing, M.T. & Ramaseshan. (2002). Effects of Some Environmental Challenges and Centralization on the Entrepreneurial Orientation and Performance of Public Sector Entities. *Service Industries Journal*, 22(2), 43-58.
16. Digitally Driven (2020). U.S. small businesses find a digital safety net during COVID-19. Report. Connected Commerce. Available at: <https://connectedcouncil.org/wpcontent/uploads/2020/09/Digitally-Driven- Report.pdf>.
17. Digitally Driven (2021). European Small businesses find a digital safety net during Covid-19. Report. Connected Commerce. Available at: <https://digitallydriven.connectedcouncil.org/europe/>
18. Estrin, S., Mickiewicz, T., Stephan, U., & Wright, M. (2019). Entrepreneurship in emerging markets. *The Oxford handbook of management in emerging markets*, 457.
19. Fulster, S. (2000). Do Entrepreneurs Create Jobs? *Small Business Economics*, 14(2), 137-148.
20. Gartner, W.B. (1988). Who is an entrepreneur? is the Wrong Question. *Entrepreneurship Theory*

& Practice, 13(4), 47-68.

21. Hameed, I. & Ali, B. (2011). Impact of Entrepreneurial Orientation, Entrepreneurial Management and Environmental Dynamism on Firm's Financial Performance. *Journal of Economics and Behavioral Studies*, 3(2), 101-114.

22. Hayek, F.A. (1948). *Individualism and Economic Order*. Chicago: University of Chicago Press.

23. He, Q., Liu, J., Wang, S., & Yu, J. (2020). The impact of COVID-19 on stock markets. *Economic and Political Studies*, 8(3), 275-288. Available at: <https://doi.org/10.1080/20954816.2020.1757570>.

24. Hussain, S., Sandhu, M. R. S., & Zaheer, M. (2021). Entrepreneurial Orientation in Born Internationalized Firms: A Study from Developing Country. *Journal of Asian Development Studies* Vol, 10(1).

25. Kadda, D. (2020, September 3). Fall - GDP shock by 15.2% in the second quarter of 2020. Capital.gr. <https://www.capital.gr/oikonomia/3478134/ptosi-sok-tou-aep-kata-15-2-to-deutero-trimi-no-tou-2020/>

26. Kamal, N., & Lundqvist, H. (2019). The role of Entrepreneurial Orientation and Dynamic Capabilities during Internationalization: A comparative case study of Swedish SME's.

27. Khandwalla, P. N. (1976). Some top management styles, their context and performance. *Organization and Administrative Sciences*, 7(4), 21-51.

28. Lumpkin, G.T. & Dess, G.G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking it to Performance. *Academy of Management Review*, 21(1), 135-172.

29. McGee, J., Khavul, S., Harrison, D., & Perez-Nordtvedt, L. (2012). When the going gets tough, the tough get going entrepreneurially: The relationship between environmental hostility, entrepreneurial orientation, entrepreneurial self-efficacy and firm performance (summary). *Frontiers of Entrepreneurship Research*, 32(5), 16.

30. Mehmood, T., Alzoubi, H. M., & Ahmed, G. (2019). Schumpeterian entrepreneurship theory: Evolution and relevance. *Academy of Entrepreneurship Journal*, 25(4).

31. Miller, D. & Friesen, P.H. (1983). Strategy-Making and Environment: The Third Link. *Strategic Management Journal*, 4(2), 221-235.

32. Pereira, J., Braga, V., Correia, A., & Salamzadeh, A. (2021). Unboxing organisational complexity: how does it affect business performance during the COVID-19 pandemic?. *Journal of Entrepreneurship and Public Policy*, 10(3), 424-444.

33. Rasiah, R., Ng, Y. K., & Cheong, K. C. (2023). Mediating and moderating effects of social networks and business environment on the relationship between entrepreneurial orientation and sustainable competitive advantage among small and medium Malaysian firms in Cambodia. *Asian Journal of Technology Innovation*, 1-22.

34. Rosenbusch, N., Rauch, A. & Bausch, A. (2013). The Mediating Role of Entrepreneurial Orientation in the Task Environment-Performance Relationship: A Meta-Analysis. *Journal of Management*, 39(3), 633-659.

35. Scarborough, N.M. and Cornwall, J.R. (2019), *Essentials of Entrepreneurship and Small Business Management*, Pearson, New York

36. Schultz, T.W. (1979). *Concepts of Entrepreneurship and Agricultural Research*. Kaldor Memorial Lecture, Iowa State University.

37. Schumpeter, J.A. (1934). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Cambridge, MA: Harvard University Press.

38. Singh, R. (2020). The need for increasing black entrepreneurship as a result of the Covid-19 pandemic. *International Journal of Entrepreneurship and Economic Issues*, 4(1), 16-23.

39. Shane, S. & Venkataraman, S. (2000). The Promise of Entrepreneurship as a Field of Research. *Academy of Management Review*, 25(1), 217-226.

40. Shirokova, G., Bogatyreva, K., Beliaeva, T., & Puffer, S. (2016). Entrepreneurial orientation and firm performance in different environmental settings: contingency and configurational approaches. *Journal of Small Business and Enterprise Development*, 23(3), 703-727.

41. Storey, D. (1994). *Understanding the Small Business Sector*. London: Routledge.

42. Tetenbaum, T.J. (1998). Shifting Paradigms: From Newton to Chaos. *Organizational Dynamics*, 26(4), 21-32.

43. United Nations. 2020. Financing for Development in the Era of COVID-19 and Beyond Initiative (FFDI). [Online]. [Accessed 08 August 2021]. Available from: <https://www.un.org/en/coronavirus/financing-development>

44. Urbano, D., Aparicio, S., & Audretsch, D. (2019). Twenty-five years of research on institutions,

- entrepreneurship, and economic growth: what has been learned?. *Small Business Economics*, 53, 21-49.
45. Van Praag, C.M. & Versloot, P.H. (2007). What Is The Value Of Entrepreneurship? A Review of Recent Research. *Small Business Economics*, 29(4), 351–382.
46. Wales, W., Gupta, V. K., Marino, L., & Shirokova, G. (2019). Entrepreneurial orientation: International, global and cross-cultural research. *International Small Business Journal*, 37(2), 95-104.
47. Wennekers, S. & Thurik, R. (1999). Linking Entrepreneurship and Economic Growth. *Small Business Economics*, 13(1), 27-56.
48. World Bank Policy Research Working Paper Series. [Accessed 08 August 2021]. Available at: <https://openknowledge.worldbank.org/handle/10986/3991>
49. Zahra, S. A. (2020). International entrepreneurship in the post Covid world. *Journal of World Business*, 101143
50. The specialization of the new support measures by the financial staff (2021). E-Forologia.gr. <https://www.e-forologia.gr/cms/viewContents.aspx?id=221191>

1. Acs, Z.J. (2006). How is Entrepreneurship Good for Economic Growth? *Innovations*, 1(1), 97-107.
2. Acs, Z.J., Audretsch, D.B., Braunerhjelm, P. & Carlsson, B. (2004). The Missing Link: The Knowledge Filter and Entrepreneurship in Endogenous Growth. Discussion Paper, 4783. London: Center for Economic Policy Research.
3. Arend, R. J. (2013). Ethics-focused dynamic capabilities: A small business perspective. *Small Business Economics*, 41(1), 1–24.
4. Audretsch, D. & Keilbach, M. (2004). Entrepreneurship Capital and Economic Performance. *Regional Studies*, 38(8), 949-959.
5. Ashmos, D.P., Duchon, D. & McDaniel Jr, R.R. (2000). Organizational Responses to Complexity: The Effect on Organizational Performance. *Journal of Organizational Change Management*, 13(6), 577-595.
6. Ashraf, B. N. (2020). Stock markets' reaction to COVID-19: Cases or fatalities? *Research in International Business and Finance*, 54, 101249. Available at: <https://doi.org/10.1016/j.ribaf.2020.101249>.
7. Ba kowski, K., Ferdinandusse, M., Hauptmeier, S., Jacquinot, P. and Vilým, V. 2021. The macroeconomic impact of the Next Generation EU instrument on the euro area. [Online]. Occasional Paper Series 255, European Central Bank. Available at: <https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op255-9391447a99.en.pdf>
8. Battisti, M., & Deakins, D. (2017). The relationship between dynamic capabilities, the firm's resource base and performance in a post-disaster environment. *International Small Business Journal*, 35(1), 78–98.
9. Baumol, W.J. (1990). Entrepreneurship, Productive, Unproductive and Destructive. *Journal of Political Economy*, 98(5), 893-921
10. Belchior, R. F., & Lyons, R. (2021). Explaining entrepreneurial intentions, nascent entrepreneurial behavior and new business creation with social cognitive career theory—a 5-year longitudinal analysis. *International Entrepreneurship and Management Journal*, 17(4), 1945-1972.
11. Belitski, M., Guenther, C., Kritikos, A. S., & Thurik, R. (2022). Economic effects of the COVID-19 pandemic on entrepreneurship and small businesses. *Small Business Economics*, 1-17.
12. Birch, L.D. (1987). *Job creation in America*. London: Free Press.
13. Burgelman, R.A. (1983). A Process Model of Internal Corporate Venturing in the Diversified Major Firm. *Administrative Science Quarterly*, 28, 223-244.
14. Carree, M.A. & Thurik, A.R. (2003). The Impact of Entrepreneurship on Economic Growth. D.B. Audretsch & Z.J. Acs (Eds.), *Handbook of Entrepreneurship Research*. 437-471, Boston/Dordrecht: Kluwer Academic.
15. Caruana, A., Ewing, M.T. & Ramaseshan. (2002). Effects of Some Environmental Challenges and Centralization on the Entrepreneurial Orientation and Performance of Public Sector Entities. *Service Industries Journal*, 22(2), 43-58.
16. Digitally Driven (2020). U.S. small businesses find a digital safety net during COVID-19. Report. Connected Commerce. Available at: <https://connectedcouncil.org/wpcontent/uploads/2020/09/Digitally-Driven-Report.pdf>.
17. Digitally Driven (2021). European Small businesses find a digital safety net during Covid-19. Report. Connected Commerce. Available at: <https://digitallydriven.connectedcouncil.org/europe/>

18. Estrin, S., Mickiewicz, T., Stephan, U., & Wright, M. (2019). Entrepreneurship in emerging markets. *The Oxford handbook of management in emerging markets*, 457.
19. Fulster, S. (2000). Do Entrepreneurs Create Jobs? *Small Business Economics*, 14(2), 137-148.
20. Gartner, W.B. (1988). Who is an entrepreneur? is the Wrong Question. *Entrepreneurship Theory & Practice*, 13(4), 47-68.
21. Hameed, I. & Ali, B. (2011). Impact of Entrepreneurial Orientation, Entrepreneurial Management and Environmental Dynamism on Firm's Financial Performance. *Journal of Economics and Behavioral Studies*, 3(2), 101-114.
22. Hayek, F.A. (1948). *Individualism and Economic Order*. Chicago: University of Chicago Press.
23. He, Q., Liu, J., Wang, S., & Yu, J. (2020). The impact of COVID-19 on stock markets. *Economic and Political Studies*, 8(3), 275-288. Available at: <https://doi.org/10.1080/20954816.2020.1757570>.
24. Hussain, S., Sandhu, M. R. S., & Zaheer, M. (2021). Entrepreneurial Orientation in Born Internationalized Firms: A Study from Developing Country. *Journal of Asian Development Studies* Vol, 10(1).
25. Kadda, D. (2020, September 3). Fall - GDP shock by 15.2% in the second quarter of 2020. *Capital.gr*. <https://www.capital.gr/oikonomia/3478134/ptosi-sok-tou-aep-kata-15-2-to-deutero-trimi-no-tou-2020/>
26. Kamal, N., & Lundqvist, H. (2019). The role of Entrepreneurial Orientation and Dynamic Capabilities during Internationalization: A comparative case study of Swedish SME's.
27. Khandwalla, P. N. (1976). Some top management styles, their context and performance. *Organization and Administrative Sciences*, 7(4), 21-51.
28. Lumpkin, G.T. & Dess, G.G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking it to Performance. *Academy of Management Review*, 21(1), 135-172.
29. McGee, J., Khavul, S., Harrison, D., & Perez-Nordtvedt, L. (2012). When the going gets tough, the tough get going entrepreneurially: The relationship between environmental hostility, entrepreneurial orientation, entrepreneurial self-efficacy and firm performance (summary). *Frontiers of Entrepreneurship Research*, 32(5), 16.
30. Mehmood, T., Alzoubi, H. M., & Ahmed, G. (2019). Schumpeterian entrepreneurship theory: Evolution and relevance. *Academy of Entrepreneurship Journal*, 25(4).
31. Miller, D. & Friesen, P.H. (1983). Strategy-Making and Environment: The Third Link. *Strategic Management Journal*, 4(2), 221-235.
32. Pereira, J., Braga, V., Correia, A., & Salamzadeh, A. (2021). Unboxing organisational complexity: how does it affect business performance during the COVID-19 pandemic?. *Journal of Entrepreneurship and Public Policy*, 10(3), 424-444.
33. Rasiah, R., Ng, Y. K., & Cheong, K. C. (2023). Mediating and moderating effects of social networks and business environment on the relationship between entrepreneurial orientation and sustainable competitive advantage among small and medium Malaysian firms in Cambodia. *Asian Journal of Technology Innovation*, 1-22.
34. Rosenbusch, N., Rauch, A. & Bausch, A. (2013). The Mediating Role of Entrepreneurial Orientation in the Task Environment-Performance Relationship: A Meta-Analysis. *Journal of Management*, 39(3), 633-659.
35. Scarborough, N.M. and Cornwall, J.R. (2019), *Essentials of Entrepreneurship and Small Business Management*, Pearson, New York
36. Schultz, T.W. (1979). *Concepts of Entrepreneurship and Agricultural Research*. Kaldor Memorial Lecture, Iowa State University.
37. Schumpeter, J.A. (1934). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Cambridge, MA: Harvard University Press.
38. Singh, R. (2020). The need for increasing black entrepreneurship as a result of the Covid-19 pandemic. *International Journal of Entrepreneurship and Economic Issues*, 4(1), 16-23.
39. Shane, S. & Venkataraman, S. (2000). The Promise of Entrepreneurship as a Field of Research. *Academy of Management Review*, 25(1), 217-226.
40. Shirokova, G., Bogatyreva, K., Beliaeva, T., & Puffer, S. (2016). Entrepreneurial orientation and firm performance in different environmental settings: contingency and configurational approaches. *Journal of Small Business and Enterprise Development*, 23(3), 703-727.
41. Storey, D. (1994). *Understanding the Small Business Sector*. London: Routledge.
42. Tetenbaum, T.J. (1998). Shifting Paradigms: From Newton to Chaos. *Organizational Dynamics*, 26(4), 21-32.

43. United Nations. 2020. Financing for Development in the Era of COVID-19 and Beyond Initiative (FFDI). [Online]. [Accessed 08 August 2021]. Available from: <https://www.un.org/en/coronavirus/financing-development>
44. Urbano, D., Aparicio, S., & Audretsch, D. (2019). Twenty-five years of research on institutions, entrepreneurship, and economic growth: what has been learned?. *Small Business Economics*, 53, 21-49.
45. Van Praag, C.M. & Versloot, P.H. (2007). What Is The Value Of Entrepreneurship? A Review of Recent Research. *Small Business Economics*, 29(4), 351–382.
46. Wales, W., Gupta, V. K., Marino, L., & Shirokova, G. (2019). Entrepreneurial orientation: International, global and cross-cultural research. *International Small Business Journal*, 37(2), 95-104.
47. Wennekers, S. & Thurik, R. (1999). Linking Entrepreneurship and Economic Growth. *Small Business Economics*, 13(1), 27-56.
48. World Bank Policy Research Working Paper Series. [Accessed 08 August 2021]. Available at: <https://openknowledge.worldbank.org/handle/10986/3991>
49. Zahra, S. A. (2020). International entrepreneurship in the post Covid world. *Journal of World Business*, 101143
50. The specialization of the new support measures by the