

## NAVIGATING MARKET DYNAMICS: A LONGITUDINAL STUDY OF ROMANIA'S LEADING PRINTING FIRMS

Julia Anamaria ȘIȘU<sup>1</sup>, Marian NĂSTASE<sup>2</sup>, Andrei-Constantin TÎRNOVANU<sup>3</sup>

**Abstract.** *In an era marked by rapid digital transformation, economic uncertainties, and the disruptive impact of the COVID-19 pandemic, understanding the mechanisms that contribute to organizational resilience is crucial for both academic inquiry and practical management. This longitudinal study scrutinizes the financial performance of all Romanian printing firms employing five or more individuals, spanning a four-year timeframe from 2019 to 2022. Situated within the overarching theoretical construct of organizational resilience, the research aims to evaluate how these firms have navigated the complexities of economic oscillations and sectoral digital transformation. Employing comprehensive statistical analyses, the study uncovers patterns of financial contraction and subsequent recovery, notably influenced by the disruptive events of the COVID-19 pandemic. Counter-cyclical profit dynamics and the relative stability of employee numbers are among the key findings. These results expand the understanding of financial resilience in the Romanian printing industry and offer nuanced insights for both academics and practitioners, particularly in the context of significant disruptive events like global pandemics.*

**Keywords:** Financial Resilience in Printing Industry, Covid-19, Romanian Printing Sector, Market Dynamics, Organizational Stability, Employee Productivity.

DOI <https://doi.org/10.56082/annalsarscieco.2023.2.91>

### 1. Introduction

The transition from traditional operations to digitalization is a ubiquitous challenge facing various sectors today. This transformation is amplified by economic fluctuations and unforeseen disruptive events, such as the COVID-19 pandemic. Understanding how industries navigate these complexities is crucial, not only for academic discourse but also for practical management strategies. The printing industry in Romania represents a case in point; a sector grappling with the twin challenges of digital transformation and economic uncertainty.

---

<sup>1</sup> PhD Student, Faculty of Management, Bucharest University of Economic Studies, Bucharest, Romania (sisujulia16@stud.ase.ro)

<sup>2</sup> Prof. PhD, Faculty of Management, Bucharest University of Economic Studies, Bucharest, Romania (marian.nastase@man.ase.ro)

<sup>3</sup> PhD Student, Faculty of Management, Bucharest University of Economic Studies, Bucharest, Romania (tirnovanuandrei17@stud.ase.ro)

---

Existing literature on organizational resilience provides valuable frameworks for analyzing how companies adapt to change. For instance, Păunescu & Mátyus [5] explored resilience measures among micro and small enterprises in Romania during the COVID-19 pandemic. Their study emphasized the importance of openness to production innovation, efficient internal operational management, and strong community support. Another pertinent study by Achim et al. [1] employed a multivariate panel data analysis on 218 Romanian companies across different sectors to evaluate business performance in response to the pandemic. Their findings revealed that proper liquidity management, equity financing, and increased company size were key factors in consolidating economic performance. However, this body of work often lacks a sector-specific focus, leaving a gap in our understanding of how individual industries, such as the printing sector in Romania, are coping with current challenges. While the existing literature provides a foundation for understanding organizational resilience, it does not specifically address the unique challenges and opportunities facing the Romanian printing industry. This study aims to fill this gap by examining how printing companies in Romania, employing five or more individuals, have navigated economic fluctuations and sectoral shifts from 2019 to 2022. The study employs a longitudinal approach, incorporating financial metrics and employee data to assess organizational resilience within this specific industrial context.

In light of this, the concept of entrepreneurial ecosystems (EE) as advanced by Philip et al. [6] offers a salient framework for additional scrutiny. According to their study, the resilience of EEs is a function of their heterogeneity—diversity among the types of enterprises, sectors, and even the kinds of innovations that are being pursued. This heterogeneity, in interaction with ecosystem coherence—meaning the degree of alignment among the actors and institutions within the ecosystem—facilitates the system's overall resilience. These dual factors enable entrepreneurial ecosystems to effectively recover and adapt to various forms of disturbances, from economic downturns to technological disruptions. Applying this lens to the Romanian printing industry implies that resilience could be influenced not only by the adaptability and strategies of individual firms but also by the diversity and coherence within the broader entrepreneurial ecosystem that encompasses these firms. Therefore, the Romanian printing industry's ability to navigate economic and technological fluctuations might also be contingent upon the state of its entrepreneurial ecosystem, which can include relationships with suppliers, customers, regulators, and even competing firms.

---

Building on this context, the study by Jacques et al. [4] provides a nuanced understanding of how digital finance mechanisms can influence corporate resilience. Specifically, they found that digital finance significantly mitigates the severity of crises such as the COVID-19 pandemic, especially for smaller firms and those with limited cash reserves. The role of digital finance extends beyond transactional efficiencies to include strategic advantages, such as improved access to external financing and reduced financing costs. These observations suggest that the strategic use of digital finance could be particularly beneficial for companies in sectors undergoing digital transformation, like the Romanian printing industry. The study further indicates that firms in regions with a higher prevalence of digital finance are likely to face fewer financial frictions, a factor that could be crucial in highly competitive and low-margin sectors.

## **2. Literature review**

The existing body of literature provides frameworks for understanding resilience and adaptability across various sectors, including small and micro enterprises. However, much of this research lacks specificity when it comes to particular industries like the printing sector.

In the current business landscape, resilience and adaptability in the printing industry are informed by a combination of strategies that vary depending on market conditions. These strategies are not isolated but interact in specific configurations that either enhance or inhibit firm performance. For instance, while diversification is often seen as a risk-mitigation strategy, its effectiveness can be compromised if it coexists with certain other strategies like market penetration. On the other hand, entrepreneurial and product development strategies appear to be foundational across different market conditions, suggesting that they may be indispensable for resilience in fluctuating economic landscapes. During crisis situations, firms need to be agile in adjusting their strategic configurations. Initial stages of a crisis may require a focus on entrepreneurial and product development strategies to ensure immediate survival and resilience. As the crisis progresses, the importance of market penetration and cooperation could become more pronounced, requiring a shift in strategic focus. The presence or absence of specific strategies in these combinations significantly influences firm performance, indicating that strategic agility is crucial during turbulent times.

However, it's important to note that the effectiveness of these strategies is not static; it evolves with the stages of a crisis. While certain strategies may become less effective

---

as market conditions change, they should not be entirely discounted for future applicability. For example, cooperative strategies, although found to be less effective during certain crisis periods, may still offer value under different market conditions or crisis stages. This nuanced understanding of strategic configurations in the printing industry aligns with sector-specific studies that explore resilience and adaptability among small printing firms during various phases of market conditions and crises [5].

The concept of resilience as articulated by Quenum et al. [7] provides another layer of understanding to our discussion on adaptability and performance in the printing industry. According to Quenum et al., resilience is measured by the proximity of disrupted trajectories to a planned trajectory. In the context of the printing industry in Romania, this perspective offers a metric for evaluating the effectiveness of various strategic configurations. Firms may have pre-established plans that outline expected performance trajectories. However, unexpected events like economic downturns or technological disruptions can divert these trajectories. The agility of a firm in realigning its disrupted path closer to its planned trajectory can serve as an indicator of resilience. This realignment often involves adjustments in strategic configurations, which, as discussed earlier, vary in effectiveness depending on the market conditions and phases of a crisis. Therefore, understanding the dynamic nature of resilience in this industry requires not only recognizing the combinations of strategies effective in specific contexts but also assessing how these strategies help in maintaining or returning to a planned performance trajectory.

The distinction between reactive and proactive resilience strategies, as explored in the context of business model adjustments, offers a refined lens for understanding resilience in the Romanian printing industry. Emerging trends, such as digital transformation and economic fluctuations, impact all elements of a business model. Firms in the printing industry can either view these trends as risks or opportunities, and their strategic approach to these trends can greatly influence their resilience. Specifically, a proactive resilience strategy, which could involve the use of foresight methods like scenario planning, appears to be particularly promising. This approach enables firms to anticipate market trends, thereby allowing for timely modifications or re-designs to their business models. The addition of proactive strategies to the discussion of resilience provides a more comprehensive view of how firms in the Romanian printing industry can navigate complex market dynamics. By proactively positioning themselves to capitalize on emergent trends, these firms can enhance their

resilience and adaptability, thus aligning well with the need for dynamic strategic configurations in fluctuating economic landscapes [3].

The 'Penalty of Change' measurement method introduced by Alexopoulos et al. [2] offers a quantitative approach to assessing resilience at the manufacturing level. This method identifies potential disruptive events and estimates their likelihood and impact on manufacturing systems. The approach is particularly useful for large production volumes and can be adapted to various production methods. Its strength lies in its structured approach to resilience, employing quantitative metrics to measure a system's ability to withstand disruptions. The method's application is enhanced by the use of IT systems and data analytics tools, which aid in the identification and assessment of potential future disruptions. However, the reliability of this method may be influenced by the subjective assumptions made regarding the potential events and their likelihood. Therefore, the approach underscores the importance of systematic measurement and monitoring in understanding resilience, beyond strategic adjustments and proactive planning.

### **3. Research methodology**

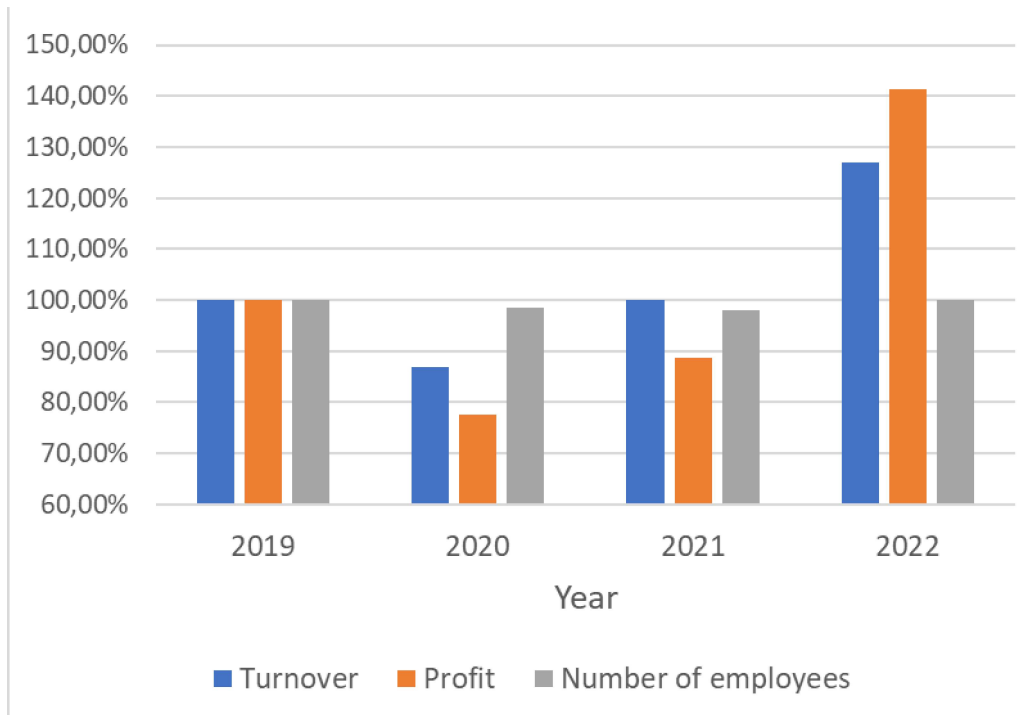
Statistical analyses were performed utilizing IBM SPSS Statistics, Version 24, as the primary software tool. Descriptive statistics were computed to summarize key characteristics of the data across multiple years (2019-2022), as well as to capture year-over-year variations. To examine the relationships between the variables under study, both Spearman's rank-order and Pearson's product-moment correlation coefficients were employed. These measures provided insights into the strength and direction of monotonic associations between the variables, allowing for a nuanced interpretation of the data.

This study was conducted on a comprehensive dataset comprising all companies operating in the printing sector in Romania, specifically those classified under the NACE (Classification of Economic Activities in the European Community) code 1812, which pertains to "Other Printing Activities." The inclusion criteria further narrowed the focus to companies employing a workforce of five or more individuals. Utilizing these parameters, the research identified a total of 377 companies that met both the employment and industry classification requirements. This approach ensures a targeted yet expansive dataset, providing a robust foundation for the subsequent statistical analyses.

---

#### 4. Results

Table 1: Tunover, Profit and Number of Employees Change



*Source: Authors' processings.*

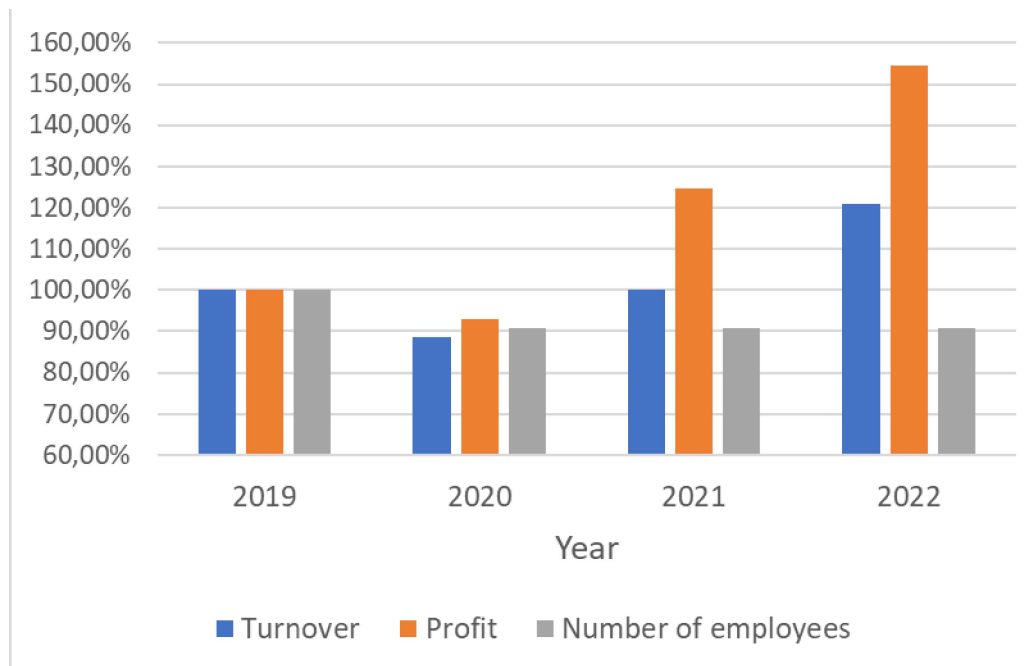
The data suggests a period of financial contraction or market challenges in 2020, with reduced turnover and profitability. Despite the decline in employee numbers in 2021, the firms exhibited heightened profitability, potentially pointing to strategic reorientations, automation, or improved operational efficiencies. By 2022, these firms not only recovered but demonstrated a robust financial position, surpassing previous years in terms of turnover and sustaining employee numbers.

These fluctuations are emblematic of the larger oscillations within the Romanian printing industry during the analyzed period, likely influenced by external factors such as digital transformation, global economic uncertainties, and sector-specific dynamics.

Furthermore, it's noteworthy to mention that while the turnover and profit showed considerable resilience and growth from 2020 to 2022, the number of employees did not follow a similar recovery. This could suggest that the industry has leaned more towards technological investments or outsourcing services, which led to a diminished

need for a large workforce. Additionally, the pronounced spike in profitability in 2022, relative to the turnover, may indicate improved cost management strategies or the advent of higher-margin products or services. The continuous decline in employee numbers across the years, despite rising financial metrics, highlights the imperative for the industry to retrain and reskill its workforce to adapt to the evolving business landscape.

Table 2: Tunover, Profit and Number of Employees Change, Median Values



*Source: Authors' processings.*

From the onset, the aggregate data presents a brief dip in turnover in 2020, which is contrasted by an impressive surge by 2022. This sharp recovery to 126.99% of 2019 values indicates a buoyant aggregate performance. However, when we transition our focus to the median, a more consistent and positive trajectory becomes apparent. The median turnover experiences continuous growth across the years, reaching 121% of the 2019 figure by 2022.

Profit metrics further amplify these differences. While the aggregate profit sees a significant decline in 2020 to 77.52% and a spirited recovery to 141.27% in 2022, the median profit, devoid of extreme values, amplifies a different narrative. Despite a

---

slight reduction in 2020, by 2022, the median profit swells to an even more robust 154.66%, outpacing the aggregate growth.

Employee counts remain relatively stable in both datasets. However, the median remains steadfast throughout, suggesting that the central tendency of firms in the dataset maintained their employee counts.

An additional observation from the median values is the disconnect between the employee count and profit. The stable median employee count combined with rising profit suggests that businesses were able to optimize their operations to achieve higher profitability with the same or fewer resources. This could be indicative of investments in technology, automation, or streamlined business processes. The persistence in employee numbers, despite the challenges faced in 2020, could also reflect a commitment from businesses to retain their workforce, understanding the long-term value of a trained and experienced team. Furthermore, the discrepancy between aggregate and median values underscores the influence of outliers or exceptionally large firms in the dataset. Their performance could significantly skew the aggregate results, highlighting the importance of considering both measures to grasp the true dynamics of the industry.

Table 3: Correlations Between Year-Over-Year Chanes In Turnover, Profits And The Number Of Employees Over The Studied Period

Correlations		TO 2019-2020	TO 2020-2021	TO 2021-2022	NP 2019-2020	NP 2020-2021	NP 2021-2022	EMP 2019-2020	EMP 2020-2021	EMP 2021-2022
Spearman's rho	Turnover 2019-2020	1								
	Turnover 2020-2021	-.190**	1							
	Turnover 2021-2022	0,074	0,007	1						
	Net Profit 2019-2020	.529**	-.154**	0,026	1					
	Net Profit 2020-2021	-.236**	.600**	0,003	-.366**	1				
	Net Profit 2021-2022	0,037	-0,075	.524**	0,04	-.208**	1			
	Employees 2019-2020	.372**	0,081	-0,027	0,077	-0,014	-0,056	1		
	Employees 2020-2021	.212**	.357**	0,104	0,084	.131*	-0,024	0,089	1	
	Employees 2021-2022	0,033	.238**	.303**	-0,01	.139**	0,078	-0,063	0,093	1
** Correlation is significant at the 0.01 level (2-tailed).										
* Correlation is significant at the 0.05 level (2-tailed).										

Source: Authors' processings.

### Counter-Cyclical Profit Recovery Dynamics

Analysis of the data reveals a significant negative correlation between changes in profits from 2019-2020 and from 2020-2021. This counter-cyclical trend suggests that companies encountering a pronounced decline in profits during the 2019-2020 period were likely to experience a subsequent improvement in profits in the 2020-2021



period, and vice versa. The negative correlation substantiates this observation, indicating a reversal in profit trajectories.

### **Temporal Symmetry in Profit Fluctuations**

The same counter-cyclical pattern is observed within the year 2020-2021 itself. That is, firms that saw a larger drop in profits in 2020 were generally those that experienced a more robust recovery in 2021. This consistency across periods reinforces the significance of the counter-cyclical trend in profitability.

### **Independence of Employee Metrics:**

It is noteworthy that the changes in the number of employees were not statistically correlated from year to year. This lack of correlation implies that shifts in employee numbers do not follow the trends observed in profits, suggesting a set of influencing factors distinct from those impacting profitability.

### **Low Correlation Across Financial Metrics:**

The data indicate that companies which experience larger fluctuations, both declines and recoveries, in turnover and profits are frequently the same entities. However, these correlations are low, suggesting that while there is some overlap, the relationship is not strong enough to infer a direct causal linkage.

### **Persisting Employee Stability:**

It's significant to point out that the turnover from 2020-2021 and the employee change from 2020-2021 are not statistically correlated. This indicates that, even when turnover was changing (be it increasing or decreasing), the number of employees remained relatively consistent, showing that workforce changes were independent of turnover dynamics.

### **Interplay of Turnover and Profit:**

A positive and significant correlation between changes in turnover and profit from 2019-2020 suggests that companies which witnessed a drop in turnover during this period also saw a decline in profits. However, as mentioned, the correlation is not overwhelmingly high, underscoring the idea that other external factors might have played a role in influencing profitability.

### **Subdued Year-Over-Year Employee Dynamics:**

---

The year-on-year correlations between changes in employee numbers are generally not statistically significant, emphasizing the decoupled nature of employment from the financial dynamics of the organizations in the dataset. This further strengthens the argument that employee metrics remained somewhat impervious to the financial fluctuations during the studied period.

**Table 4: Correlations between turnover, profit and the number of employees**

		Turnover	Profit	No of employees
Turnover		1		
Profit		0,634	1	
No of employees		0,842	0,456	1

*Source: Authors' processings.*

The number of employees exhibits a strong positive correlation with turnover, as evidenced by a correlation coefficient of 0.842. This suggests that as the number of employees in a company increases, it is likely to experience a proportional increase in its turnover.

Conversely, the correlation between profit and the number of employees is relatively moderate, with a correlation coefficient of 0.456. While there is a positive relationship, indicating that companies with more employees tend to have larger profits, the strength of this relationship is not as robust as the former.

**Table 5: Spearman correlation coefficients between turnover, profits and number of employees across the years of the studied period**

	TO 2019	TO 2020	TO 2021	TO 2022	NP 2019	NP 2020	NP 2021	NP 2022	EMP 2019	EMP 2020	EMP 2021	EMP 2022
Turnover 2019	1	0,961	0,93	0,896	0,61	0,514	0,522	0,505	0,861	0,878	0,838	0,837
Turnover 2020		1	0,941	0,905	0,598	0,605	0,541	0,536	0,817	0,855	0,817	0,817
Turnover 2021			1	0,952	0,574	0,549	0,646	0,6	0,784	0,821	0,831	0,817
Turnover 2022				1	0,527	0,516	0,62	0,665	0,768	0,797	0,789	0,827
Net Profit 2019					1	0,715	0,658	0,565	0,464	0,493	0,481	0,483
Net Profit 2020						1	0,654	0,614	0,371	0,432	0,412	0,435
Net Profit 2021							1	0,751	0,387	0,422	0,46	0,468
Net Profit 2022								1	0,399	0,432	0,437	0,477
No of employees 2019									1	0,914	0,86	0,856
No of employees 2020										1	0,918	0,892
No of employees 2021											1	0,921
No of employees 2022												1

*Source: Authors' processings.*

**Consistency in Company Rankings:** The company rankings based on turnover display a high degree of correlation year on year, as evidenced by the coefficients exceeding 0.89 in each case. Rankings based on the number of employees also demonstrate considerable stability, with correlation coefficients exceeding 0.8 across the years. However, rankings derived from profits exhibit more variability, with correlation coefficients ranging from 0.505 to 0.751.

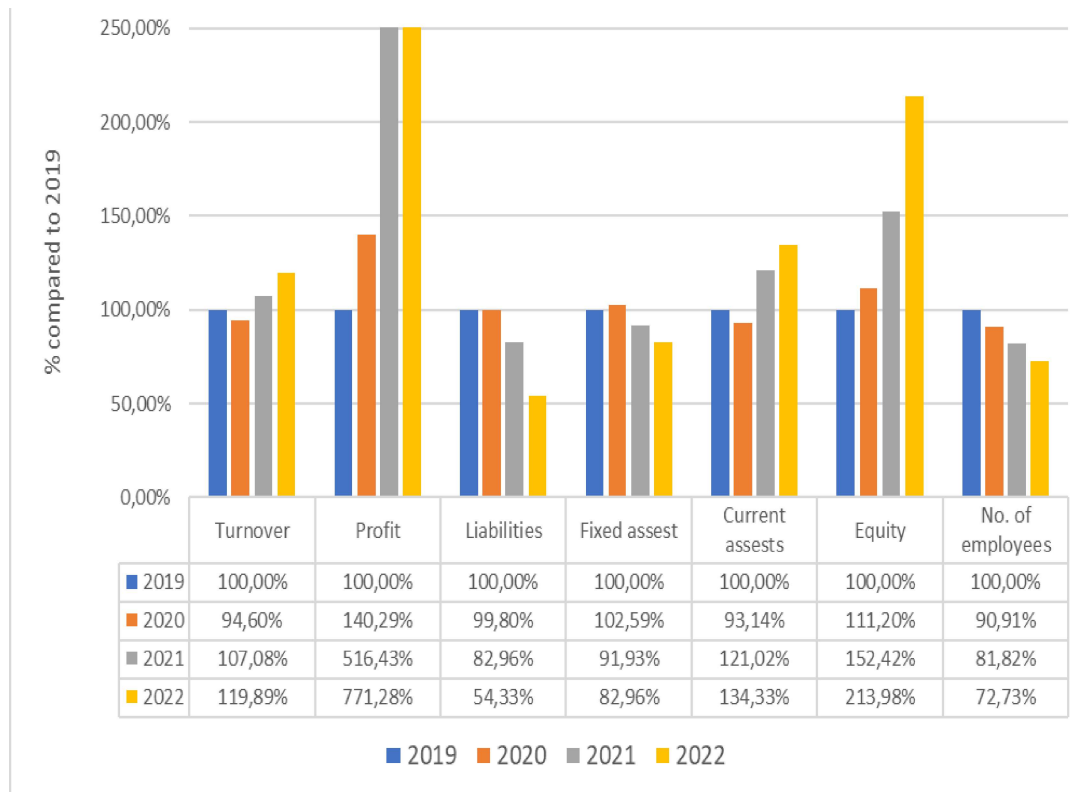
**Correlation between Turnover and Number of Employees:** With the exception of 2019, the number of employees in a given year typically correlates most strongly with the turnover of that same year. For instance, the correlation of turnover in 2020 with the number of employees in 2020 is 0.855, which is higher than its correlation with the number of employees from either 2019 (0.817) or 2021 (0.821). Nonetheless, in 2019, the correlation coefficient between turnover and the number of employees is 0.861, which, while strong, is not the highest for that year.

**Particular Observations for 2019 and 2020:** The number of employees in 2020 shows a slightly stronger correlation with the turnover of 2019 (0.878) than with that of 2020 (0.855). Similarly, the turnover for 2019 correlates more strongly with the number of employees in 2020 (0.878) than with those in 2019 (0.861). This suggests a potential lag effect where the workforce size in 2020 could be more reflective of the turnover from the previous year rather than concurrent turnover. This might hint at companies retaining or adjusting their workforce size based on previous years' financial performance.

**Variability in Profits:** Rankings predicated upon profits showcase a broader range of correlation coefficients, suggesting higher levels of variability and possibly indicating that profit is influenced by multiple external and internal factors beyond just turnover and employee numbers.

---

Table 6: An Illustration. Financial Indicator Changes In The Studied Period Of A Medium Sized Company From The Dataset



*Source: Authors' processings.*

Taking one company as an illustrative example, which sits median in terms of its size within our dataset: its financial indicators, as depicted in the graph, resonated with the overall trend in certain aspects but diverged in others. Specifically, this entity faced a moderate downturn in turnover in 2020 and a concurrent decrease in current assets. By 2021, turnover showed a revival to 107.08% compared to the baseline of 2019, and in 2022, it advanced further to 119.89%. Nevertheless, its profit trajectory remained on an upward curve throughout the analysis duration, with a remarkable increase to 516.43% in 2021 and 771.28% by 2022. This consistent upward trend was similarly observed in its equity. Equity reached 152.42% in 2021 and surged to an impressive 213.98% in 2022. When examining liabilities, the year 2020 presented a growth that, although robust, was more subdued when contrasted with the growth of 2019. Liabilities slightly diminished to 82.96% by 2021 and witnessed a minor increase to 82.96% in 2022. Conversely,

the employee count of this company showed a continuous decline, albeit at a consistent rate, during the examined period. This decline brought the number to 81.82% in 2021 and further reduced to 72.73% by 2022.

## 5. Discussions

Analysis of the provided data reveals interesting insights into the financial dynamics and workforce trends of the Romanian printing industry over the studied period. A few salient points from the analysis are:

- **Financial Oscillations:** The year 2020 marked a challenging phase, characterized by reduced turnover and profitability. However, a resilient comeback was observed by 2022, with firms surpassing previous financial metrics.
- **Workforce Dynamics:** A continuous decline in employee numbers was recorded, even in the face of rising financial metrics. This suggests increased reliance on technology, automation, or possibly, outsourcing.
- **Median vs Aggregate Values:** The median values often painted a more stable and optimistic picture than the aggregate values, emphasizing the influence of outliers in the dataset.
- **Counter-Cyclical Profit Trends:** Companies experiencing a significant profit decline in 2019-2020 showed a marked improvement in 2020-2021 and vice versa. This highlights the industry's resilience and adaptive capabilities.
- **Employee vs Financial Metrics:** There was a general lack of correlation between changes in employee numbers and financial metrics, suggesting distinct influencing factors.
- **Correlations:** Employee numbers correlated strongly with turnover, indicating that larger companies in terms of workforce often had higher turnovers. However, the relationship between employee numbers and profits was moderate.
- **Company Rankings:** There was consistency in company rankings based on turnover and the number of employees, but rankings based on profits exhibited more variability.

## Conclusions

The data analysis of the Romanian printing industry provides a comprehensive insight into its evolution over the specified timeframe. The year 2020 stands out as a crucial turning point, largely due to the unprecedented disruption of the COVID-19 pandemic, which placed considerable financial strain on the industry, evidenced primarily through a reduction in profitability. Nevertheless, the periods that followed showcased

---

the industry's capacity to rebound, emphasizing its resilience. This recovery, when contrasted with the diminishing workforce, might indicate an increased emphasis on technological adoption or the refinement of operational strategies.

Analyzing the financial metrics, particularly by comparing median values with aggregate figures, offers unique perspectives. Aggregate data, which can be skewed by outliers, might not faithfully capture the industry's intrinsic dynamics. On the other hand, median values, being less influenced by extreme data points, present a more consistent view of the industry, emphasizing the importance of a varied approach to data interpretation.

The financial resilience displayed by the industry after 2020 is impressive. Companies that faced steep profit drops during the pandemic have shown significant recovery rates in the time since. This adaptation hints at the presence of robust industry mechanisms, possibly diversification in revenue avenues, efficient risk management approaches, or a synergy of both.

The observed divergence between financial outcomes and employee numbers warrants deeper exploration. This pattern could indicate an industry in transformation, possibly shifting towards automation or pursuing heightened productivity measures. Such transitions highlight the pressing need for workforce development to match the evolving demands of the industry.

In conclusion, the Romanian printing industry demonstrates a rich and adaptive character through the examined period. Confronted by external challenges such as COVID-19, its subsequent phases of recovery, adaptation, and potential technological advancements underline its dynamic and resilient nature.

### **Acknowledgment**

This research was funded by the Bucharest University of Economic Studies. The authors express their gratitude for the institution's commitment to academic excellence and its invaluable support in facilitating this inquiry.

---

## REFERENCES

- [1] Achim, M. V., Safta, I. L., Văidean, V. L., Mureșan, G. M., & Borlea, N. S. (2022). The impact of covid-19 on financial management: evidence from Romania. *Economic Research-Ekonomska Istraživanja*, 35(1), 1807-1832.
  - [2] Alexopoulos, K., Anagiannis, I., Nikolakis, N., & Chryssolouris, G. (2022). A quantitative approach to resilience in manufacturing systems. *International Journal of Production Research*, 60(24), 7178-7193.
  - [3] Granig, P., & Hilgarter, K. (2020). Organisational resilience: a qualitative study about how organisations handle trends and their effects on business models from experts' views. *International Journal of Innovation Science*, 12(5), 525-544
  - [4] Jacques, Bughin., Berjoan, s., hintermann, f., xiong, y. (2021). Corporate Resilience Out of the COVID-19 Pandemic. *Social Science Research Network*, doi: 10.2139/SSRN.3872434
  - [5] Păunescu, C., & Mátyus, E. (2020). Resilience measures to dealing with the COVID-19 pandemic Evidence from Romanian micro and small enterprises. *Management & Marketing. Challenges for the Knowledge Society*, 15(s1), 439-457.
  - [6] Philip, T., Roundy., Beverly, K., Brockman., Mike, Bradshaw. (2017). The resilience of entrepreneurial ecosystems. *Journal of Business Venturing Insights*, doi: 10.1016/J.JBVI.2017.08.002
  - [7] Quenum, A., Thorisson, H., Wu, D., & Lambert, J. H. (2021). Resilience of business strategy to emergent and future conditions. *Journal of Risk Research*, 24(7), 870-888.
  - [8] Suder, M., Kusa, R., Duda, J., & Dunska, M. (2022). How small printing firms alleviate impact of pandemic crisis? Identifying configurations of successful strategies with fuzzy-set qualitative comparative analysis. *Entrepreneurial Business and Economics Review*, 10(2), 61-80. <https://doi.org/10.15678/EBER.2022.100204>
-