

Challenges and Strategies of Achieving Resilient and Sustainable Courier Sector within a Multi-Hazard Environment in Romania

Lavinia IANCU*

Bucharest University of Economic Studies, Bucharest, Romania

*Corresponding author, lavinia@sustenobil.ro

Abstract. *The current article examines the less explored challenges and strategies for achieving a resilient and sustainable courier sector within a multi-hazard environment in Romania, primarily focusing on its economic aspects. It incorporates a literature review on resilience and analyses balance data from the ListăFirme website from 2008 to 2023. In the year 2007, Romania entered the European Union, integrating into broader European markets and thus contributing to the expansion of the courier sector. The study uses a mix of methods, incorporating in-depth interviews with courier representatives, an online questionnaire and an analysis of the courier companies to evaluate the sector's resilience. Special emphasis is placed on the on-demand delivery solutions during the COVID-19 pandemic when the courier sector faced unprecedented surge in demand and demonstrated its capacity to adapt rapidly to changing market conditions. This focus is relevant given the rise of the GIG economy (Iancu, 2022) and the growing importance of last-mile delivery solutions in modern logistics. The assumptions were that the courier sector has always been resilient, mainly because of its synchronicity with e-commerce development, and that hazardous environments such as the COVID-19 pandemic strengthened the industry instead of weakening it. Guided by the central research question: how to define resilient management practices in the courier sector and how these practices can be applied to other sectors of the economy, the study aims to highlight the principles of resilience. In doing so, it seeks to provide theoretical insights and practical strategies that could enhance resilience across various economic sectors facing similar multi-hazardous challenges.*

Keywords: resilience, courier, socioeconomic resilience, supply chain, sustainability.

Introduction

This paper investigates the Romanian courier sector in the context of a multi-hazard environment, namely the COVID-19 and Russian-Ukrainian war at the border. It attempts to identify the most common difficulties and strategies for achieving resilience, as the courier sector is the heart of online commerce. It doing so, it clarifies the of resilience and multi-hazardous environments.

To prove the sector's resilience, financial reports of the courier sector from the ListăFirme website were analysed to identify the impact of the COVID-19 pandemic on the courier sector between 2020 and 2022, putting the numbers into the broader context from the years 2008 to 2023, that were publicly available at the moment of writing. These were coupled with quantitative and qualitative data from an online questionnaire and in-depth interviews with industry representatives. Business resilience in the multi-hazardous environment is relevant as global economies are more interdependent than ever and geopolitical tensions might create a domino effect on different countries and sectors or simply multi-hazardous events might happen concomitantly.

Little has been written on this topic. The scientific literature focuses on the courier sector and hazards but somewhat separately rather than as a whole. The assumptions were that these hazards strengthened rather than weakened the courier sector, confirming Labib's (2021) theory that entities become even more prepared for the second disaster by learning from the first one.

Literature review

The resilience of the courier sector within a multi-hazardous environment

The COVID-19 pandemic perturbed all industries, especially the transportation and delivery sectors (Iancu, 2023), and accelerated the adoption of e-commerce at a large scale, including food delivery. Couriers' ongoing operations were critical for diminishing the spread of the virus, and that translated into huge volumes of work, later exacerbated by the change of the delivery routes from Ukraine through Romania when war broke out in February 2022. The pandemic proved to be a marathon rather than a sprint for the courier sector. It revealed the whole complexity of the logistic systems when the shocks from the beginning prolonged to years of disturbance. (Schofer et al., 2022) The lockdowns altered the consumers' behaviours towards online shopping, even for groceries, transforming delivery apps into alternatives for in-person shopping and reshaping the modern retail landscapes (U.S. Census Bureau, 2021 apud Schofer et al., 2022).

Labib (2021) compares resilience to a spring that deforms under pressure, but rebounds once the load is removed, much like resilient materials in engineering that combine strength with flexibility (ductility) rather than brittleness. The term "resilience" comes from the Latin "resilio," meaning "to rebound" (Yokomatsu & Hochrainer-Stigler, 2020 apud Labib, 2021). He (2021) notes that these ideas were integrated into the R4 framework of resilience as developed by Tierney and Bruneau (2007, p.15): Robustness – the ability of systems and their components to withstand disaster forces without suffering significant performance loss or degradation; Redundancy – the degree to which systems, components or units can be substituted to continue meeting functional requirements even if there is a major loss of functionality; Resourcefulness – the capacity to diagnose and prioritise issues and to initiate solutions by mobilising the necessary material, monetary, informational, technological and human resources; and Rapidity – the ability to restore functionality quickly to contain losses and avoid prolonged disruptions (Labib, 2021).

To understand disasters and respond to them, Labib (2021) explains the "black swan phenomenon", a rare unforeseen event with great impact that could only be predicted in retrospection, and the "black elephant", a predictable one that was purposely neglected (Taleb, 2010). In this case, the focus must change from efficiency to resilience, from just-in-time to just-in-case management. Scenarios become key in front of uncertainty rather than final solutions. Probability risk assessments must be replaced with grounded possibilities (Labib & Harris, 2015).

The courier sector's resilience in the context of e-commerce is rising. It involves proactive measures that decision-makers can undertake to enhance the absorptive (e.g., physical plant protection), adaptive (e.g., rerouting strategies), and restorative (e.g., repair teams) capacities, ultimately improving resilience metrics (Carvalho et al., 2012; Hosseini et al., 2019; Sun et al., 2022 apud Bruckler et al., 2024).

Studies have examined quantitative methods for assessing supply chain resilience (SCR) and their links to qualitative, theoretical resilience concepts (Bruckler et al., 2024). Han et al. (2020) synthesised the literature on performance metrics in resilience, identifying readiness, response and recovery as the primary capacities and proposed a framework connecting these capacities with corresponding metrics. Similarly, S. Hosseini et al. (2019) reviewed operations research models incorporating resilience metrics and classified resilience actions, proactive or reactive, according to their effectiveness in enhancing absorptive, adaptive and restoring capacities. Both studies noted a gap in developing resilience metrics that explicitly build on these capacities (Han et al., 2020; S. Hosseini et al., 2019).

Further, Ribeiro and Barbosa-Póva (2018) concluded that many quantitative SCR models focus on drivers of resilience (such as network connectivity or supply chain robustness) without

directly quantifying resilience. Likewise, Sharkey et al. (2021) investigated network optimisation in physical and cyber-physical systems, organising networks by robustness, rebound, adaptability and extensibility. They observed that most models prioritise robustness and rebound over adaptability and extensibility. To bridge the gap between the quantitative and resilience approaches, Poulin and Kane (2021) introduced a standardised taxonomy that classifies existing metrics according to the characteristics of the resilience curve.

Other reviews have also focused on quantitative methods aimed at enhancing SCR through specific measures; for example, Hohenstein et al. (2015) and Behzadi et al. (2020) analysed and categorised these methods separately, while Snyder et al. (2016) grouped operations research and management science methods by their objectives—such as evaluating disruption impacts on supply chains or modelling sourcing strategies and found that most models consider only a single resilience action (apud Bruckler et al., 2024).

Multiple aspects must be considered when estimating the effect of COVID-19 on business sustainability performance. Furthermore, the Business Sustainability Performance Assessments (BSPA) must be enhanced to prepare for future hazards, developing new criteria or sub-criteria, such as sanitary measures, crisis management and lockdown protocols, to mitigate the adverse effects on business sustainability and thus provide resilience. (Saulick et al., 2023)

The courier and last-mile ecosystem's future relies on building resilience, which requires focusing on factors such as fulfilment timelines, the types of goods transported and routing efficiency (Suguna et al., 2022; Sakas et al., 2022).

Individuals' behaviours, attitudes and choices underpin the learning of economic dynamics. During the COVID-19 pandemic, reducing physical interactions (Xiong et al., 2020) disrupted industries that rely on face-to-face contact, including couriers.

Bonacini et al. (2020) examined the consequence of lockdown policies in Italy, while Qiu et al. (2020) and Venter et al. (2020) analysed how contagion risks in adjacent cities and following reductions in activity not only shortened physical interactions, but also led to improvements in air quality. Thus, many companies that rely on in-person exchanges have adapted by leveraging digital and virtual channels. In addition, the uncertainty that followed the pandemic has determined innovative responses across sectors. Danisman and Tarazi (2020) discussed how the post-pandemic outlook fuelled the integration of new financial technologies, a trend echoed by Zahra (2020) and Dias et al. (2020) in their examinations of global shifts toward innovative practices.

Oldekop et al. (2020) argued that interconnected modern capitalism is a critical factor that causes the response to such crises, impacting economic markets and operational strategies within the courier sector. In parallel, Goodell (2020) drew comparisons between market responses to pandemics and other catastrophic events like natural disasters or terrorist attacks, a pattern further supported by studies from Lyócsa and Molnár (2020), Kaplanski and Levy (2010) and Goel et al. (2017) that document the vulnerability of markets during such disturbances. Empirical proof indicates that unanticipated catastrophes can precipitate sharp financial downturns (e.g., Barro, 2006; Gabaix, 2012; Gourio, 2012), with anxiety and negative sentiment intensifying risk aversion and, consequently, dampening market performance (Ariel, 1990; Kamstra et al., 2000, 2003; Cohen-Charash et al., 2013).

Ho and Wyer (2023) and Buchheim et al. (2022) underscore the complex connection between positive and negative for companies that incorporate these sentiments into their strategic outlooks. The courier sector must adjust to exterior shocks and evolving market sentiments to achieve resilience and sustainability in a challenging, multi-hazardous environment (Cerqueti & Ficcadenti, 2023).

Movement restrictions and the closure of physical shops led consumers to rely on online shopping. More than 50% of respondents in a survey reported using home delivery services during the pandemic (Statista, 2021).

Online customers prioritise safety and convenience when choosing courier companies. (Kunyska et al., 2021 apud Sakas et al., 2022) That will likely endure after the pandemic, emphasising the need for innovative solutions in the last-mile delivery. (Sakas et al., 2022) Product quality, brand reputation and the reliability of information sources contribute to the perceived risk in online purchasing decisions. (Rosillo-Díaz et al., 2019 apud Sakas et al., 2022). Further, consumers often depend on personalised information, word-of-mouth recommendations and brand familiarity to mitigate perceived risks, especially in online auctions (Ha, 2002 apud Sakas et al., 2022). Electronic word-of-mouth (eWoM) is key in repurchase intentions, mediated by brand loyalty (Praharjo, 2016 apud Sakas et al., 2022). Online reviews also influence consumers' perceived risks and visit intentions in sectors like hospitality (Huifeng & Ha, 2021 apud Sakas et al., 2022; Huifeng, Ha, & Lee, 2020 apud Sakas et al., 2022). Consumer trust in e-commerce platforms varies across cultures (Teo & Liu, 2007 apud Sakas et al., 2022). Brand names matter in reducing perceived risks during online shopping (Huang, Schrank, & Dubinsky, 2004 apud Sakas et al., 2022). The quality of e-commerce platforms, including usability and design, impacts customer satisfaction, perceived value and loyalty (Tzavlopoulos et al., 2019 apud Sakas et al., 2022), thus contributing to the courier sector's resilience.

In order to continue their operations, guidelines were implemented to ensure the continuity of courier services during the pandemic. For example, the drivers of freight transport vehicles weighing over 2.4 tonnes were exempted from quarantine measures provided they adhered to health and safety protocols (Agroberichten Buitenland, 2020).

At the national level, Romania often faces financial, social and environmental hazards. Economic volatility amplifies the country's vulnerability, including recessions and external shocks such as energy price fluctuations, supply chain disruptions and the rapid rise of the GIG economy, which adds another layer of economic instability because of the limited job security, inconsistent income and lack of social protections, making them even weaker to financial shocks and crises.

During the COVID-19 pandemic, Romania introduced the state of emergency in March 2020, with restrictions on movement, temporary non-essential business closures and curfews, relying on delivery of basic goods. The state of prolonged emergency and lockdowns. The government introduced economic aid measures such as tax deferrals, state-guaranteed loans for SMEs and grants and working capital loans to support businesses facing liquidity shortages (European Commission, 2022). With retail and HoReCa closure and restrictions on mobility, the delivery sector faced an unprecedented surge in demand, especially for groceries, medical supplies and e-commerce IT products. The state introduced early preventive measures in February 2020, such as designating hospitals for isolation and implementing quarantine protocols for travellers from affected regions (European Parliament, 2020). However, courier companies remained operational, adapting to contactless deliveries, personal protective equipment (PPE) and sanitation protocols (European Parliament, 2020). Financial measures to support businesses were implemented, including VAT reimbursements of 9 billion LEI, aiding working capital needs (Government of Romania, 2020). Companies responded by expanding digitalisation efforts and enhancing delivery networks (Carp, 2024). Adjustments include enabling electronic shareholder meetings and extending the state of alert to maintain public health (Kinstellar Law Firm, 2020).

Recognising the surge in demand for delivery services, the Romanian government promoted digitalisation by encouraging contactless delivery methods and the integration of digital

payment systems (Carp, 2024), as well as non-physical deliveries, where parcels were left in front of the door to reduce human contact. Buyers have increasingly engaged with e-payment platforms, replacing physical currency transactions with digital ones (Roggeveen & Sethuraman, 2020 apud Sakas et al., 2022). Customer purchasing intentions during the pandemic were linked to psychological factors, such as anxiety and COVID-related fear driving essential purchases. Depression influenced non-necessity purchases (Di Crosta et al., 2021 apud Sakas et al., 2022) and clients preferred well-established brands. Nevertheless, companies' failure to meet expectations led to diminished loyalty (Mason et al., 2020 apud Sakas et al., 2022). The influx of online information has caused information overload and cyberchondria, leading to unusual purchasing behaviours and voluntary self-isolation among buyers (Laato et al., 2020 apud Sakas et al., 2022).

During the pandemic, mandatory use of protective equipment (masks and gloves) for delivery personnel, contactless delivery options and sanitisation protocols for vehicles and packages, adopting online platforms by traditional businesses to facilitate home deliveries, special permits and exemptions from movement restrictions, access to COVID-19 testing for frontline workers and supported telework for non-operational staff were applied to ensure uninterrupted operations for the delivery. Even authorities promoted partnerships between local producers and delivery platforms to support both sectors during the crisis. However, despite revenue drops, the government provided wage subsidies for businesses to retain employees. Nevertheless, the money arrived late, which caused hardships in the operational field. Acknowledging the sector's importance, the delivery companies, particularly SMEs, were eligible for state-backed loans and grants to sustain operations during the crisis. The uptake of these measures varied across countries and industries. For instance, nearly 80% of Polish firms benefited from public support by the autumn of 2020, but only 47% of Romanian firms reported receiving such support, suggesting barriers such as complex application procedures and lack of awareness (Brookings Institution, 2021). Many companies found the application procedures burdensome, discouraging them from applying for financial aid. The funds dedicated to independent artists were delayed for years and, in some cases, were never accessed. Private companies perceived the fund allocation as not transparent and did not apply for them. (Brookings Institution, 2021).

Methodology

A questionnaire on social and economic resilience was disseminated online to collect insights from businesses on the diverse perspectives on how companies and communities navigate and recover from adversities such as the COVID-19 pandemic. The quantitative and qualitative responses from the questionnaire and in-depth interviews with companies' representatives revealed that remote work, safety and hygiene measures, government support and technology and digitalisation contributed to resilience. Some businesses demonstrated a customer-focused approach by maintaining salaries and staff, avoiding price increases and offering extended payment terms or additional services to support clients during difficult times. Other key economic resilience actions were diversifying products and services, strategic partnerships, technology investments, maintaining financial reserves and offering customer-focused payment or service adjustments. Government support, such as progressive employee taxation and assistance for start-ups, was emphasised as a factor in improving resilience.

The following analysis is based on data retrieved from the ListăFirme.ro website, which compiles reports of Romanian businesses. Romania's population has consistently declined from approximately 21.3 million in 2005 to 19.05 million in 2023 (National Institute of Statistics, n.d.), primarily due to low birth rates, high mortality rates and emigration.

Results and discussions

In 2020, the courier market grew by approximately 35%, reaching a turnover of over 5 billion lei. Express courier services recorded a 40% increase compared to the previous year (ANCOM, 2021). During the pandemic, the delivery sector experienced shifts in employment models, with platforms such as Glovo and Tazz by eMAG attracting many foreign workers to address labour shortages (Iancu, 2022). However, fluctuations in demand also created unstable working conditions for many couriers.

According to the ListăFirme website, the balance sheet reported by the Romanian companies for 2023 within the courier sector registered the following data: 43 companies registered with NACE 5310 - Postal Activities under Universal Service Obligation, with a total turnover of €1,393,827,944, a total net profit of €292,140,324, a total net loss of €8,277,489 and total assets of €817,519,873. Despite relatively few firms, it demonstrates high profitability because of operational efficiency, strong market demand or even a monopoly-like advantage, likely due to being a regulated postal service. There are 4,855 firms registered under the NACE code 5320 - Other Postal and Courier Activities, registering a total turnover of €1,708,380,145, a total net profit of €75,733,497 and a total net loss of €5,147,701, with a total asset that amount €4,487,895,010. With a large number of firms, this segment is highly competitive. The turnover is massive, whereas the profit margin is lower than that of NACE 5310, which may be attributed to lower pricing strategies and higher operational costs, which are characteristic of a fragmented market. NACE 5310 (Postal Activities under Universal Service Obligation) is more profitable per firm than NACE 5320, probably because of the financial advantage of operating in regulated or essential service markets with fewer competitors.

NACE 5320 (Other Postal and Courier Activities) operates in a market with multiple competitors, thus diminishing profit margins. Its high turnover suggests high demand, most likely because of the increase in e-commerce and the need for fast delivery services. NACE 5320's more extensive asset base indicates a higher investment in infrastructure, vehicles and technology to meet logistics demands. In contrast, NACE 5310's relatively lower asset requirement suggests it benefits from a centralised and more cost-efficient operational model.

While representing only 0.53% of total firms nationally, the delivery sector is the backbone for e-commerce, logistics and essential goods delivery, ensuring societal connectivity during crises (e.g., pandemics or natural disasters). The delivery sector supports access to medicines, food and documents, particularly in isolated areas. Despite its small size, the industry demonstrates economic stability, contributing 0.62% of the national net profit. This highlights its operational efficiency and profitability in a competitive environment. NACE 5320 supports online retail growth and fosters economic resilience. The sector sustains job creation with 4,898 firms across both NACEs, particularly for low- to medium-skilled workers. It provides safety for employees who need employment in other industries during economic shocks. The couriers contribute 0.33% of national turnover and 0.56% of total national assets, with a notable economic presence despite its relatively small number of firms, due to the higher entry barrier. NACE 5320 accounts for most of the sector's turnover and assets, dominating the logistics. The industry has a modest 0.14% contribution to total net losses, demonstrating resilience in financial management and risk mitigation, even during periods of economic uncertainty, probably due to their business model and payment options (reimbursement, online payment or cash on delivery).

The delivery sector's resilience is heavily linked to infrastructure investment. The assets tied to this industry (0.56% of the national total) indicate capital commitments, but these investments provide long-term stability and adaptability.

The demand for last-mile delivery services grows as e-commerce expands. Thus, firms functioning under the NACE 5320 integrate technology further and optimise operations. Electric delivery fleets and smart routing can increase efficiency while reducing ecological impact. Regulations and investment in logistics infrastructure can enhance the sector's capacity to serve during hazards. The delivery sector can play a role in reducing inequalities and facilitating economic inclusion by expanding into underserved areas; however, when it comes to the resilience of the sector, there is a difference between local companies and global corporations that consolidate local partnerships and have access to capital from the main headquarters. The last ones (NACE 5320) are more prone to investing in green and eco-friendly delivery solutions to stay viable and competitive while contributing to broader societal goals. Increased operational costs (e.g., fuel, labour, infrastructure) and potential demand volatility during economic downturns can challenge the sector's stability and, therefore, resilience.

The COVID-19 pandemic determined shifts in the work market, with employees being less willing to remain in positions that do not offer personal fulfilment or meet their evolving expectations. As organisations returned to more in-person interactions, many employees still prefer remote or flexible working arrangements. Flexibility becomes vital in workers' overall job satisfaction and retention, especially when employees must manage personal commitments during the workday, such as medical appointments.

Between 2008 and 2023, Romania's net profit evolution showcases economic resilience and societal adaptability, mainly through two major crises: the 2008 global financial breakdown and the COVID-19 pandemic, followed by the Russian-Ukrainian war at the border. The data reflects how economic shocks, fiscal measures and societal shifts influenced the dynamics of profitability. Therefore, during the financial crisis, companies' net profit decreased from €16.9 billion in 2007 to €13.7 billion in 2008 (-18.8%), in line with the worldwide economic contraction. In 2009, profits rebounded by +8.7%, showing signs of recovery. Businesses adapted; many pivoted operations or adopted cost-efficiency strategies. This period also marked the rise of the GIG economy, as financial pressure caused many employees to become freelancers or self-employed.

The delivery sector became increasingly important as companies sought to continue their operations. Many businesses rely on smaller, agile providers to maintain supply chains and services, a trend foreseen for this sector's future boom. From 2010 onward, Romania entered a sustained growth phase, with net profits rising steadily from €14.9 billion in 2010 to €28.7 billion in 2019. The period marked an annual average growth of around +7.9% because of increasing foreign investment, EU structural funds and expanding industries like IT, retail and logistics. The rise of e-commerce during this period also prepared the delivery's role as a core driver of economic activity.

The COVID-19 pandemic disrupted international supply chains and traditional business operations; however, Romania's net profit increased by +7.0% in 2020, reaching €30.7 billion and soared further by +32.9% in 2021, hitting €40.8 billion, primarily because of the pharmaceutical and medical services accessed during these times, as well as due to e-commerce, an alternative to the more restricted brick-and-mortar shopping. Businesses adapted to remote work, digital transformation and heightened consumer demand in the e-commerce and delivery sectors, increasing resilience. During the pandemic, delivery became indispensable as people turned to online shopping and home delivery for essentials. Logistics, food delivery and last-mile delivery companies developed rapidly, providing uninterrupted support during lockdowns. However,

limited operational availability and a high risk of infections forced them to become more resilient and adaptable under crisis conditions.

By 2023, total net profit slightly declined by 9.2%, settling at €47.3 billion, which can be linked to fiscal changes requiring micro-enterprises to employ at least one full-time employee to retain favourable tax benefits. This policy pushed many solopreneurs into formal employment or partnerships, affecting profitability dynamics across sectors. The delivery sector and SMEs showed strength even after the pandemic. Thus, Romania's logistics and e-commerce sectors remain central to growth and adaptability in the face of future challenges.

The number of Romanian companies increased from approximately 530,000 in 2005 to over 925,000 in 2023. Employment showed volatility, peaking at about 4.57 million employees in 2007, declining to 3.92 million in 2010, followed by a recovery to 4.28 million by 2022-2023. Net profits grew from around €10.3 billion in 2005 to a high of €52.1 billion in 2022, albeit with some drops during economic disruptions. The resilience is seen in turnover, which nearly quadrupled over the same period. While debt grew, it increased more slowly than turnover, improving the debt-to-turnover ratio over the last decade.

Despite setbacks, such as reduced employment and gains in debt levels, the recovery after each crisis saw a boost in net profits and company numbers. Profitability and turnover exceeded pre-crisis levels by 2021-2022. Overall, the data suggests that Romanian companies have developed a sustained capacity to overcome economic downturns, recover quickly and strengthen their financial performance in the following years.

New firms created, stable employment growth, improved financial results and robust profitability trends over time support resilience. Over nearly two decades, Romanian companies have steadily expanded in scale, as shown by the jump in the number of companies from around 530,000 in 2005 to more than 925,000 in 2023. Although employment dropped in the 2008–2009 crisis and again in 2020, it generally rebounded to the four-million range, recovering from downturns. Profitability maintained an upward trajectory, with net profits climbing from about €10.3 billion to over €52 billion at their peak, even though losses grew in absolute terms. Crucially, the gap between profitable and unprofitable firms widened in favour of profitable enterprises, signalling an overall sector strengthening.

Turnover quadrupled over the period, and while total debts also increased, the debt-to-turnover ratio has been on a downward trend in recent years. Receivables grew at a pace similar to turnover, which indicates that businesses have maintained balanced cash flows rather than accumulating disproportionate unpaid invoices. Even during global shocks, most notably the 2008–2009 financial crisis and the 2020 pandemic, the data show that Romanian companies have restored profits, kept their workforce relatively stable and continue growing in number. Adjusting marketing strategies, increasing operational flexibility and developing fresh emergency plans contribute to resilience.

During the COVID-19 pandemic, delivery companies thrived despite the sanitary challenges and fatigue, investing massively in digitalisation – especially implementing the automated lockers, and they became a saving domain for other affected industries. For instance, Dragoș Petrescu, CEO of City Grill Company, one of Romania's largest local restaurant chains, declared during the MIND Your Business event on 11 September 2024 in Bucharest that, during the pandemic, City Grill employed 1,500 people, was debt-free, had an impeccable reputation and financial reserves. Despite these, the company suddenly found itself unable to meet its financial obligations, including paying employees' wages, which were supplemented by customer tips, constituting 40-50% of its income. He highlighted several lessons learned during this period. He

highlighted effective communication during uncertainty. Because of the lack of clear directives, initially, the company did not communicate properly with its employees. However, even in uncertainty, transparent communication helped maintain employee trust and morale. While competitors like Fan Courier and eMAG registered rapid growth, with some businesses doubling or tripling their operations within weeks, City Grill focused on supporting its workforce and taking action in the face of uncertainty. Therefore, for two and a half years, the company leased over 400 employees to delivery companies like SameDay (part of the eMAG group) and Autonom Group. Temporary employment for the staff maintained a connection between the company and its workforce during the downturn. The pandemic led to the launch of City Grill Delivery to adapt to the latest market conditions. Eventually, the pandemic acted as a catalyst for City Grill's transformation. The crisis triggered a more autonomous and adaptive business model, ultimately enabling the company to navigate the challenges, survive the downturn and emerge stronger.

Conclusion

The two NACE codes have slight variances; regulated postal services (5310) maintain greater efficiency and profitability under stable market conditions, as the e-commerce expansion stimulates the sector, whereas the courier segment (5320) remains dynamic and competitive, requiring cost control and innovation to secure market advantages. While the national business environment has grown moderately, the courier sector has expanded. The increased number of courier companies, alongside growth in turnover and net profit, demonstrates its role in meeting the demands of modern logistics and e-commerce. Conversely, the rapid growth has also increased net losses, debt and receivables.

However, the rise of the GIG economy has further strengthened the sector's adaptability, enabling flexible workforce arrangements and rapid adjustments to fluctuating demand. COVID-19 pandemic and the Russian-Ukrainian war impose a resilience strategy across industries, from freight and manufacturing to retail, to maintaining supply chain continuity. For example, the intermodal (IM) freight network in the United States coordinating multiple transport modes (road, rail, barges and air carriers) ensures economic competitiveness through improved collaboration, expanded terminal capacity and resource allocation, which have shown how investments in multimodal infrastructure can bolster resilience.

The government measures allowing courier operations to proceed during lockdowns, were more effective than direct financial aid in supporting ongoing services. At the same time, sustainable and comprehensive resilience requires a systematic approach, including technological upgrades, integrated policy frameworks and investment in national and international partnerships. To further enhance the sectors' resilience, one needs to improve the digital and physical infrastructure and increase the financial results to cope with prolonged uncertainties. In terms of limitations, longitudinal studies may reveal patterns and individual studies of the financial results of the best-performing companies can reveal more data than the stats at the industry level.

Table 1. Romanian Companies' financial results via ListăFirme.ro

2015	2014	2013	2012	2011	2010	2009	2008	Year
680.140	674.838	662.639	657.087	652.108	614.700	632.037	662.831	Companies N
831	714	595	473	415	259	224	199	Companies C
4.115.698	4.036.707	4.035.628	4.046.340	3.998.064	3.922.834	4.162.709	4.523.581	EmployeesN
33.165	32.291	35.376	36.965	37.750	39.738	40.534	40.588	EmployeesC
18.815.651.808	15.491.253.802	13.867.657.868	12.590.988.095	12.949.038.626	14.901.362.840	14.914.098.734	13.715.950.923	Net ProfitN
32.854.333	31.756.161	21.637.835	19.015.896	18.956.193	14.010.012	18.777.875	18.271.276	Net ProfitC
10.166.076.516	10.973.375.543	10.598.333.546	11.339.874.978	12.591.998.414	11.415.229.040	13.428.872.824	10.862.027.602	Net LossN
8.805.066	2.026.443	7.515.993	12.876.939	43.151.786	28.637.781	52.598.050	5.965.228	Net LossC
268.103.448.050	254.285.659.443	243.285.129.381	245.718.860.475	240.740.567.241	216.247.162.146	209.734.139.974	242.306.090.390	TurnoverN
645.028.709	578.626.350	531.546.037	515.978.735	525.230.885	520.198.904	544.683.829	520.985.275	TurnoverC
207.697.522.724	276.289.379.231	201.406.828.741	273.466.977.229	263.492.175.212	255.203.299.137	168.124.159.386	174.467.665.362	DebtsN
268.747.566	241.823.676	229.880.292	192.941.982	172.676.724	168.472.148	189.084.567	153.529.802	DebtsC
79.678.321.136	82.894.008.618	78.834.279.821	79.083.145.045	71.116.540.833	119.804.123.264	55.947.016.192	55.875.078.643	Receivable N
102.427.048	87.694.540	80.500.147	64.527.647	65.101.346	55.805.804	62.763.884	54.620.642	Receivable C

2023	2022	2021	2020	2019	2018	2017	2016
925.116	908.017	870.681	831.454	802.407	763.588	733.237	699.226
4.284	3.841	3.257	2.376	1.718	1.395	1.168	973
4.259.471	4.283.758	4.129.941	4.124.154	4.252.473	4.201.466	4.171.909	4.206.204
44.240	44.147	19.433	39.581	38.218	37.012	34.747	34.214
47.690.631.035	52.076.813.455	40.822.651.035	30.704.737.308	28.691.911.005	26.224.014.116	23.272.391.141	21.361.217.557
97.027.114	91.021.614	117.364.474	111.318.209	64.870.177	60.171.042	38.667.428	41.583.858
9.819.025.544	9.111.559.311	7.761.181.485	8.918.514.534	9.305.184.879	8.549.922.230	8.403.275.925	8.983.848.145
34.598.219	40.831.430	16.202.621	14.326.799	18.136.417	11.336.482	10.311.144	7.345.973
525.892.005.346	519.857.904.651	413.302.898.724	346.356.040.344	359.401.075.922	335.892.330.274	299.788.037.075	280.196.775.947
1.702.659.857	1.573.370.502	1.369.873.834	1.228.059.366	1.044.588.464	934.626.033	798.946.704	732.340.519
305.003.395.716	304.096.393.506	266.512.135.923	248.820.638.111	244.594.814.613	236.760.695.915	210.866.749.182	211.775.873.809
733.400.681	568.260.886	451.683.597	394.957.892	355.715.881	337.067.879	327.900.337	298.208.776
134.351.626.223	135.799.782.029	112.702.207.211	101.563.326.687	96.748.061.375	92.165.048.305	84.253.623.503	81.455.418.249
317.961.581	306.211.409	256.999.666	215.056.917	183.816.336	149.070.477	129.250.150	117.883.136

Acknowledgement

This paper was co-financed by the Bucharest University of Economic Studies during the PhD program. This work was partially supported by the project “Societal and Economic Resilience within multi-hazards environment in Romania”, funded by European Union – Next Generation EU and Romanian Government, under National Recovery and Resilience Plan for Romania, contract no.760050/ 23.05.2023, cod PNRR-C9-I8-CF 267/ 29.11.2022, through the Romanian Ministry of Research, Innovation and Digitalization, within Component 9, Investment I8.

References

- Agroberichten Buitenland. (2020). *COVID-19 transport measures in Romania*. <https://www.agroberichtenbuitenland.nl/documenten/nieuwsbrieven/2020/03/25/romania--corona-measures-and-news-25-03>
- ANCOM. (2021). *Analysis of the postal and courier market in Romania*. https://www.ancom.ro/en/uploads/links_files/Study_on_the_quality_of_parcel_services_and_the_impact_of_e_commerce_on_the_postal_market_during_2021.pdf
- Brookings Institution. (2021). *Economic response to COVID-19 in Central and Eastern Europe*. <https://www.brookings.edu/articles/how-covid-19-policy-responses-differed-in-central-europe/>
- Bruckler, M., Wietschel, L., Messmann, L., Thorenz, A., & Tuma, A. (2024). Review of metrics to assess resilience capacities and actions for supply chain resilience. *Computers & Industrial Engineering*, 192, 110176. <https://doi.org/10.1016/j.cie.2024.110176>
- Carp, L. S. (2024). Connecting Romania with the European market through courier services. *Ovidius University Annals, Economic Sciences Series*, 24(1), 40–49. <https://stec.univ-ovidius.ro/html/anale/RO/2024i1/Section%201%20and%202/5.pdf>
- Cerqueti, R., & Ficcadenti, V. (2023). Anxiety about the pandemic and trust in financial markets. *The Annals of Regional Science*, 72, 1277–1328. <https://doi.org/10.1007/s00168-023-01243-0>
- Colliers International. (2021). *Industrial logistics and COVID-19 in Romania*. <https://www.colliers.com>
- Cumstam.ro. (n.d.). <https://cumstam.ro> (Accessed February 19, 2025)
- European Commission. (2022). *State aid measures for businesses during COVID-19*. https://commission.europa.eu/strategy-and-policy/coronavirus-response/supporting-jobs-and-economy-during-coronavirus-pandemic/state-aid-cases/romania_en
- European Commission. (2023). *Details of Romania’s support measures to help citizens and companies during the significant economic impact of the coronavirus pandemic*. European Commission. https://commission.europa.eu/strategy-and-policy/coronavirus-response/supporting-jobs-and-economy-during-coronavirus-pandemic/state-aid-cases/romania_en
- European Parliament. (2020). *State measures during COVID-19 pandemic: Romania*. https://en.wikipedia.org/wiki/COVID-19_pandemic_in_Romania
- Eurostat. (2023). *Freight transport statistics: Modal split*. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Freight_transport_statistics_-_modal_split
- Government of Romania. (2020). *Measures adopted against COVID-19 (June 2020 – March 2021)*. https://www.vsehrd.cz/clanek-viktorin/measures-adopted-by-the-romanian-government-against-covid-19-june-2020-to-march-2021_1e8eff51-6214-454e-9de3-2cff5363fddc

- Iancu, L. (2022). Sustainable management in the gig economy: Traditional vs. gig business model in the delivery sector. In *Proceedings of the 6th International Management Conference "Approaches in Organisational Management"* (pp. 173–185). Bucharest University of Economic Studies.
- Iancu, L. (2023). Sustainable management in the delivery sector. In *Proceedings of the 17th International Management Conference "Management Beyond Crisis: Rethinking Business Performance"* (pp. 139–149). Bucharest University of Economic Studies.
- Iancu, L. (2025). Dietary habits and sustainable online ordering among Romanian provincial students. *Journal of Financial Studies*, X(Special Issue). (No page range provided.)
- INS. (2024). *Transport of passengers and goods by means of transport in 2023*. <https://insse.ro/cms/en/content/transport-passengers-and-goods-means-transport-2023>
- Kinstellar Law Firm. (2020). *Temporary rules for general meetings of shareholders during the COVID-19 pandemic in Romania*. <https://www.kinstellar.com/news-and-insights/detail/1134/romania-government-approves-temporary-rules-designed-to-facilitate-general-meetings-of-shareholders-and-the-meetings-of-other-corporate-bodies>
- Labib, A. (2021). Towards a new approach for managing pandemics: Hybrid resilience and bowtie modelling. *Safety Science*, 139, 105274. <https://doi.org/10.1016/j.ssci.2021.105274>
- Listafirme.ro. (n.d.). *Economic evolutions*.<https://membri.listafirme.ro/evolutii-economice.asp>
- Pierel, E., Helgeson, J., & Dow, K. (2023). Intersections of small business mobility, adaptive capacity and resilience during crises. *International Journal of Mass Emergencies and Disasters*, 41(1), 47–65. <https://doi.org/10.1177/02807270231173650>
- Sakas, D. P., Kamperos, I. D. G., & Terzi, M. C. (2022). The long-term risk familiarity effect on courier services' digital branding during the COVID-19 crisis. *Journal of Theoretical and Applied Electronic Commerce Research*, 17(4), 1655–1684. <https://doi.org/10.3390/jtaer17040084>
- Saulick, P., Bokhoree, C., & Bekaroo, G. (2023). Business sustainability performance: A systematic literature review on assessment approaches, tools and techniques. *Journal of Cleaner Production*.<https://doi.org/10.1016/j.jclepro.2023.136837>
- Schofer, J. L., Mahmassani, H. S., & Ng, M. T. M. (2022). Resilience of U.S. rail intermodal freight during the COVID-19 pandemic. *Research in Transportation Business & Management*, 43, 100791. <https://doi.org/10.1016/j.rtbm.2022.100791>
- Statista. (2021). *Growth of e-commerce and courier demand in Romania*. <https://www.statista.com/outlook/emo/ecommerce/romania>