



The Impact of Quality of Financial Information on the Decline of Food Manufacturing Companies in the European Union

El Impacto de la Calidad de la Información Financiera en el Declive de las Empresas de Manufactura de Alimentos en la Unión Europea

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ARTICLE INFO

Received 17 March 2025,
Accepted 28 January 2026

Available online 16 April 2026

DOI: 10.5295/cdg.252377ac

JEL: M41, G33, L66

ABSTRACT

This study examines the relationship between quality of financial information (QFI) and the probability of corporate decline in the food manufacturing sector within the European Union (EU) controlled by a set of internal (age, size, liquidity, return on assets, and debt) and external (gross domestic product and unemployment rate) determinants. The study employs a logit regression model applied to a balanced panel dataset of 335 large food manufacturing firms in the EU from 2011 to 2021. Quality of financial information is estimated using discretionary accruals, based on the Jones model (1991), while corporate decline is measured by fluctuations in sales. The findings indicate that low-quality financial information (high discretionary accruals) is positively associated with corporate decline, highlighting the role of financial transparency in business sustainability. The results suggest that earnings management practices can increase business vulnerability, reinforcing the importance of accurate financial reporting in mitigating corporate failure. The study underscores the need for enhanced regulatory oversight and financial reporting transparency in the food manufacturing industry. Policymakers and stakeholders should strengthen financial disclosure requirements to curb earnings management practices and ensure better resource allocation for long-term sustainability. This research contributes to the limited literature on quality of financial information and corporate decline, particularly in the food manufacturing sector, which is crucial for economic stability and public welfare. By integrating financial reporting quality into corporate failure analysis, this study provides new insights into the role of earnings management in business deterioration.

Keywords: Quality of financial information, Business decline, Earnings management, Discretionary accruals, Food manufacturing industry, Corporate sustainability.

R E S U M E N

Este estudio analiza la relación entre la calidad de la información financiera (QFI) y la probabilidad de deterioro empresarial en el sector de fabricación de alimentos en la Unión Europea (UE), considerando determinantes internos como antigüedad, tamaño, liquidez, rentabilidad de los activos y nivel de endeudamiento, así como factores externos como el producto interior bruto y la tasa de desempleo. Se utiliza un modelo de regresión logística aplicado a un panel equilibrado de 335 grandes empresas del sector entre 2011 y 2021. La QFI se estima mediante devengos discrecionales basados en el modelo de Jones (1991), mientras que el deterioro empresarial se mide a través de fluctuaciones en las ventas. Los resultados muestran que una baja calidad de la información financiera, reflejada en mayores devengos discrecionales, se asocia positivamente con el declive corporativo. Esto resalta la importancia de la transparencia y la precisión de los informes financieros para la sostenibilidad empresarial. Asimismo, se evidencia que las prácticas de gestión de beneficios incrementan la vulnerabilidad de las empresas, lo que refuerza la necesidad de un mayor control regulatorio. El estudio sugiere fortalecer los requisitos de divulgación financiera para limitar estas prácticas y mejorar la asignación de recursos. Esta investigación contribuye a la escasa literatura sobre la relación entre la calidad de la información financiera y el deterioro empresarial, especialmente en el sector de la fabricación de alimentos, ofreciendo nuevas perspectivas sobre el impacto de la gestión de beneficios en el fracaso corporativo.

Palabras clave: Calidad de la información financiera, Deterioro corporativo, Gestión de ganancias, Devengos discrecionales, Industria de manufactura de alimentos, Sostenibilidad corporativa.

1. INTRODUCTION

Corporate decline represents a critical stage in the organizational lifecycle, marked by performance deterioration, revenue contraction, negative earnings, financial distress, asset depletion, and, in extreme cases, bankruptcy (Amankwah-Amoah, 2016; Hadrović & Lukić, 2015). The literature attributes this phenomenon to both external and internal factors. Externally, macroeconomic conditions such as Gross Domestic Product (GDP) growth and unemployment rates exert significant influence. Internally, the quality of financial information (QFI) emerges as a key determinant (Bampoky, 2013).

Adverse macroeconomic environments, such as low growth or recessions, tend to suppress aggregate demand, compress revenues, and jeopardize firms' sustainability. Similarly, high unemployment rates weaken consumer purchasing power and disrupt market dynamics, thereby increasing the likelihood of corporate decline (Hadrović & Lukić, 2015).

The analysis of QFI in competitive and cost-sensitive sectors, like the food sector, is highly relevant. This sector is crucial to the food supply chain and the global economy, providing essential products for population nutrition and well-being (Haessner *et al.*, 2024; Marchesano & Scavone, 2020). Recently, food companies have faced considerable challenges, including economic pressures, regulatory changes, and intensified competition. These factors have driven a concerning decline, characterized by business closures, profit reductions, and diminished competitiveness (Frick *et al.*, 2018).

The repercussions of decline extend beyond individual companies, affecting society by increasing unemployment, reducing purchasing power, creating food product shortages, driving price increases, and worsening food insecurity. In this context, high-quality financial information is crucial for the sector's sustainability and growth (Li *et al.*, 2020). Accurate, reliable, and timely financial reporting is essential for strategic decision-making to mitigate these adverse effects (Abed *et al.*, 2022).

Despite the recognized importance of QFI, a gap remains regarding its impact on the decline of food sector companies (Silva & Moreira, 2019). Identifying the factors contributing to this decline is critical for developing preventive measures that ensure business continuity and foster sustainable economic growth (Kozeniauskas *et al.*, 2022).

QFI assumes a preventive role. High-quality financial information, relevant, reliable, and timely, facilitates the efficient allocation of resources, mitigates information asymmetries, and strengthens stakeholder oversight (Abed *et al.*, 2022; Li *et al.*, 2020). Conversely, poor QFI may lead to suboptimal investment decisions, undermine risk management, and heighten the risk of organizational crisis (Sujarminto *et al.*, 2024; Frazer, 2020).

Recent empirical studies reinforce the importance of QFI for firm performance and value. Kumar *et al.* (2023) show that QFI enhances investment efficiency and firm value; Harjanto (2024) provides evidence of a positive association between accruals quality and firm value; and Ismail *et al.* (2024) highlight that effective ownership structures combined with high QFI foster transparency and reduce the risk of crisis.

Despite these contributions, research directly examining the relationship between QFI and the probability of corporate de-

cline remains scarce, particularly from a causal inference perspective. Existing studies have primarily focused on the impact of QFI on performance metrics (e.g., ROA, ROE) or firm value, without addressing its role as a protective mechanism against decline (Abed *et al.*, 2022; Hadrović & Lukić, 2015).

This study aims to fill this gap by evaluating, through an inferential approach, the extent to which QFI influences the probability of corporate decline. Accordingly, the central research question is formulated as follows: *To what extent does the quality of financial information influence the probability of corporate decline?* To achieve this objective, we employ a logistic regression model using data from food manufacturing firms in the European Union. This methodological design not only identifies correlations but also estimates the direction and magnitude of QFI's effect on decline risk, offering a more rigorous empirical assessment.

This study is expected to contribute along three dimensions. Theoretically, it advances understanding of QFI as a protective factor against decline. Methodologically, it applies a panel data logistic modeling approach to European firm-level data, enhancing the precision of decline probability estimates in line with recent evidence from Nabil *et al.* (2025). Practically, the findings provide managers, investors, and regulators with insights into the importance of ensuring high levels of QFI as a preventive mechanism against organizational crises.

The remainder of this article is structured as follows: Section 2 presents a theoretical framework on business decline, quality of financial information, and the characteristics of the food production sector in Europe. Section 3 details the study's methodological approach, while Section 4 discusses the results. Finally, Section 5 outlines the main conclusions, potential future research directions, and the practical implications of the findings.

2. LITERATURE REVIEW

Quality of Financial Information refers to the extent to which financial statements provide an accurate and relevant representation of a company's economic and financial position, as well as its performance (IASB, 2018). In recent years, the concept of QFI has gained increasing prominence in accounting and corporate finance research, particularly following the European Union's adoption of international accounting standards (IAS/IFRS). As noted by Barth *et al.* (2008), the shift toward international standards stemmed from the demand for reporting that is more comparable, transparent, and of higher quality within an increasingly globalized business environment.

QFI plays a central role in decision-making by investors, creditors, managers, and regulators, and is therefore critical to firms' overall sustainability. Poor quality of financial information, as emphasized by Yang (2019), undermines investor confidence, weakens market credibility, and ultimately diminishes consumer trust. Francis *et al.* (2004) further argue that low-quality financial information leads to distorted evaluations of corporate performance, impedes access to financing, and constrains firms' ability to respond strategically to external shocks. When QFI is deficient, early warning signals of organizational deteri-

oration may go unnoticed, hampering the identification of risks and the adoption of timely corrective measures, thereby accelerating processes of decline (Hope *et al.*, 2017).

Empirical studies reinforce this concern. For instance, Jouali *et al.* (2024) and Holder-Webb and Cohen (2007) find that firms disclosing low-quality financial information struggle to attract investment, deliver consistent results, and thus become more susceptible to economic crises. This heightened vulnerability substantially increases the likelihood of corporate decline.

Conversely, high-quality financial information has been shown to play a crucial role in strengthening firms' stability, performance, and longevity. However, one of the most significant threats to QFI is the deliberate manipulation of reported results to serve particular interests, commonly referred to as earnings management. Research indicates that high levels of discretionary accruals, those not directly attributable to operational performance, are a strong indicator of poor quality of financial information (Kothari *et al.*, 2005).

Business decline refers to a gradual deterioration of an organization's health and viability, manifesting through indicators such as declining sales, reductions in investment and company size, and financial distress (Nyiwul & Iqbal, 2022). Theoretical explanations for decline often incorporate both traditional firm characteristics, such as size and age, and specific financial attributes, including internal financing, capital structure, liquidity, and profitability (Mateev & Anastasov, 2010). In advanced stages, decline may result in insolvency, bankruptcy, or even business closure (Bushe, 2019; Nyiwul & Iqbal, 2022). Managers must, therefore, identify early warning signs and implement corrective measures to mitigate adverse consequences. Business decline can stem from various internal and external factors. They include imprecise financial information, specific firm characteristics such as age, size, capital structure and macroeconomic conditions (Mahamid, 2012; Serrasqueiro *et al.*, 2010). The consequences of such decline extend beyond individual enterprises, exerting a significant impact on the broader economy (e.g., Pascoe *et al.*, 2023).

Çera *et al.* (2019) categorize the causes of business decline into three domains: managerial, financial, and external. Çera *et al.* (2019) further delineate the causes through two theoretical lenses: the deterministic and institutional perspectives. The deterministic view attributes business decline to external factors that constrain growth, such as market fluctuations, regulatory or technological constraints, and resource scarcity. According to this perspective, failure is primarily driven by external influences beyond managerial control. In contrast, the institutional perspective emphasizes internal factors, including corporate culture, social norms, and organizational structures. The institutional perspective advocates for internal restructuring to shift away from traditional growth-oriented paradigms toward alternative business success measures, such as sustainability, social equity, and employee well-being (Çera *et al.*, 2019). These two perspectives were also applied by Silva and Moreira (2019)

Signaling Theory posits that organizations leverage high-quality financial disclosures to communicate their financial health and potential to investors and other stakeholders (Putri *et al.*, 2023). Transparent, accurate, and relevant financial reporting enhances investor confidence, positively influ-

encing perceptions of organizational stability and performance (Deng *et al.*, 2024). The theory further suggests a direct correlation between the quality of disclosed financial information and company sales performance, as financial data serve as critical indicators for stakeholders (Beatty *et al.*, 2010). As such, the quality of financial information is essential for sound business decision-making, facilitating performance assessment, operational control, and strategic planning (e.g., Frazer, 2020). Poor financial data quality adversely affects key corporate functions, including production, investments, mergers and acquisitions, research and development, advertising, and expansion (Feng *et al.*, 2009). Strategic initiatives, such as entering new markets or making capital investments, hinge on the accuracy and reliability of financial information (Paiva, 2018; Sujarminto *et al.*, 2024). When financial data integrity is compromised, misallocations of resources may lead to cuts in critical areas or investments in unviable projects, potentially accelerating business decline even in growth sectors (Remlein *et al.*, 2024). Furthermore, companies with poor financial data face heightened risks of decline, undermining both investor confidence and managerial decision-making (Putri, 2018).

Several studies emphasize that the QFI is strongly shaped by the legal, institutional, and regulatory framework in which firms operate (Ball *et al.*, 2000; Bushman & Piotroski, 2006; Leuz *et al.*, 2003). In the European context, supervisory bodies such as the European Securities and Markets Authority (ESMA) and the European Financial Reporting Advisory Group (EFRAG) stress that the reliability of financial information constitutes a cornerstone of sound corporate governance and of the efficient allocation of resources across the region (Leuz *et al.*, 2003). Within this framework, the mandatory application of International Financial Reporting Standards (IFRS) for listed companies, introduced through Regulation (EC) No. 1606/2002, sought to strengthen the comparability, consistency, and transparency of financial reporting among European Union Member States. Likewise, Directive 2013/34/EU harmonized financial disclosure requirements with the aim of enhancing uniformity and comparability (European Union, 2013).

Nevertheless, Capkun *et al.* (2016) caution that despite the formal adoption of IFRS, earnings management practices persist, which may compromise QFI and undermine the usefulness of reported information. Thus, even under a common regulatory framework, QFI varies according to country-specific institutional characteristics. In this regard, several studies, including Francis *et al.* (2004), employ discretionary accruals as a negative proxy for QFI, on the premise that higher levels are indicative of reduced reliability in financial reporting.

Francis *et al.* (2004) and Chen *et al.* (2011) argue that discretionary accruals serve as a negative proxy frequently associated with earnings manipulation, informational opacity, and increased information asymmetry-factors that constrain stakeholders' ability to accurately assess a firm's condition. Such limitations may heighten the risk of ineffective decision-making, agency conflicts, and operational losses. According to these authors, the deterioration of QFI should be interpreted as a warning signal of organizational vulnerability, thereby justifying its inclusion in analytical models as an explanatory variable of performance decline and business failure risk.

Earnings management, which encompasses accounting practices aimed at influencing financial results to align with market expectations or internal objectives, further complicates corporate financial transparency (Dechow & Skinner, 2000). While often legal, such practices raise ethical concerns and can distort a company's true financial performance (Jones, 1991). Manipulated earnings can create a misleading perception of financial stability, leading to uninformed investment decisions that ultimately undermine long-term organizational success (Tarighi *et al.*, 2022). The propensity for earnings management has been linked to executive demographics, such as CEO age, with younger CEOs exhibiting higher tendencies toward such practices; however, governance tools like clawback provisions can mitigate these effects (Davis & García-Cestona, 2023). Additionally, recent research also indicates that firms with strong CSR commitments are less prone to engage in earnings management, even during economic crises (El-Feel *et al.*, 2023).

Companies that practice earnings management may face greater difficulties in maintaining investors and creditors trust. This is because, by masking the real financial situation, management can distort performance assessments, compromising governance and strategic decision-making (Tarighi *et al.*, 2022). In addition, the long-term consequences of these practices include greater volatility in profits and company decline (Rad *et al.*, 2016).

Case studies, such as Enron and WorldCom, illustrate the devastating impact that earnings management practices can have on financial sustainability and corporate reputation. These cases demonstrate that while earnings management may appear advantageous in the short term, its detrimental consequences for transparency and optimal resource allocation are significant, often leading to organizational decline (Tarighi *et al.*, 2022). As such, detecting earnings management practices is essential to maintaining the quality of financial information.

Existing literature distinguishes various models for detecting earnings management, including models based on accruals. The main objective of accrual-based models is to differentiate between the discretionary component that is considered an earnings management instrument and the non-discretionary component Healy & Wahlen (1999).

The existing literature underscores the pivotal role of quality of financial information in corporate sustainability and performance. While high-quality financial reporting fosters transparency, enhances decision-making, and strengthens investor confidence, lower-quality financial information—often associated with earnings management—can distort financial reality and contribute to organizational decline. Empirical studies suggest that discretionary accruals serve as a key proxy for assessing the extent of earnings management and financial misreporting, both of which can have far-reaching implications for business stability. In the context of the food manufacturing sector, where firms operate under tight margins and are highly sensitive to economic and regulatory shifts, the ability to accurately assess financial health is critical. However, despite the well-established link between financial reporting quality and corporate performance, the extent to which QFI influences corporate decline, particularly in the food manufacturing industry, remains underexplored. This study seeks to fill this gap by empirically examining how

quality of financial information, measured through discretionary accruals, affects the likelihood of business decline.

Based on the theoretical framework presented, the following hypotheses are formulated to support the empirical analysis. First, the literature shows that low QFI undermines the confidence of external stakeholders, restricts trade credit, increases the cost of financing, affects corporate reputation, and, particularly relevant in our context, may reduce the trust of customers and the consumer market. Even managers with access to detailed internal data remain subject to these external constraints and to contractual pressures grounded in published figures (Putri, 2018; Tarighi *et al.*, 2022; Yang, 2019). Accordingly, the following hypothesis is proposed:

H1: *Quality of Financial Information (QFI) is negatively related with the likelihood of firm decline*

Beyond QFI, the literature documents several firm-level control variables associated with firm decline. Among them, the literature suggests that younger firms, due to their limited operational experience and less consolidated networks, are more vulnerable to internal and external shocks, with the potential to impact firm decline (Çera *et al.*, 2019; Mateev & Anastasov, 2010). Additionally, firm size is also an important control variable. Small firms tend to have limited access to financial resources, lower market diversification, and weaker bargaining power with suppliers and customers, which makes them more susceptible to decline (Arditi *et al.*, 2000; Serrasqueira *et al.*, 2010). Liquidity is another critical control variable for firm decline. Firms with lower capacity to meet short-term obligations face greater operational difficulties, which may exacerbate their financial situation (Arslan *et al.*, 2006).

The link between low profitability and heightened risk of corporate decline is a well-documented phenomenon in finance and strategic management literature. Seminal models for predicting bankruptcy and financial distress, such as those by Altman *et al.* (2017) and Beaver (1966), explicitly incorporate profitability measures (like ROA) as key discriminators between healthy and failing firms. Low ROA is an indicator of inefficiency in utilizing the firm's asset base (Hambrick & D'Aveni, 1988). This inefficiency can stem from operational weaknesses, poor management, or an inability to compete effectively, ultimately leading to a higher vulnerability to decline (Sheppard & Chowdhury, 2005). The predictive power of profitability for distress risk continues to be validated in contemporary research (e.g., Campbell *et al.*, 2008), confirming that firms with lower ROA are statistically more likely to face decline.

Regarding capital structure, a high level of indebtedness may heighten a firm's vulnerability to fluctuations in interest rates or credit conditions. Firms with high leverage face greater financial pressure and a higher risk of insolvency, with the potential to impact firm decline (Mateev & Anastasov, 2010). Therefore, considering these firm-level control variables of firm decline, the following hypotheses are proposed:

H2a: *Age negatively influences the likelihood of firm decline.*

H2b: *Firm size negatively influences the likelihood of firm decline.*

H2c: *Firm liquidity negatively influences the likelihood of firm decline.*

H2d: Firm profitability (ROA) negatively influences the likelihood of firm decline.

H2e: Firm indebtedness positively influences the likelihood of firm decline.

In addition to firm-level factors, macroeconomic variables may also play a significant role. High unemployment rates may reduce demand for goods and services, negatively impacting sales volume and corporate sustainability (Mahamid, 2012). Additionally, economic growth is one of the main determinants of the business environment. When Gross Domestic Product (GDP) performance is weak, the likelihood of firm decline tends to increase, particularly in sectors more dependent on domestic demand (Kozeniauskas et al., 2022). Thus, considering these country-level control variables of firm decline, we proposed the following hypotheses:

H3a: Unemployment rate positively influences the likelihood of firm decline.

H3b: GDP growth rates are negatively associated with the likelihood of firm decline.

3. DATA, MODEL SPECIFICATION AND METHODOLOGY

The food production sector plays a fundamental role in the European economy, serving as a pillar of the manufacturing industry and international trade (e.g., Lodorfos et al., 2018). This sector encompasses a broad spectrum of activities, ranging from agriculture and animal breeding to the transformation of raw materials into consumable food products, such as dairy items, meats, breads, beverages, and processed foods. Notably, it contributes 14.6% to the Gross Domestic Product (GDP) of European nations and generates employment for 4.2 million people across 286,000 companies (Lodorfos et al., 2018).

Given the intense competition among food manufacturers, the sector attracts investments from both domestic and foreign sources (Ditsiou et al., 2023). The maintenance of high-quality financial information is imperative for sustaining investor confidence and securing capital to support growth. Conversely, poor-quality of financial information can hinder a company's ability to accurately forecast future trends, adjust market strategies, and respond effectively to economic fluctuations (Deng et al., 2024). As such, in a dynamic and competitive business environment such as the food manufacturing sector, companies face numerous economic and business challenges that may lead to decline or closure (e.g., Frick et al., 2018). The ramifications of such decline extend beyond individual enterprises, exerting a significant impact on the broader economy (e.g., Pascoe et al., 2023). Consequently, the food manufacturing industry was chosen to closely examine this phenomenon.

To accomplish the objective of this research, to examine the relationship between quality of financial information and corporate decline, we have drawn data from Orbis Europe database covering a ten-year period from 2011 to 2021.

The study concentrates on the food industry given its significant role in the economic development of the EU. Any downturn in this sector could have adverse consequences for eco-

nomical growth, employment, and the capacity to ensure safe and high-quality food for public welfare.

The focus was on large European companies justified by the accessibility of the necessary accounting data for analysis and the absence of critical financial elements in the statements of micro and small enterprises due to the flexibility of applicable accounting standards.

The criteria for classifying companies as large are those stipulated by the European Commission Directive 2003/361/EC. To collect the sample, the following inclusion and exclusion criteria were applied:

- Status: Active companies
- NACE Rev. 2 Primary Code: 10 - Food products industry
- Location: European Union
- Number of Employees: Minimum of 250 employees in all years of analysis
- Total Assets: Minimum of 43 million euros in all years of study
- Turnover: 50 million euros in all years of study

Uniform criteria for large companies were maintained throughout the study period for several reasons: to ensure consistency in company classification; to prevent results from being influenced by changes in classification criteria; and to preserve sample stability over time. This approach enhances comparability over time and facilitates trend analysis.

Companies with three or more years of missing data were excluded from the sample. In cases where data were missing for one or two years, different imputation methods were employed depending on the missing data's temporal position. If data were missing at the beginning of the period, the missing value was assigned the value of the subsequent year ($t+1$). If missing in the middle of the period, the average of the preceding and following years was used. All financial data obtained from Orbis were denominated in thousands of euros.

The final sample comprises 3,350 observations, representing 335 large companies in the food production sector across 20 European Union (EU) countries.

The extant literature identifies multiple variables that influence corporate decline. Among these, this study incorporates variables available in the Orbis Europe database, such as age, liquidity, debt, profitability, and size, as well as external factors, such as the unemployment rate and Gross Domestic Product derived from the World Development Indicators (WDI) database, and the quality of financial information, estimated using established specifications.

Regarding the measurement of corporate decline, the literature exhibits limited consensus on the appropriate metric. Empirical research has used various measures, including changes in sales value, employee count, investment, profit, and asset values (e.g., Davidsson & Wiklund, 2000; Ganchala et al., 2022; Mateev & Anastasov, 2010). To estimate the relationship between QFI and the probability of firm decline, a panel data logit model was employed, incorporating fixed effects to control for unobserved heterogeneities. As in several other studies (e.g., Mellahi & Wilkinson, 2004), we measured decline through the growth of real sales. Accordingly, we defined the binary variable *Decline* as equal to 1 when a firm's real sales growth rate is negative, and 0 otherwise.

In addition, control variables were included at the firm level, namely size, debt, return on assets, liquidity, and age, as well as macroeconomic variables at the country level, such as GDP growth rate and unemployment rate. To capture institutional and legal heterogeneities across countries, country fixed effects were incorporated.

Real sales growth was estimated according to the following specification: $Real\ SG_{i,t} = (1 + SG_{i,t}) / (1 + Inf_{j,t}) - 1$ where:

$$SG_{i,t} = (Sales_{i,t} - Sales_{i,t-1}) / (Sales_{i,t-1})$$

with:

- Real $SG_{i,t}$: real sales growth of firm i at time t
- $Sales_{i,t}$: nominal sales growth of firm i at time t and time $t-1$
- $Inf_{j,t}$: inflation rate of country j at time t

Prior research (Chen *et al.*, 2011; Rad *et al.*, 2016) has highlighted the absence of a universally accepted measure for quality of financial information. Various proxies are employed, including discretionary accrual quality, disclosure timeliness, value relevance, and accounting conservatism (Costa *et al.*, 2022).

Discretionary accruals represent an accounting earnings management metric, reflecting adjustments that managers make to reported profits (Rad *et al.*, 2016). The magnitude of accruals indicates the extent to which managerial discretion affects earnings transparency (Bigus & Hillebrand, 2017). Higher accrual values may indicate earnings management practices, thereby reducing QFI (Rad *et al.*, 2016).

We employed the Jones model (1991) to estimate discretionary accruals by decomposing total accruals into discretionary and non-discretionary components. The total accruals of each firm-year were calculated as the difference between net income before extraordinary items and operating cash flow for the period, scaled by total assets at the beginning of the year. Following the Jones model (1991), we estimated the following regression for each firm and year:

$$NDA_{i,t} = \alpha_0 \left(\frac{1}{A_{i,t-1}} \right) + \alpha_1 \left(\frac{\Delta REV_{i,t}}{A_{i,t-1}} \right) + \alpha_2 \left(\frac{PPE_{i,t}}{A_{i,t-1}} \right) + \varepsilon_{i,t}$$

where

- $NDA_{i,t}$ = non-discretionary accruals of firm i in year t ;
- $A_{i,t-1}$ = total assets at the beginning of the period;
- $\Delta REV_{i,t}$ = change in revenues between $t-1$ and t ;
- $PPE_{i,t}$ = tangible fixed assets in year t .

The α coefficients allow for the estimation of the expected non-discretionary accruals for each firm. Discretionary accruals were obtained as the difference between total accruals and the estimated non-discretionary accruals.

Beaver *et al.* (2012) assert that financial report attributes, particularly earnings quality measured via accruals, are relevant in forecasting corporate decline. Similarly, Nagar and Sen (2018) find that earnings and revenue management practices increase the likelihood of corporate decline. Accordingly, firms engaging in earnings management are expected to exhibit a higher probability of decline, leading to an anticipated inverse relationship between the quality of financial information and decline.

Prior research has demonstrated a positive correlation between debt levels and corporate decline (Arditi *et al.*, 2000; Mateev & Anastasov, 2010; Nusbantoro *et al.*, 2019). Increased debt levels elevate the probability of firm failure due to interest payment obligations, which impose financial constraints on cash flow and hinder growth. However, contrasting findings (Serrasqueiro *et al.*, 2010) suggest that debt may reduce the likelihood of corporate decline through enhanced creditor oversight. Consequently, the relationship between debt and corporate decline remains ambiguous, with prior studies reporting both positive and negative associations (Arditi *et al.*, 2000; Serrasqueiro *et al.*, 2010).

Regarding liquidity, existing literature indicates that cash flow difficulties significantly impact corporate growth (Costa *et al.*, 2022). Similarly, Bryan *et al.* (2002) emphasize that companies with lower liquidity levels are more susceptible to bankruptcy. Companies with reduced liquidity experience greater cash constraints and encounter difficulties in meeting obligations to suppliers, which may result in an inverse relationship between liquidity and corporate decline (Bryan *et al.*, 2022; Costa *et al.*, 2022; Ganchala *et al.*, 2022).

The relationship between corporate decline and company size has been examined by Levratto (2013) and Costa *et al.* (2022). These studies suggest that smaller companies possess fewer resources and are more vulnerable to financial difficulties, increasing their likelihood of decline. Larger companies exhibit a lower probability of decline, leading to an expected inverse relationship between these variables.

Younger firms are more prone to decline, as business failure among new companies can be attributed to a lack of business acumen, management expertise, and operational experience (Arditi *et al.*, 2000). Older organizations have accumulated knowledge regarding customer acquisition, supplier relationships, and distribution networks. They maintain robust alliances and favorable relationships with financial institutions, which provide them with greater resilience against decline (Arditi *et al.*, 2000). Consequently, a negative relationship between age and the probability of decline is expected. However, empirical evidence indicates that companies grow until they reach a minimum efficiency level that ensures survival. Beyond this phase, age negatively affects growth (Serrasqueiro *et al.*, 2010). Therefore, a negative relationship between age and the probability of decline is anticipated during the growth phase of a company's life cycle, while a positive relationship is expected in the post-maturity phase (Serrasqueiro *et al.*, 2010).

Regarding Profitability (ROA), Lisboa *et al.* (2021) report that companies with lower profitability are more susceptible to decline. Lower profitability increases the likelihood of corporate decline, as evidenced by Costa *et al.* (2022). An inverse relationship between profitability and decline is anticipated.

Following the established literature in corporate finance and industrial organization, we control for key macroeconomic conditions at the country level. We include the GDP growth rate to account for the overall state of the business cycle, as periods of economic expansion (contraction) are associated with higher (lower) aggregate demand, directly influencing a firm's sales growth (Opler & Titman, 1994; Fama & French, 1989). Furthermore, we include the unemployment rate to capture demand-side effects in the labor market that impact consumer purchasing power and, consequently, corporate revenues (Jensen *et al.*, 2001; Nickell *et al.*, 1997). The omission of these macroeconomic fac-

tors could lead to omitted-variable bias, as a firm’s decline might be erroneously attributed to its financial reporting quality when, in fact, it is driven by an adverse economic environment.

To examine the impact of QFI on corporate decline we specified Model (1), based on prior studies and variables (e.g., [Mateev & Anastasov, 2010](#)):

$$Decline_{i,t} = \alpha_{i,t} + \beta_1 QFI_{i,t} + \beta_2 Prof_{i,t} + \beta_3 Size_{i,t} + \beta_4 Liquid_{i,t} + \beta_5 Debt_{i,t} + \beta_6 Age_{i,t} + \beta_7 GDP_t + \beta_8 Unemployment_t + \varepsilon_{i,t} \quad (model\ 1)$$

Complementarily, this study seeks to capture the effects of two major crises that occurred during the selected period (2012-2021): the sovereign debt crisis, and the COVID-19 pandemic. To assess the impact of these crises on corporate decline, the following model (2) was also specified:

$$Decline_{i,t} = \alpha_{i,t} + \beta_1 QFI_{i,t} + \beta_2 Prof_{i,t} + \beta_3 Size_{i,t} + \beta_4 Liquid_{i,t} + \beta_5 Debt_{i,t} + \beta_6 Age_{i,t} + \beta_7 CovidCrisis_t + \beta_8 SovereignDebtCrisis_t + \beta_9 GDP_t + \beta_{10} Unemployment_t + \varepsilon_{i,t} \quad (model\ 2)$$

Table 1
List of variables and their specification

Variables	Expected sign	Formulas	Measurement
Dependent			
Decline		$Real\ SG_{i,t} = \frac{1 + SG_{i,t}}{1 + Inf_{i,t}} - 1$ $SG_{i,t} = \frac{Sales_{i,t} - Sales_{i,t-1}}{Sales_{i,t-1}} - 1$ <p>Decline=1 if Real SG_{i,t} <0 and 0 otherwise</p>	Real sales growth. Binary variable that assumes a value of 1 when the growth rate is negative and 0 otherwise.
Independent			
Quality of Financial Information (QFI)	-	$NDA_{i,t} = \alpha_0 \left(\frac{1}{A_{i,t-1}} \right) + \alpha_1 \left(\frac{\Delta REV_{i,t}}{A_{i,t-1}} \right) + \alpha_2 \left(\frac{PPE_{i,t}}{A_{i,t-1}} \right) + \varepsilon_{i,t}$ <p>DA = TA-NDA</p>	Proxy based on discretionary accruals, estimated by the Jones (1991) model, in which higher values indicate lower QFI.
Control			
Size	-	Ln (Total assets)	Total assets
Liquid	-	Current assets/Current liability	Liquidity ratio
Debt	+	Total Debt/Total Assets	Debt ratio
Prof	-	EBITDA/Total Assets	Profitability ROA
Age	-	Ln (year of analysis – year of incorporation)	Number of years since incorporation
CovidCrisis	+		Binary variable that assumes the value 1 for the Covid years (2020 and 2021) and 0 otherwise
SovereignDebtCrisis	+		Binary variable that assumes the value 1 for the Sovereign Debt Crisis years (2011 to 2015) and 0 otherwise
GDP	-		Real GDP growth rate of the country in year t.
Fixed Effects / Country			Dummies to control for institutional characteristics in each country.
Unemployment	+		Percentage of the active population that is unemployed.

Source: Own elaboration. Notes: This table presents the definition and construction of the variables employed in the study.

To explore the relationship between the quality of financial information (QFI) and the probability of corporate decline (binary variable), we estimate both fixed effects (FE) and random effects (RE) panel logit models. Each approach captures a different dimension of

variation in the data: the FE model focuses on within-firm changes over time, controlling for time-invariant unobserved characteristics, while the RE model leverages both within- and between-firm variation. In our sample, the decomposition of variance in the QFI

proxy shows that approximately 62% of the total variation occurs between firms, with the remaining 38% occurring within firms over time. This suggests that much of the useful variation in QFI is cross-sectional in nature. As a result, the RE model is more sensitive to persistent differences in QFI across firms, while the FE model isolates the effect of firm-level changes in QFI over time. Together, these models provide complementary insights: the RE estimates reflect broader structural patterns across firms, whereas the FE results highlight the more conservative within-firm dynamics.

Descriptive statistics and analyses of the relationships among the variables were conducted using STATA 19.5, ensuring a rigorous and systematic approach to result interpretation.

4. DESCRIPTIVE STATISTICS

Table 2 presents the descriptive statistics for the variables used in the model. The dataset comprises 3,350 firm-year observations, ensuring sample consistency. Following winsorization, discretionary accruals display a mean of 0.20617 and a standard deviation of 0.18781.

Corporate debt is another critical factor. The mean debt level of 51.8 percent suggests that more than half of the companies' assets are financed through debt. The minimum value of 2.6 percent indicates a more conservative financial strategy in some firms, characterized by low debt levels. Profitability averages 10.1 percent, with a range spanning from -6.30 percent to 31.18 percent. The average company age is 46 years, with firms varying from newly established (1 year) to centuries old (maximum of 276 years). The average liquidity ratio is 1.64, reflecting these companies' ability to manage cash flows effectively and meet short-term liabilities.

Macroeconomic variables exhibit heterogeneous patterns: GDP records a mean of 0.039 (SD = 0.042), while the unemployment rate averages 11.1% (SD = 6.17). Overall, the evidence indicates a heterogeneous sample in terms of financial structure, profitability, liquidity, firm age, and macroeconomic context, enabling comprehensive analyses and robust comparisons of the Quality of Financial Information (QFI) and business decline.

Table 2
Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
QFI	3,350	0.20617	0.18781	0.00329	1.03499
Debt	3,350	0.51858	0.20527	0.02598	0.99668
Prof	3,350	0.10109	0.06223	-0.06301	0.31181
Liquid	3,350	1.64218	1.08072	0.30794	6.74802
Size	3,350	5.37649	1.10647	3.17805	10.72371
Age	3,350	3.54092	0.81357	0.00000	5.62030
GDP	3,350	0.03840	0.04174	0.10249	0.12720
Unemployment	3,350	11.09667	6.17417	3.14000	27.69000

Source: Own elaboration. Notes: The table reports, for each variable, the number of observations (Obs), the mean (Mean), the standard deviation (Std. Dev), the minimum value (Min), and the maximum value (Max). Financial variables include: **QFI**: Quality of financial information, estimated using the Jones (1991) model and measured through discretionary accruals; **Debt**: debt ratio (proportion of liabilities-to-assets); **Prof**: return on assets; **Liquid**: current assets divided by current liabilities; **Size**: logarithm of total assets; and **Age**: logarithm of the number of years since the firm's establishment. Macroeconomic variables include **GDP**: gross domestic product, and the **Unemployment**: unemployment rate (%). The variables *QFI* and *Liquidity* were winsorized at the 5% and 99% levels to mitigate the influence of outliers.

The Pearson correlation matrix (Table 3) shows that most explanatory variables are weakly correlated (< 0.25), indicating limited multicollinearity concerns. A positive and statistically significant correlation emerges between discretionary accruals, a proxy for QFI, and the decline in real sales ($r \approx 0.0402$; $p < 0.0273$). This finding implies that higher discretionary accruals (lower QFI) are associated with reductions in real sales among food manufacturing firms. Such evidence aligns with recent literature, which indicates that low-quality financial information raises the cost of capital, constrains resource access, and erodes consumer confidence, ultimately leading to weaker operating performance and revenue contraction (Gao et al., 2025).

Table 3
Pearson correlation matrix

	Decline	QFI	Debt	Liquid	Prof	Size	Age	GDP	Unemploy
Decline	1.0000								
QFI	0.0402**	1.0000							
Debt	-0.0233	0.0167	1.0000						
Liquid	0.0072	-0.0593***	-0.6698***	1.0000					
Prof	-0.0798***	0.2288***	-0.2295***	0.1401***	1.0000				
Size	0.0219	-0.0665***	-0.0606***	-0.0230	0.0597***	1.0000			
Age	0.0054	-0.0586***	-0.1235***	0.1508***	0.0581***	0.0862***	1.0000		
GDP	-0.0114	0.0088	0.0074	-0.0052	0.0079	0.0430***	0.0302*	1.0000	
Unemployment	-0.0009	0.0479	0.0277	-0.0198	0.0470***	-0.1817***	-0.0757	-0.1504***	1.0000

Source: Own elaboration. Notes: **QFI**: is estimated using the Jones (1991) model and measured through discretionary accruals; **Debt**: represents the ratio of total liabilities to total assets; **Prof**: denotes return on assets; **Liquidity**: is defined as current assets divided by current liabilities; **Size**: corresponds to the natural logarithm of total assets; **Age**: reflects the natural logarithm of the number of years since the firm's incorporation. The macroeconomic variables include **GDP** (Gross Domestic Product) and the **Unemployment** (% of the labor force). This table shows the Pearson correlation coefficients (and their statistical significance) between the independent variables. ***, **, * represent the significance of the coefficients at the 1%, 5% and 10% level, respectively.

Additionally, firm profitability correlates negatively and significantly with sales decline. Correlations with country dummies highlight institutional and regulatory heterogeneity across the sample, supporting the inclusion of country fixed effects in subsequent econometric specifications.

5. RESULTS

The results of the panel logit estimations reported in Table 4 (odds ratios) indicate that discretionary accruals, used as a proxy for the quality of financial information (QFI), are positively associated with the probability of corporate decline (logit coefficients are available in the appendix table). This relationship is statistically significant in the random effects (RE) specifications for both Model 1 and Model 2, with odds ratios of 2.04353 and 2.04298, respectively, supporting **H1**.

These estimates suggest that firms exhibiting higher levels of discretionary accruals face a substantially higher likelihood of experiencing a decline in sales, consistent with the interpretation that lower financial reporting quality increases firm vulnerability (in line with the findings of, e.g., [Anton and Carp \(2020\)](#) and [Costa et al. \(2022\)](#), who highlight the risks associated with poor financial reporting quality and risk of decline). Although the coefficients remain positive in the fixed effects (FE) models, they are not statistically significant, which may reflect the limited within-firm variation captured by this estimator.

While the model does not explicitly identify the channels through which lower QFI contributes to corporate decline, the observed association is consistent with information asymmetry and agency cost theories ([Healy & Palepu, 2001](#); [Jensen & Meckling, 1976](#)). Weaknesses in financial reporting quality may increase uncertainty about firms' true economic conditions, thereby affecting stakeholders' perceptions and potentially constraining access to external resources. Importantly, these mechanisms are not empirically tested in this study and should be interpreted as theoretically grounded explanations rather than direct causal evidence.

Regarding firm-level control variables, leverage and profitability exhibit statistically significant effects in the RE specifications. Specifically, the odds ratios for debt are below unity and statistically significant, indicating that more leveraged firms are, on average, less likely to experience sales decline, in contrast with **H2e**. Similarly, profitability (ROA) displays a strong and negative association with decline probability across both estimators and model specifications, suggesting that more profitable firms are better positioned to sustain sales performance, supporting **H2d**. In contrast, liquidity exhibits an odds ratio below unity, showing a negative association with firm decline, as predicted by **H2c**, but does not show a statistically significant effect in any specification.

Firm size presents mixed results. The FE estimates indicate a statistically significant odds ratio below one, suggesting that larger firms are less likely to experience decline, supporting **H2b**, whereas the RE estimates are not statistically significant. Firm age exhibits a positive, though statistically insignificant, association with sales decline across all models. Although this finding runs counter to **H2a**, it may be interpreted in light of product

and industry life-cycle theories, which suggest that mature firms operating in saturated markets may be more exposed to declining sales dynamics.

At the macroeconomic level, GDP growth displays a negative coefficient, although not statistically significant, indicating that adverse macroeconomic conditions increase the probability of sales decline, as predicted by **H3b**. Recent studies confirm that in essential sectors such as food manufacturing, macroeconomic shocks and global structural transformations exert influence on sales ([Amankwah-Amoah, 2016](#); [García-Sánchez et al., 2022](#)).

The unemployment rate did not exhibit a statistically significant effect, despite the reported positive effect (in line with **H3a**), which can be explained by the sector's characteristics. The food sector is regarded as non-cyclical, even under high unemployment, consumers continue to purchase food products. Hence, demand does not fall proportionally with unemployment, rendering its effect on firm decline insignificant.

Neither the COVID-19 crisis nor the sovereign debt crisis dummy variables (model 2) show statistically significant effects on the probability of decline, suggesting that firms in the food production sector were relatively resilient to these systemic shocks (e.g., [Mira et al., 2023](#)). Similarly, [Nathali et al. \(2023\)](#) argue that the expansion of online sales and home deliveries helped these companies sustain a solid customer base and maintain sales. [Nurseto et al. \(2023\)](#) further concluded that, being classified as an essential sector, food companies were able to continue operations during lockdowns and restrictions. These combined factors contributed to the negligible impact of the COVID-19 pandemic on the decline of food manufacturing firms in the European Union.

Finally, the inclusion of country fixed effects reveals statistically significant cross-country differences, reinforcing the importance of controlling for institutional and structural heterogeneity when assessing the impact of QFI on corporate decline. Such evidence is consistent with the conclusions of [Beynon et al. \(2020\)](#), who argue that different combinations of regulatory, normative, and cultural-cognitive institutional conditions significantly influence firm exit rates, which may also be related with the probability of business decline. Nevertheless, the primary purpose of including country fixed effects is not to compare nations but to control structural differences, ensuring that the estimated effect of QFI on decline can be interpreted as an incremental impact independent of each economy's particular conditions.

Regarding model fit, the results in Table 4 are in line with theoretical expectations and previous findings (e.g., [Bryan et al., 2002](#); [Costa et al., 2022](#); [Ganchala et al., 2022](#); [Nagar & Sen, 2018](#)). To validate the model, we conducted the likelihood ratio test and the Wald Chi-Square test. The likelihood ratio test yielded a chi-square of -2041.157 with a p-value of 0.000, confirming the model's joint significance. The Wald Chi-Square test reported a statistic of 53.08 with a p-value of 0.0148, indicating no evidence against the model's fit. To assess the collinearity between variables, the variance inflation factor (VIF) was computed for each explanatory variable. Following [Paiva \(2018\)](#) and [Rad et al. \(2016\)](#), a VIF exceeding 10 would indicate multicollinearity. However, all calculated VIFs fall below this threshold, confirming the absence of multicollinearity and ensuring the validity of the model's regression coefficients.

Table 4
Results of the Logit model

Variables	Odds Ratio (OR)	Odds Ratio (OR)	Odds Ratio (OR)	Odds Ratio (OR)	VIF
	Model 1 FE	Model 1 RE	Model 2 FE	Model 2 RE	
QFI	1.18996	2.04353***	1.19154	2.04298***	1.07
Firm-level Control					
Debt	0.77163	0.41115***	0.78182	0.41172***	1.94
Prof	0.00458***	0.01239***	0.00463***	0.01236***	1.13
Liquid	0.99035	0.95119	0.98939	0.95106	1.88
Size	0.45538***	0.98439	0.45711***	0.98458	1.06
Age	0.90528	1.03251	0.90957	1.03272	
Macroeconomics-level Control					
GDP	0.18827	0.20259	0.18609	0.20133	1.01
Unemployment	1.01022	1.00306	1.00987	1.00273	1.05
SovereignDebtCrisis			0.91028	0.90659	1.09
CovidCrisis			1.04583	1.04611	1.09
Country dummies	Yes	Yes	Yes	Yes	Ok
N.° Observations	2, 979	3,015	2,979	3,015	
Goodness of fit adjustment tests					
Log likelihood	-1372.74700	-2041.15700	-1371.95300	-2040.303	
Wald χ^2	30.72000**	53.08000**	32.31000**	54,680**	

Source: Own elaboration. **Notes:** The table reports the results of the panel logistic regression (logit) used to examine the influence of QFI on the probability of corporate decline. The estimator employed is the FE and RE panel logit model. The reported coefficients correspond to odds ratios. **Decline** (dependent variable): defined as a dummy equal to 1 when the firm experiences a reduction in sales volume, and 0 otherwise. **QFI**: discretionary accruals estimated using the Jones (1991) model; **Prof**: net income/total assets; **Size**: natural logarithm of total assets; **Liquid**: current assets/current liabilities; **Debt**: total debt/total assets; **GDP**: constant values, obtained from the WDI; **CovidCrisis**: Binary variable that assumes the value 1 for the Covid years (2020 and 2021) and 0 otherwise; **SovereignDebtCrisis**: Binary variable that assumes the value 1 for the Sovereign Debt Crisis years (2011 to 2015) and 0 otherwise; and **Unemployment**: percentage of the labor force officially classified as unemployed, WDI. In addition, the table presents key diagnostic tests: the Wald test for joint significance, the Hosmer–Lemeshow test for model fit, and VIF statistics to assess multicollinearity. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Robustness checks

To assess the robustness of the main findings, we re-estimate the model using an alternative definition of business decline. Specifically, the original decline indicator based on real sales variation is replaced with a dummy constructed from changes in nominal sales. This alternative specification allows us to verify whether the results are sensitive to the measurement of sales performance, which may capture both quantity and price effects.

The results reported in Table 5 confirm the robustness of the main findings concerning the quality of financial information. Discretionary accruals remain positively associated with the probability of firm decline and are statistically significant in the random effects (RE) specification, with an odds ratio of 2.49070 (p -value = 0.004). This magnitude is even larger than that observed in the baseline estimations, reinforcing the conclusion that lower financial reporting quality substantially increases the likelihood of sales decline. Although the coefficient remains positive in the fixed effects (FE) model, it is not statistically significant, consistent with the baseline results and likely reflecting limited within-firm variation.

The firm-level control variables do not exhibit statistically significant effects under this alternative specification. Leverage, profitability, liquidity, firm size, and firm age all display odds ratios that are not significantly different from unity in both FE and RE models. This suggests that when business decline is defined using nominal sales changes, internal financial characteristics play a more limited role in explaining sales contractions.

At the macroeconomic level, GDP growth does not show a statistically significant effect in either specification. The unemployment rate, however, becomes marginally significant in the RE model, with an odds ratio slightly above 1, indicating that higher unemployment rates are associated with a higher probability of a firm-level sales decline. This result is consistent with the notion that nominal sales measures may be more sensitive to broader labor-market conditions that affect aggregate demand.

Overall, these robustness checks indicate that while the relative importance of control variables varies depending on how business decline is measured, the effect of discretionary accruals remains stable in both direction and statistical significance. This consistency provides strong support for the paper's central argument, namely that lower-quality financial information is

systematically associated with a higher probability of corporate decline, regardless of the specific operationalization of sales performance.

Table 5
Robustness checks

Variables	Odds Ratio (OR) Model 1 FE	Odds Ratio (OR) Model 1 RE	VIF
QFI	1.15077	2.49070***	1.07
Firm-level Control			
Debt	0.79586	0.67693	1.94
Prof	0.24853	0.27935	1.13
Liquid	0.90054	0.99210	1.88
Size	1.05675	0.98924	1.06
Age	0.77235	0.95425	1.04
Macroeconomics-level Control			
GDP	1.60602	3.74571	1.01
Unemployment	1.06829	1.04915*	1.05
SovereignDebtCrisis			1.09
CovidCrisis			1.09
Country dummies	Yes	Yes	Ok
N.º Observations	3,015	3,015	
Goodness of fit adjustment tests			
Log likelihood	-618.665	-1013.073	
LR chi2	1821,87***	920,59***	

Source: Own elaboration. Notes: The table reports the results of the panel logistic regression (logit) used to examine the influence of QFI on the probability of corporate decline. The estimator employed is the FE and RE panel logit model. The reported coefficients correspond to odds ratios. **Decline**: the dependent variable, defined as a dummy equal to 1 when the firm shows a reduction in real sales and 0 otherwise. **QFI**: discretionary accruals estimated from the Jones model; **Prof**: net income/total assets; **Size**: natural logarithm of total assets; **Liquid**: current assets/current liabilities; **Debt**: total debt/total assets; **GDP**: in constant terms, obtained from WDI; **CovidCrisis**: Binary variable that assumes the value 1 for the Covid years (2020 and 2021) and 0 otherwise; **SovereignDebtCrisis**: Binary variable that assumes the value 1 for the Sovereign Debt Crisis years (2011 to 2015) and 0 otherwise; and **Unemployment**: % of the active population officially classified as unemployed, WDI. The main diagnostic tests are also presented: LR chi2, Loglikelihood and VIF statistics to assess multicollinearity. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

6. CONCLUSIONS

This study examines the relationship between the quality of financial information and the probability of business decline in the European food manufacturing sector. Using a logistic regression framework applied to a large panel of firms, the analysis evaluates how internal firm characteristics and external macroeconomic conditions interact with financial reporting quality

to influence the likelihood of sales decline. By focusing on discretionary accruals as a proxy for QFI, the study contributes to the literature on business decline by shifting attention from traditional financial distress indicators toward informational and governance-related dimensions.

The empirical results provide consistent evidence that lower financial reporting quality, proxied by discretionary accruals, is associated with a significantly higher probability of firm decline. This relationship remains robust across alternative model specifications and an alternative definition of decline based on nominal sales variation, thereby reinforcing the central role of QFI as a determinant of firms' resilience. These findings contribute to the literature by shifting attention away from traditional financial distress predictors and toward governance- and information-related factors as early indicators of vulnerability.

Implications within the food manufacturing sector

The sectoral focus of this study is particularly relevant. Food manufacturing is generally considered a non-cyclical and relatively stable industry, characterized by persistent demand and resilience to short-term shocks. However, the results indicate that even in such a context, weaknesses in the quality of financial reporting increase the likelihood of sales decline. This suggests that firm vulnerability in the food sector is not driven solely by market demand or operational efficiency, but also by informational frictions that affect stakeholder confidence. Poor QFI may amplify perceived risk among investors, creditors, and commercial partners, thereby constraining firms' strategic flexibility precisely when adaptation is required to address changing consumer preferences, cost pressures, or competitive dynamics.

Importantly, the limited explanatory power of traditional financial indicators, such as leverage, profitability, liquidity, and firm size, reinforces the notion that a decline in this sector reflects broader governance and informational challenges rather than purely balance-sheet weaknesses. This finding is consistent with the idea that sales decline represents an early-stage manifestation of firm vulnerability, preceding more conventional signs of financial distress.

Managerial implications

From a managerial perspective, the findings highlight the strategic value of high-quality financial reporting as a risk management tool rather than a mere compliance exercise. Managers operating in the EU food manufacturing sector should recognize that transparent and reliable financial information can reduce uncertainty, preserve access to external financing, and stabilize relationships with suppliers and customers. Investments in robust internal controls, accounting systems, and reporting practices may therefore contribute directly to firm resilience by mitigating informational risk and supporting more effective stakeholder engagement.

Policy and regulatory implications in the EU context

At the policy level, the findings carry important implications for regulators and standard-setters within the European Union.

The strong association between QFI and firm decline supports regulatory initiatives to enhance transparency, harmonize, and enforce financial reporting standards. In sectors deemed strategically important, such as food manufacturing, regulatory oversight that promotes high reporting quality may indirectly contribute to economic stability by reducing firm-level vulnerability and improving capital allocation.

Furthermore, the results suggest that policies focused exclusively on firms' financial ratios or capital adequacy may overlook critical informational dimensions of risk. Supervisory frameworks that incorporate indicators of financial reporting quality could improve early-warning systems and support more proactive interventions, particularly during periods of macroeconomic stress.

Limitations and avenues for future research

Despite its contributions, this study has several limitations. First, due to data constraints, QFI is measured solely through discretionary accruals, which may not fully capture other relevant dimensions of reporting quality, such as timeliness, conservatism, or disclosure clarity. Second, the analysis is confined to large food manufacturing firms in the European Union, limiting the generalizability of the findings to other industries, smaller firms, or different institutional settings. Third, while macroeconomic variables are included, other external factors, such as technological change or shifts in consumer behavior, are not explicitly modeled.

Future research could address these limitations by incorporating alternative and multidimensional measures of QFI, extending the analysis to small and medium-sized enterprises, or comparing results across industries with different competitive and demand structures. Further work could also examine the interactions among financial reporting quality, innovation strategies, and sustainability practices, thereby deepening our understanding of how informational governance shapes firm resilience over time.

7. DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

8. SOURCES OF FUNDING

This research has not received any specific grants from funding agencies in the public, commercial or non-profit sectors.

9. AUTHORSHIP

All authors contributed substantially to several stages of the research. Masidinga Landu: [Conceptualization; Methodology; Formal analysis and investigation; Writing - original draft preparation; Writing - review and editing], Jorge H. Mota: [Conceptualization; Methodology; Formal analysis and investigation; Writing - review and editing; Supervision], Ana Maria Bandeira:

[Conceptualization; Methodology; Formal analysis and investigation; Writing - review and editing; Supervision], António Carriço Moreira: [Conceptualization; Methodology; Formal analysis and investigation; Writing - review and editing; Supervision].

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APPENDIX

Table A.1

Variables	Coefficients Model 1 FE	Coefficients Model 1 RE	Coefficients Model 2 FE	Coefficients Model 2 RE	VIF
QFI	0.17392	0.71468***	0.17525	0.71441***	1,07
Firm-level Control					
Debt	-0.25925	-0.88880***	-0.24614	-0.88741***	1.94
Prof	-5.38512***	-4.39058***	-5.37638***	-4.39331***	1.13
Liquid	-0.00970	-0.05004	-0.01067	-0.05018	1.88
Size	-0.78662***	-0.01573	-0.78284***	-0.01554	1.06
Age	-0.09951	0.03199	-0.09478	0.03219	1.04
Macroeconomics-level Control					
GDP	-1.66990	-1.59655	-1.68151	-1.60282	1.01
Unemployment	0.01017	0.00306	0.00982	0.00273	1.05
SovereignDebtCrisis			0.04482	0.04507	1.09
CovidCrisis			-0.09400	-0.09807	1.09
Country dummies	Yes	Yes	Yes	Yes	Ok
N° Observations	3,350	3,015	2,979	3,015	
Goodness of fit adjustment tests					
Log likelihood	-1372.747	-2041.157	-1371.953	-2040.303	
LR chi2	30.720**	53,08**	32,310**	54.680**	

Source: Own elaboration. **Notes:** The table reports the results of the panel logistic regression (logit) used to examine the influence of QFI on the probability of corporate decline. The estimator employed is the panel logit model, with the inclusion of country fixed effects. **Decline** (dependent variable): defined as a dummy equal to 1 when the firm experiences a reduction in current sales volume, and 0 otherwise. **QFI**: discretionary accruals estimated using the Jones (1991) model; **Prof**: net income/total assets; **Size**: natural logarithm of total assets; **Liquid**: current assets/current liabilities; **Debt**: total debt/total assets; **GDP**: constant values, obtained from the WDI; **CovidCrisis**: Binary variable that assumes the value 1 for the Covid years (2020 and 2021) and 0 otherwise; **SovereignDebtCrisis**: Binary variable that assumes the value 1 for the Sovereign Debt Crisis years (2011 to 2015) and 0 otherwise; and Unemployment: percentage of the labor force officially classified as unemployed, WDI. In addition, the table presents key diagnostic tests: LR chi2, log likelihood and VIF statistics to assess multicollinearity. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.