Accounting and Macroeconomic Variables Explaining Investment: An Empirical Study with Panel Data in the Portuguese Textile Sector

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Abstract: This study analyses the variables that influence investment in a sample of small, labour-intensive companies in a sector that is highly dependent on external demand and the world economy. The aim is to test the three traditional theories of investment (neoclassical theory, free cash flow theory and agency theory), as well as consider the existence of other variables endogenous and exogenous to the company, in order to obtain a model that is appropriate to the reality of the companies in the sample, which consists of 3859 companies in the Portuguese textile sector, for the period from 2010 to 2022. Although there are many studies on the subject, the sample of companies used is different from the others, presenting a unique perspective for understanding investment dynamics in this type of company. The methodology used involves estimating panel data models using the GMM method. The results show that there is a statistically significant and negative relationship between liquidity and asset turnover and investment, so the free cash flow and neoclassical theories, respectively, are partially verified. The agency theory is not confirmed. Other variables are significant in explaining investment: the debt structure is statistically negative, while the size of the company, the GDP and the interest rate are statistically positive. Return on assets proved not to be statistically significant in explaining investment. To summarise, the study highlights the need for financial strategies adapted to the unique characteristics of small businesses.

Keywords: investment; capital structure; liquidity; debt; asset turnover; gross domestic product (GDP)

1. Introduction

The idea of investment involves the application of capital to create value, depending on the economic environment and future expectations (Batista 2020). In economic terms, investment is the sum of gross fixed capital formation (GFCF) and changes in stocks (INE (Instituto Nacional de Estatística) 1996). The latter component generally represents a small percentage, which is why investment is only referred to as GFCF (INE (Instituto Nacional de Estatística) 1996). In a country’s national accounts, investment is a volatile and pro-cyclical variable, falling during recessions and rising during expansions, reflecting expectations of future profitability (Keynes 2010). Various factors, both endogenous and exogenous to the company, influence investment decisions (Rufino and Cavalcante 2024).

Based on the work of Modigliani and Miller (1958), different theories were developed (Meyer and Paula 2023), including trade-off theory, pecking order theory, signal theory, neoclassical theory, free cash flow theory, agency theory, among others (Batista 2020).

This article analyses the three traditional theories (neoclassical theory, free cash flow theory and agency theory) as they are particularly important and relevant in explaining investment (Batista 2020).

Under the assumption of perfect capital markets and perfect information, the capital structure does not interfere with the value of the company. Thus, investment decisions
depend on factors exogenous to the company and are independent of financing decisions (Modigliani and Miller 1958). Neoclassical theory considers that sales are explanatory of investment and the relationship between the two is positive (Hall and Jorgenson 1967). The precursors of these authors confirm this relationship (Pereira 2001).

In opposition to the neoclassicals, the post-Keynesians argue that capital structure is an explanatory factor for investment (Silva 1988). The lack of perfect information between managers, owners and creditors means that external financing is not a perfect substitute for internal financing as was considered in previous theory (Aidar and Terra 2017). Companies with difficulties in obtaining external financing resort to internal financing (cash flow) to finance their investments (Aidar and Terra 2017). Investment thus does not depend on exogenous factors as in the previous theory but on factors endogenous to the company. There is thus a positive relationship between investment and cash flow, hence the origin of the free cash flow theory (Fazzari and Athey 1987; Fazzari et al. 1988). The positive relationship between cash flow and investment is confirmed by several authors (Du and Wei 2021; Shah and Khan 2021).

Agency theory, when considering the asymmetry of information between owners/managers/creditors, considers that the level of debt and capital structure is a relevant variable in explaining investment. Hence, there is a negative relationship between debt and investment (Myers 1977; Baltagi and Moscone 2010; Campello et al. 2010).

The aim of this article is to analyse the explanatory variables of investment in 3859 Portuguese textile companies (CAE 13) from 2010 to 2022, using panel data models. The explanatory capacity of the three traditional investment theories is assessed. However, in order to obtain a robust model suited to the characteristics of the companies included in the sample, other accounting and macroeconomic variables identified in the literature are analysed.

The investment decision is reflected in the company’s profitability (Lv et al. 2021; Sa’diyah 2021), so it is crucial to analyse this decision. In addition, the funds required for investment are high and are not recovered in the short term, so failures can lead the company to insolvency/bankruptcy (Rosa and Mukhibad 2022). There are other factors that explain the relevance of this study and that differentiate this analysis from existing studies.

Although there are several theories on investment and studies that analyse the subject with samples from different countries (Mordor Intelligence 2024; Medeiros and Fraga 2021), sectors of activity (Mendes 2011; Martinez and Santos 2021) and time periods (Mordor Intelligence 2024), there are few studies focused on companies with the characteristics of those used in this study (Farinha and Prego 2013; Caeiro 2022). The proposed research, on the textile sector in Portugal, is relevant because it explores a field that has been little studied in the national context and considers the unique characteristics of the companies. This sector is mostly made up of small family businesses that rely heavily on intensive labour. This reality contrasts significantly with the existing literature, which is dominated by empirical studies of larger, more capital-intensive companies, neglecting the particularities of the former. The lack of studies focussing on these types of companies creates a gap in knowledge and limits understanding of the dynamics and challenges they face. This study is a pioneer in addressing the reality of these companies, filling the gap in research in this area. Farinha and Prego (2013) emphasise that studying investment in Portugal is relevant due to the high indebtedness of companies, their low profitability and the changes in credit conditions following the economic crisis.

In addition, in many regions and countries, companies with characteristics similar to those in the sample play an essential role in the economy. They are vital in countries and regions with an abundance of cheap labour and promote social inclusion, especially for women and disadvantaged populations. They thus act as engines of economic and social development, as well as fuelling export growth. To ensure the continued prosperity of these companies, which is essential for the economy and the well-being of the population,
it is crucial to understand the variables that explain investment in this sector, which may not be identical to studies that include mostly large and more capital-intensive companies.

Understanding the determinants of investment in this type of company is essential for managers, investors, researchers and the government. It is crucial for managers to allocate resources efficiently in order to maintain the company’s competitiveness. This is an important factor in the current economic environment. For investors and academics, it helps make more informed decisions about resource allocation and identify investment opportunities (Lopez et al. 2021). The government can use the results of this research to formulate policies that promote the sustainable growth and competitiveness of these companies, as well as improving access to finance and encouraging innovation.

The article is organised as follows. This section introduces the topic, the relevance and the research objectives. Section 2 presents the literature review. Section 3 presents the methodology and the sample used. Section 4 presents and analyses the empirical results, and the conclusions are presented in Section 5.

2. Literature Review

Major economic crises such as the Great Depression in 1929 or the Great Recession of 2008 present challenges that involve major investment and financing decisions (Alves et al. 2023). In the previous section, three theories were identified to explain investment: the neoclassical theory, the free cash flow theory and the agency theory. Whenever a new theory emerges, new empirical studies emerge, either to test that theory or to evaluate other potentially explanatory variables. This section reviews empirical work and the variables that potentially explain investment.

Investment decisions will have implications for the company’s financial management. Investing involves evaluating the different possibilities and selecting the one with the best expected results in terms of return/risk. The choice of investment can be affected by a number of variables both internal and external to the company (Abdul Kareem et al. 2023).

Modigliani and Miller’s (1958) neoclassical theory argues that a company’s capital structure is irrelevant for decision-making, considering debt financing as a perfect substitute for internal financing. Studies analysing this theory find that sales have a positive and statistically significant relationship to explain investment (Hall and Jorgenson 1967; Jorgenson 1971; Chirinko 1993; Casagrande 2002; Makarim and Noveria 2014; Pereira 2001). Sales is the variable with the greatest explanatory power for investment (Chirinko 1993). Other authors have found a positive relationship between asset turnover and investment (Do and Phan 2022; Hartono and Wahyuni 2005; Makarim and Noveria 2014).

This theory has the shortcoming of not considering any variable other than sales (Batista 2020). Investment must be explained by variables both endogenous and exogenous to the company (Araujo et al. 2023).

Later, Modigliani and Miller (1963) introduced taxes into their theory. However, they continued to assume perfect markets, no asymmetry of information and no restrictions on financing, hence the limited applicability of this theory (Barbosa et al. 2007; Stiglitz and Weiss 1981). However, the cost of capital depends on the company’s degree of indebtedness (Caseiro 2022). The imperfection of the capital market reveals a link between investment and company indebtedness. Although some companies prefer internal financing to avoid the additional costs of external capital (Gomes 2001; Demirguc-Kunt et al. 2004), this approach does not eliminate the limitations imposed by the theory.

Neoclassical theory assumes a market with perfect competition and equal access to credit, regardless of the company’s economic and financial situation. In reality, this is not the case. Agency theory considers the existence of information asymmetry and conflicts of interest between owners, managers and creditors, resulting in an increase in the cost of debt financing. Thus, the cost of internal financing is lower than that of external financing (Myers and Majluf 1984; Imhof 2014), and debt is therefore crucial to agency costs (Pilarski and Sackmann 2024).
Capital market imperfection (Barbosa et al. 2007) and information asymmetry create credit restrictions (Stiglitz and Weiss 1981), which explains the negative relationship between investment and indebtedness, contrary to neoclassical theory.

The greater the opportunity for growth, the more likely it is that managers will invest in projects that allow them to make a better projection, to the detriment of the company’s results. This behaviour means that recourse to debt financing and the costs associated with it impose certain restrictions on managers, who only opt for the most profitable projects. Owners also demand higher returns to offset the costs of monitoring managers (Michael 2014). Debt is therefore a variable that influences investment (Michael 2014), since the higher this variable is, the greater the company’s risk of default and the higher its cost. Some authors argue for a positive relationship between debt and investment (Ahn et al. 2006; Nakajima and Sasaki 2016; Rashid and Karim 2018) and others for a negative relationship (Danso et al. 2019; Campello et al. 2010; Jensen 1986; Myers 1977). Others argue that there is no relationship between the two variables (Salim 2019; Perwitasari 2021). Authors also argue that there are behavioural variables that explain investment (Carvalho et al. 2019), which is why it was chosen to be tested in this empirical study.

Free cash flows were first analysed by Fazzari et al. (1988), which represent the surplus capital available in a company to cover investment (Batista 2020). After verifying some weaknesses in the neoclassical theory, Jensen (1986) studied the theory of free cash flow in the oil industry and verified the conclusions of its creators. The cash flows generated by companies can finance investment and thus reduce external indebtedness (Batista 2020; Terra 2011; Fazzari et al. 1988). This justifies the positive relationship between cash flow and investment found in several studies (Alti 2003; Fazzari et al. 1988; Silva and Carreira 2010; Rosa and Mukhibad 2022; Rashid and Karim 2018; Alti 2003). This relationship is more evident in companies with greater difficulties in resorting to debt financing and/or with a high cost of debt (Fazzari et al. 1988). The positive relationship between cash flow and investment derives from agency costs (Pilarski and Sackmann 2024; Silva and Carreira 2010).

Cash flow is more relevant in explaining investment in smaller companies with restricted access to credit (Aivazian et al. 2005). Serrasqueiro et al. (2007) found a positive and statistically significant relationship between cash flow and investment in Portuguese-listed companies between 1998 and 2004. Liquidity is therefore an explanatory variable for investment, and there is a relationship between the two variables (Rashid and Karim 2018). Others find the opposite: liquidity negatively influences investment (Kalusová and Badura 2022).

The agency cost worsens in older companies with slow growth and high cash flows. Managers may opt for reinvestments not accepted by shareholders, resulting in bad investments and negative returns (Morgado and Pindado 2003; Fazzari et al. 1988). According to Jensen (1986), debt limits managers from arbitrarily using cash flows, reducing agency costs and unprofitable investments (Park and Jang 2013). However, high cash flows increase managers’ autonomy for personal decisions (Chiu et al. 2010). Dividend distribution can resolve excess cash flows (Smith and Pennathur 2019). Cash flow is crucial for investments in smaller companies with credit restrictions (Aivazian et al. 2005).

It should also be noted that some authors (Lang et al. 1991; Park and Jang 2013) report that there is no consensus on the formula for calculating cash flows. Furthermore, companies with little cash flow do not have many investment alternatives (Lang et al. 1991). These factors motivated the need to test these theories in this empirical study.

The empirical studies also identify other variables, namely, profitability and size, as explanatory of investment.

Although profitability has been identified as an explanatory factor for investment, there is no consensus on the relationship between the two variables: for some, it is positive (Rahmiati and Huda 2015; Endiana 2016) and for others, it is negative (Wahyuni et al. 2015). Some authors have found a statistically significant and positive relationship between company size and investment. There are several arguments for this relationship, such as larger companies generally have greater resources and investment opportunities...
(Almeida et al. 2020), greater economies of scale, greater product diversification and there-
fore lower risk, greater ability to attract good managers (Guo and Zhang 2023), and factors
that facilitate investment, among others (Almeida et al. 2020; Guo and Zhang 2023).

Investment decisions cannot be unrelated to macroeconomic conditions, which is why
there are potentially explanatory variables for investment such as gross domestic product
(GDP) (Nunes et al. 2012; Abdul Kareem et al. 2023) and the interest rate (Luporini and
Alves 2010; Mian and Sufi 2020; Farinha and Félix 2015).

GDP is an indicator of economic activity, which is dependent on a number of economic
and business factors, such as government policies, market expectations and sectoral con-
ditions, factors that directly affect the company’s investment decisions (Nunes et al. 2012;
Abdul Kareem et al. 2023).

An investment is advisable if its expected return is higher than an alternative invest-
ment, which represents the opportunity cost of capital. Therefore, changes in interest rates
alter investment decisions. The explanatory power of interest rates on investment is not
unanimous among empirical studies, nor is the relationship between the variables. Some
argue that there is a negative relationship between the market interest rate and investment
(Luporini and Alves 2010), while for others the relationship is positive (Mian and Sufi
2020). The interest rate affects investment directly through the expected return and indi-
rectly through the effect on demand (Serrasqueiro and Nunes 2012). Demand for credit
depends on the interest rate and the ability of companies to finance themselves internally
(Farinha and Félix 2015).

3. Methodology and Sample

The aim of this study is to analyse the explanatory variables of investment in Por-
tuguese companies in the textile sector. The aim is to build an empirical model that can
robustly explain investment in small, more labour-intensive companies. The model is based
on the three traditional theories, but also incorporates other variables considered relevant
and identified in empirical studies.

Investment can be defined as the policy of investing in assets with the aim of obtaining
future returns (Saputro and Lestari 2019; Choudhary 2016). The investment variable
(INV) used in this study is in line with the majority of empirical studies, measured by
the quotient between the difference in assets in one year compared to the previous year
by the assets of the previous year (Aivazian et al. 2005; Rosa and Mukhibad 2022). The
assets considered in this study are those that the company uses in its operational activity
with continuity or permanence, tangible fixed assets and intangible assets. Tangible fixed
assets are defined as assets with a physical existence held by the company for use in the
production or supply of goods and services for leasing to others or for administrative
purposes and the company expects to use these assets for more than one period (Comissão
de Normalização Contabilística 2009a). Meanwhile, intangible assets have no physical
substance (Comissão de Normalização Contabilística 2009b). The net value of these assets
is taken into account, i.e., accumulated depreciation and impairment losses are deducted
from the acquisition cost.

The literature review shows that some studies argue that there is a circle between the
company’s financial health, investment and economic activity. Company investment is
volatile and highly dependent on the progress of the economy. Cumulatively, companies’
financial health and consequent investment affect the economic cycle. This is why it is a
circle and its beginning is unknown (Farinha and Prego 2013). Hence, the independent or
potentially explanatory variables of investment are divided into two groups: the company’s
accounting variables and macroeconomic variables.

The absolute value of the accounting variables depends on the size of the company,
which is why they are used in quotients to be normalised against the sample.

According to the literature review, profitability can be used to explain investment
decisions and also to assess management effectiveness. The study uses the proxy return
on assets (ROA), the ratio of net profit for the period to assets (Endiana 2016; Rosa and
Mukhibad 2022). This ratio compares the value generated by the company in net income for each monetary unit of assets used. The aim is to analyse whether profitability, through the ROA proxy, positively affects companies’ investment decisions (Rahmiati and Huda 2015; Endiana 2016). If the company has a high ROA, it is desirable to increase investment in order to obtain maximum net profit. This is why profitability positively affects investment decisions (Endiana 2016).

The second type of variable that potentially explains investment decisions is the company’s indebtedness, which is analysed using two proxies: the indebtedness or solvency ratio (LEV) of the ratio of liabilities to assets (Kuzucu 2015) and the debt structure (DS) of the ratio of current liabilities to total liabilities (Do and Phan 2022). Companies that are unable to self-finance may face financial constraints. In addition, debt entails interest payments that reduce the company’s profit. We analyse whether indebtedness negatively affects investment decisions (Danso et al. 2019; Campello et al. 2010; Myers 1977; Jensen 1986).

Company liquidity (LIQ), the ratio of liquid financial resources to assets, is another variable that can potentially explain investment decisions. Companies that manage to generate liquidity improve their investment opportunities because they can self-finance their investments. A positive relationship is expected between the two variables (Fazzari et al. 1988; Rosa and Mukhibad 2022; Rashid and Karim 2018; Alti 2003).

Another variable that can potentially explain investment decisions is asset turnover (AT), the ratio of sales to assets (Rosa and Mukhibad 2022). This indicator measures how much the company generates in sales for each monetary unit of assets used. Managers use this ratio to assess their investment decisions, particularly whether the company needs more assets to maximise sales. Most empirical studies show a positive relationship between TA and investment (Makarim and Noveria 2014; Do and Phan 2022; Hartono and Wahyuni 2005).

The last accounting variable that can potentially explain investment decisions is the company size (SIZE) of the natural logarithm of assets (Kalusová and Badura 2022). The aim is to analyse whether size positively affects investment decisions. The process of making investment decisions becomes more complicated as the size of the company decreases, due to a lower capacity for self-financing and greater difficulty in resorting to debt (Guo and Zhang 2023).

The macroeconomic variables that potentially explain investment analysed are gross domestic product and the interest rate. Gross domestic product indicates the state of a country’s economy and as such is a crucial indicator for business investment. When the GDP grows, it indicates an expanding economy, increasing confidence and encouraging investment (Nunes et al. 2012; Abdul Kareem et al. 2023). We analysed whether the GDP measured by the annual rate of change in gross domestic product at market prices (INE 2023) positively affects investment decisions.

The value of the interest rate will affect the cost of the loan and therefore the profitability of the investment. In addition, the interest rate in force on the market is a benchmark for the opportunity cost of capital. We analysed whether the interest rate (EUR) measured by the 12-month Euribor, the rate on the first day of the year (Euribor rates.eu 2023), negatively affects companies’ investment decisions (Luporini and Alves 2010).

In view of the above and in order to achieve the aim of this study, the following research hypotheses are set out:

**H1.** The three theories explaining investment have explanatory power in Portuguese companies in the textile sector in Portugal.

**H2.** There are other accounting variables referenced in the literature that explain the investment in Portuguese textile companies in Portugal.

**H3.** There are macroeconomic variables referenced in the literature that explain investment in Portuguese companies in the textile sector in Portugal.
H4. Macroeconomic variables have incremental explanatory power for investment compared to accounting variables in Portuguese textile companies in Portugal.

To test the research hypotheses, regressions are estimated with panel data for the years 2010 to 2022, represented by the following equations:

\[ \text{INV}_{i,t} = \beta_0 + \beta_1 X_{i,t-1} + \epsilon_{i,t} \] (1)
\[ \text{INV}_{i,t} = \beta_0 + \beta_1 \text{LIQ}_{i,t-1} + \beta_2 \text{LEV}_{i,t-1} + \beta_3 \text{AT}_{i,t-1} + \beta_4 \text{ROA}_{i,t-1} + \beta_5 \text{DS}_{i,t-1} + \beta_6 \text{SIZE}_{i,t-1} + \epsilon_{i,t} \] (2)
\[ \text{INV}_{i,t} = \beta_0 + \beta_1 \text{EUR}_{i,t-1} + \beta_2 \text{GDP}_{t-1} + \epsilon_{i,t} \] (3)
\[ \text{INV}_{i,t} = \beta_0 + \beta_1 \text{LIQ}_{i,t-1} + \beta_2 \text{LEV}_{i,t-1} + \beta_3 \text{AT}_{i,t-1} + \beta_4 \text{ROA}_{i,t-1} + \beta_5 \text{DS}_{i,t-1} + \beta_6 \text{SIZE}_{i,t-1} + \beta_7 \text{EUR}_{t-1} + \beta_8 \text{GDP}_{t-1} + \epsilon_{i,t} \] (4)

where the lower index \( i \) and \( t \) refer to the company and the year, respectively. The coefficient \( \beta_0 \) is the regression constant, which represents the investment that is not explained by the explanatory variables included in the model. The variables have the meaning already known.

Equation (1) represents a model with a single explanatory variable, which makes it possible to verify the first hypothesis and the other accounting variables being analysed, profitability (ROA) and debt structure (DS). Hypothesis 2 is tested in Equations (1) and (2). Equation (3) aims to test the explanatory power of macroeconomic variables of Hypothesis 3. Equation (4) tests Hypothesis 4.

The models are estimated using the GMM-System method proposed by Arellano and Bover (1995) and developed by Blundell and Bond (1998), which eliminates endogeneity problems and provides robust estimates in the presence of heteroscedasticity and autocorrelation (Do and Phan 2022). This method is recommended for samples with economic and/or financial panel data when the number of temporal observations (years) is small compared to the number of cross-sectional observations (companies).

In the sample, there may be fixed individual effects, autoregressive variables with high persistence and independent variables that are not strictly exogenous. Using GMM estimation, the models are estimated in levels and differences, with the instruments being the lagged values of the non-strictly exogenous variables.

The Hansen test for the validity of the instruments is conducted. The Arellano and Bond (1991) test is also performed to check for the presence of first- and second-order serial autocorrelation in the residuals, known respectively as AR(1) and AR(2). The aim is to ensure that the instrumental variables used from the second-order lag are appropriate and that there is no second-order autocorrelation.

Two additional statistical tests are performed to evaluate the quality of the models: the individual significance test of the model parameters (\( t \)-test) and the global significance test of the model (Wald test).

The level of statistical significance used in the tests is 5%.

Although adjusted determination coefficients (adjusted \( R^2 \)) are presented, this coefficient is of limited significance when the model’s dependent variable is a growth rate, as it tends to show low values.

The sample used in this study is taken from the financial statements of companies in the SABI database. The time period is between 2010 (when the accounting standardisation system came into force) and 2022 (the last year with available data), which makes a total of 13 years. The Portuguese companies to be included in the sample belong to the classification of economic activities (CAE) 13—manufacture of textiles, in the subCAEs: 131 (preparation and spinning of textile fibres), 132 (textile weaving) and 133 (textile finishing).

A number of criteria were used to exclude companies from the sample. The criteria are (1) companies that did not present all the information required for the study, (2) companies...
that did not present data for three consecutive years, as this was a minimum activity criterion for a company and (3) companies that presented figures that did not comply with the correct standards, for example, total assets being negative.

All the companies in the database that fulfill the defined criteria result in a sample made up of 3859 companies, totalling 50,167 annual observations.

The companies included in the sample have different characteristics to the companies generally analysed in most studies. On average, the companies are small, as evidenced by the following data: the average number of employees of the companies in the sample is 12 (classifying them as small companies, with less than 50 employees), the average turnover and average total assets are EUR 3,034,953.63 and EUR 2,548,058.61, respectively (in the classification they must be less than 10 million euros for both). In addition, it is common in the textile sector for managers to also be the company owners, especially in micro and small companies. This structure facilitates direct and personalised management, allowing decisions to directly reflect the interests of the owners (CENTIT—Centro de Inteligência Têxtil 2021).

The descriptive statistics of the explanatory variables for the 50,167 annual observations are shown in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Minimum Value</th>
<th>Maximum Value</th>
<th>Std. Dev.</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquidity—LIQ</td>
<td>0.1268</td>
<td>0.0089</td>
<td>0.5743</td>
<td>0.188783</td>
<td>0.0000</td>
</tr>
<tr>
<td>Leverage—LEV</td>
<td>0.7019</td>
<td>0.0000</td>
<td>1.0248</td>
<td>0.305421</td>
<td>0.0000</td>
</tr>
<tr>
<td>Asset Turnover—AT</td>
<td>1.0193</td>
<td>0.0001</td>
<td>27.5485</td>
<td>1.208473</td>
<td>0.0000</td>
</tr>
<tr>
<td>Return on Asset—ROA</td>
<td>—0.1279</td>
<td>—71.7840</td>
<td>10.3084</td>
<td>2.048338</td>
<td>0.0004</td>
</tr>
<tr>
<td>Debt Structure—DS</td>
<td>0.7054</td>
<td>0.0000</td>
<td>1.0000</td>
<td>0.0054</td>
<td>0.0000</td>
</tr>
<tr>
<td>Sise—SIZE</td>
<td>13.4097</td>
<td>6.5077</td>
<td>18.8124</td>
<td>1.943596</td>
<td>0.0410</td>
</tr>
<tr>
<td>Interest Rate—EUR</td>
<td>0.9999</td>
<td>0.3230</td>
<td>1.8420</td>
<td>0.558886</td>
<td>0.0000</td>
</tr>
<tr>
<td>Gross Domestic Product—GDP</td>
<td>0.4624</td>
<td>—4.4000</td>
<td>3.8000</td>
<td>2.777426</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

The table presents the descriptive statistics: mean, minimum and maximum values, standard deviation, associated t-statistic and respective p-value for the explanatory variables proposed in the models, covering the period from 2010 to 2022 for Portuguese companies in the textile sector. The explanatory variables are (1) liquidity (LIQ) measured by the ratio of liquid financial means to assets, (2) leverage (LEV) measured by the ratio of liabilities to assets, (3) asset turnover (AT) measured by the ratio of sales to assets, (4) return on assets (ROA) measured by the ratio of net income to assets, (5) debt structure (DS) measured by the ratio of current liabilities to total liabilities, (6) company size (Sise) measured by the natural logarithm of assets, (7) interest rate (EUR) measured by the 12-month Euribor on the first day of the year and (8) gross domestic product (GDP) measured by the annual growth rate of gross domestic product at market prices. The p-value corresponds to the statistical test of the null hypothesis: the mean of the explanatory variable being equal to zero. Variables that are statistically significant at a 5% significance level are marked in bold.

In the t-test at a 5% significance level, the null hypothesis that the mean of the analysed explanatory variables is equal to zero is rejected. This means that for all variables, except the NS variable, there is sufficient statistical evidence to state that their means are not equal to zero at a 5% significance level. For the NS variable, we did not find sufficient evidence to reject the hypothesis, indicating that the mean of NS is not statistically different from zero at a 5% significance level. The variables asset turnover, return on assets and gross domestic product are the most volatile, with a standard deviation greater than their mean. The average, minimum and maximum values of the variables highlight the significant variability of the data in the sampled companies. On average, the capital structure of the sampled companies consists of 70% debt (LEV) and the remaining 30% equity. These companies have a less conservative capital structure, requiring careful policies to balance the cost of debt and long-term sustainability. On average, 70% of the companies’ liabilities are due within a year (DS), making it crucial to adopt rigorous cash flow management to ensure necessary liquidity and avoid solvency issues. The average values of these two indicators may limit investment. The ROA and NS show negative average values, indicating that the average net income of the sampled companies is negative. These
companies face difficulties generating profit from their assets and sales, respectively, which may signal operational efficiency problems and challenges in financial sustainability. These indicators fluctuate between negative (minimum value) and positive (maximum value), ranging from $-71.84$ to $10.31$ for ROA and from $-41.83$ to $43.95$ for NS. The twelve-month Euribor is approximately 1%, and in Portugal, the average annual growth rate of gross domestic product at market prices is 0.46%.

The correlation coefficients of the explanatory variables for the 50,167 annual observations are presented in Table 2.

Table 2. Correlation coefficients of the explanatory variables.

<table>
<thead>
<tr>
<th>LIQ</th>
<th>LEV</th>
<th>AT</th>
<th>ROA</th>
<th>DS</th>
<th>SIZE</th>
<th>EUR</th>
<th>GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>-0.0252</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.0861</td>
<td>0.0516</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>0.0844</td>
<td>-0.0175</td>
<td>-0.1838</td>
<td>1.0000</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>0.0637</td>
<td>-0.0067</td>
<td>0.2232</td>
<td>0.0229</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-0.2378</td>
<td>-0.1773</td>
<td>-0.2465</td>
<td>0.1290</td>
<td>0.0158</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-0.0810</td>
<td>-0.1562</td>
<td>0.0168</td>
<td>-0.0673</td>
<td>0.0119</td>
<td>-0.0321</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>0.0678</td>
<td>0.1817</td>
<td>-0.0294</td>
<td>0.0412</td>
<td>-0.0239</td>
<td>0.0251</td>
<td>-0.8539</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

The table presents the correlation coefficients between the explanatory variables proposed in the models, covering the period from 2010 to 2022 for Portuguese companies in the textile sector. The explanatory variables are (1) liquidity (LIQ), measured by the ratio of liquid financial assets to total assets, (2) leverage or solvency (LEV), measured by the ratio of liabilities to assets, (3) asset turnover (AT), measured by the ratio of sales to assets, (4) return on assets (ROA), measured by the ratio of net income to assets, (5) debt structure (DS), measured by the ratio of current liabilities to total liabilities, (6) company size (SIZE), measured by the natural logarithm of assets, (7) interest rate (EUR), measured by the 12-month Euribor on the first day of the year and (8) gross domestic product (GDP), measured by the annual growth rate of GDP at market prices.

The correlation coefficients among the variables are low, with the highest being observed between SIZE/LEV, DS/AT and GDP/LEV. However, all coefficients are below 0.8, indicating no multicollinearity issues (Cohen 1988). Sogorb-Mira (2005) recommends excluding variables that are strongly correlated with each other to avoid biases in regression results. This is not a concern for the variables under analysis, as all variables can be included in the models. There are negative correlations between some variables, notably between SIZE and LEV, which suggests that as company size increases, leverage tends to decrease.

4. Empirical Results

This section analyses the explanatory variables of investment in the sample, compares the explanatory power of the proposed models and discusses the results of existing empirical studies.

The tables with the results of the model estimations, following the methodology defined in Section 3, present (1) the estimates of the regression coefficients for the models; (2) the values in parentheses corresponding to the $p$-value to assess the statistical significance of each coefficient; (3) the measures of model fit quality, including the adjusted R-squared ($R^2$ adjusted) and associated $p$-values; the chi-square statistic from the Wald test to evaluate whether the independent variables, taken together, have a significant effect on the dependent variable; the Hansen test to assess if the instruments used in the model are valid; and the Arellano–Bond tests to detect first-order (AR(1)) and second-order (AR(2)) autocorrelation in the regression model residuals.

Statistically significant coefficients at the 5% significance level are highlighted in bold. Table 3 presents the results of the simple linear regressions of Equation (1), using panel data for Portuguese textile companies from 2010 to 2022. Equations (1) were estimated using the GMM method. Each model includes an accounting explanatory variable, used to test the traditional investment theories (LIQ, LEV and AT), as well as ROA and DS.
Table 3. Simple linear regression models to explain investment.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Equation (1) $\text{INV}<em>{i,t} = \beta_0 + \beta_1 \text{X}</em>{i,t-1} + \epsilon_{i,t}$</th>
<th>Equation (1) $\text{INV}<em>{i,t} = \beta_0 + \beta_1 \text{X}</em>{i,t-1} + \epsilon_{i,t}$</th>
<th>Equation (1) $\text{INV}<em>{i,t} = \beta_0 + \beta_1 \text{X}</em>{i,t-1} + \epsilon_{i,t}$</th>
<th>Equation (1) $\text{INV}<em>{i,t} = \beta_0 + \beta_1 \text{X}</em>{i,t-1} + \epsilon_{i,t}$</th>
<th>Equation (1) $\text{INV}<em>{i,t} = \beta_0 + \beta_1 \text{X}</em>{i,t-1} + \epsilon_{i,t}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQ$_{i,t-1}$</td>
<td>$-0.54877$ $(0.0000)$</td>
<td>$	ext{LEV}_{i,t-1}$</td>
<td>$-2.299 \times 10^{-9}$ $(0.1435)$</td>
<td>AT$_{i,t-1}$</td>
<td>$-0.06543$ $(0.0000)$</td>
</tr>
<tr>
<td>R$^2$ adjust.</td>
<td>0.105875</td>
<td>0.0002</td>
<td>0.04135</td>
<td>0.001863</td>
<td>0.04490</td>
</tr>
<tr>
<td>p-value: Hansen</td>
<td>0.3923</td>
<td>0.3452</td>
<td>0.3993</td>
<td>0.3442</td>
<td>0.4523</td>
</tr>
<tr>
<td>AR(1)</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>AR(2)</td>
<td>0.5001</td>
<td>0.5621</td>
<td>0.5212</td>
<td>0.4215</td>
<td>0.5112</td>
</tr>
</tbody>
</table>

The table presents the estimates of the regression coefficients associated with the explanatory variable of the model, with the $p$-values listed in parentheses below each coefficient. At the bottom of the table are the adjusted $R^2$ coefficients ($R^2$ adjusted) and the $p$-values for the Hansen test and the AR(1) and AR(2) tests. The five estimated equations use the variable $\text{INV}_{i,t}$ as the dependent variable, representing the net investment rate of company $i$ in year $t$. The explanatory variables in the estimated equations are (1) liquidity (LIQ), measured by the ratio of liquid financial means to assets, (2) leverage or solvency (LEV), measured by the ratio of liabilities to assets, (3) asset turnover (AT), measured by the ratio of sales to assets, (4) return on assets (ROA), measured by the ratio of net income to assets and (5) debt structure (DS), measured by the ratio of current liabilities to total liabilities. All variables are lagged by one period ($t-1$) and refer to company $i$. Statistically significant coefficients at a 5% significance level are highlighted in bold.

The five models estimated using GMM show that they are suitable. The Hansen test ($p$-value $> 0.05$) does not reject the null hypothesis, indicating that all instruments are valid (not correlated with the model errors), and therefore, the model and variables are appropriate. The residual autocorrelation test reveals the presence of first-order autocorrelation (the $p$-value of AR(1) is below the 5% significance level). However, the null hypothesis of no second-order autocorrelation cannot be rejected (the $p$-value of AR(2) is greater than 0.05). Given the validity of the instruments and the absence of second-order autocorrelation, the results of the GMM-estimated models can be considered valid.

The adjusted $R^2$ values are low, ranging from 0.2% in Equation (1), when the explanatory variable is LEV, to 10.5% in Equation (1), when the explanatory variable is LIQ. Low values for this coefficient are typical when the explanatory variable of the model is a growth rate. Nevertheless, it can also be stated that there are other variables that have explanatory power regarding investment. Based on this coefficient, among the five models presented, liquidity is the variable that best explains investment in the sampled companies.

The explanatory variable LIQ is statistically significant and negative in explaining investment, as observed in other studies (Kalusová and Badura 2022). This result does not confirm the free cash flow theory and contradicts the pecking order theory (POT), which suggests that firms prefer internal financing over external financing. In the sampled companies, the liquidity variable does not positively explain investment decisions. The financial conservatism of managers, who are often also the owners of the companies, leads them to accumulate reserves to face future uncertainties.

The solvency ratio, LEV, is not statistically significant in explaining investment decisions, as also found by some authors (Salim 2019; Perwitasari 2021). According to agency theory, leverage is a central variable in explaining investment. Information asymmetry between owners and managers, and the agency problems that arise with increased leverage, reduce investment. These problems, stemming from conflicts of interest between managers and owners, might not exist in the analysed sample. The companies in the sample
are characterised by being small in size. In such companies, managers are typically also the owners, which reduces the typical conflicts described by agency theory. Moreover, increased leverage in small companies is often accompanied by greater involvement of manager-owners in operations and financial decisions, ensuring closer monitoring and control over resource use, thus mitigating potential conflicts.

To confirm the neoclassical investment theory, a statistically significant and positive relationship between asset turnover (AT) and investment was expected. However, in this study, although statistically significant, the relationship is negative. This result can be justified by the fact that in the sampled companies, managers who are also owners are focused on optimising the use of existing assets before making new investments. Generally, these types of companies have limited resources and thus prioritise maximising efficiency and labour productivity.

According to the literature review, a positive and statistically significant relationship between return on assets (ROA) and investment was expected, i.e., companies with higher levels of asset profitability tend to invest more. This is confirmed in the analysed sample.

Debt structure (DS) is statistically negative and significant in explaining investment. When the proportion of short-term liabilities increases, the risk of financial default also rises. As a precaution, companies tend to reduce all activities that may involve the outflow of financial resources, including investments.

Table 4 presents the results of the multiple linear regressions of Equations (2) to (4), using panel data for Portuguese textile companies from 2010 to 2022. Equations (2) and (4) were estimated using the GMM method.

Table 4. Multiple linear regression models to explain investment.

<table>
<thead>
<tr>
<th>Variables</th>
<th>INV_{it} = \beta_0 + \beta_1 X_{1it-1} + \beta_2 X_{2it-1} + \ldots + \beta_n X_{nit-1} + \varepsilon_{it}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equation (2)</td>
<td>Equation (3)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.202875 (0.0000)</td>
</tr>
<tr>
<td>LIQ_{it-1}</td>
<td>-0.352807 (0.0000)</td>
</tr>
<tr>
<td>LEV_{it-1}</td>
<td>0.0000 (0.4124)</td>
</tr>
<tr>
<td>AT_{it-1}</td>
<td>-0.050957 (0.0000)</td>
</tr>
<tr>
<td>ROA_{it-1}</td>
<td>-0.007770 (0.7474)</td>
</tr>
<tr>
<td>DS_{it-1}</td>
<td>-0.171708 (0.0000)</td>
</tr>
<tr>
<td>SIZE_{t}</td>
<td>0.023697 (0.0000)</td>
</tr>
<tr>
<td>EUR_{t-1}</td>
<td>---</td>
</tr>
<tr>
<td>GDP_{t-1}</td>
<td>---</td>
</tr>
<tr>
<td>R^2 adjust.</td>
<td>0.2257</td>
</tr>
<tr>
<td>p-value: Wald Q^2</td>
<td>0.0000</td>
</tr>
<tr>
<td>Hansen</td>
<td>0.5670</td>
</tr>
<tr>
<td>AR (1)</td>
<td>0.0000</td>
</tr>
<tr>
<td>AR (2)</td>
<td>0.4532</td>
</tr>
</tbody>
</table>

The table presents the estimates of the regression coefficients, with the associated p-values shown in parentheses below each coefficient. At the end of the table are the adjusted R-squared coefficients (R^2 adjust.) and the p-values associated with the chi-square statistic of the Wald test, the Hansen test and the AR(1) and AR(2) tests. The three estimated equations, Equations (2) to (4), use the variable INV_{it} as the dependent variable, which represents the net investment rate of company i in year t. The explanatory variables in the estimated equations are (1) liquidity (LIQ), measured by the ratio of liquid financial means to assets, (2) leverage or solvency (LEV), measured by the ratio of liabilities to assets, (3) asset turnover (AT), measured by the ratio of sales to assets, (4) return on assets (ROA), measured by the ratio of net income to assets, (5) debt structure (DS), measured by the ratio of current liabilities to total liabilities, (6) net sales profitability (NS), measured by the ratio of net income to sales, (7) company size (SIZE), measured by the natural logarithm of, (8) interest rate (EUR), measured by the 12-month Euribor on the first day of the year and (9) gross domestic product (GDP), measured by the annual growth rate of GDP at market prices. All variables are lagged by one period (t – 1), and the accounting variables refer to company i. Statistically significant coefficients at a 5% significance level are highlighted in bold.
The three models estimated using GMM are deemed suitable. In the Hansen test (p-value > 0.05), the instruments are valid (not correlated with the model errors). In the residual autocorrelation test, although first-order autocorrelation is present (the p-value of AR(1) < significance level of 5%), there is no second-order autocorrelation (the p-value of AR(2) > 0.05). These tests allow us to conclude that the results of the GMM-estimated models can be considered valid.

The model represented by Equation (2) includes only accounting explanatory variables. Two of the proposed variables, LEV and ROA, are not statistically significant in explaining investment. The beta coefficients associated with these variables are not statistically different from zero at a 5% significance level.

The variables LIQ, AT and DS are statistically significant and negative in explaining the dependent variable, while the variable SIZE is statistically significant and positive in explaining investment.

In the global significance test, the Wald chi-square test (H0: \( \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0 \)) rejects the null hypothesis that all coefficients of the explanatory variables are equal to zero. This result indicates that, collectively, the independent variables included in the model have a significant effect on the dependent variable.

The adjusted R-squared coefficient is not very high, which is typical for this type of model, revealing that the explanatory variables proposed in the model account for approximately 21.6% of the variation in net investment.

In the model represented by Equation (2), which includes six explanatory variables, the results for the explanatory variables LIQ, LEV, AT and DS remain consistent with those obtained from the univariate models represented by Equation (1).

The variable ROA, which was statistically significant and positive in explaining investment in the univariate model, loses its significance when included in a model with other explanatory variables. This may be because, in the univariate model, ROA appears significant due to a lack of competing explanatory variables. However, in the multivariate model, the presence of other, more explanatory variables can obscure the significance of ROA. Additionally, the marginal impact of variables in the multivariate model, which controls for other influences, may reveal that ROA is not as strong as it appeared in isolation. The statistical insignificance of ROA in explaining investment is inconsistent with previous studies (Rahmiati and Huda 2015; Endiana 2016), which may be explained by the characteristics of the sample. Small, labour-intensive companies prioritise investments that increase productive capacity and operational efficiency, regardless of ROA. Typically, these companies operate with narrow profit margins and volatile cash flows, leading them to prioritise liquidity and solvency over investment. Financial conservatism drives managers to accumulate reserves to face future uncertainties. Additionally, the need for long-term sustainability means these companies use profits to strengthen their financial base and ensure operational continuity rather than pursuing investments. Moreover, these firms often face credit access restrictions and rely more on alternative financing sources, such as equity capital from owners, making investment decisions more closely tied to the immediate availability of resources from owners rather than traditional financial performance indicators like ROA.

The size of the company is statistically significant and positive in explaining investment, a finding also observed in several studies (Guo and Zhang 2023). Larger companies are expected to have easier access to various financing sources and thus invest more compared to smaller companies. Additionally, larger firms generally have a more robust financial structure and a solid credit history, which facilitates obtaining financing under more favourable conditions, thereby encouraging investment.

The two macroeconomic variables included in Equation (3), GDP and EUR, are found to be explanatory of investment. This is supported by both individual and global significance tests (Wald chi-square test \( Q^2 \), H0: \( \beta_1 = \beta_2 = 0 \)). The adjusted R-squared for this model is lower than that of the previous model (Equation (2)).
The variables GDP and EUR were found to be statistically significant and positive in explaining investment. Investment is a crucial component of GDP, which measures a country’s economic performance (Nunes et al. 2012; Abdul Kareem et al. 2023). A growing GDP generally indicates a favourable macroeconomic environment, characterised by low unemployment, controlled inflation and financial stability—factors that are conducive to investment. However, a statistically significant and negative relationship between EUR and investment was expected (Luporini and Alves 2010), but in the sample analysed, the relationship is positive (Mian and Sufi 2020). This might be explained by the fact that investment in this sector and country is driven by external demand, which encourages firms to invest more, even with high financing costs. In this scenario, the expectation of higher returns offsets the additional cost of interest, leading to increased investment.

Equation (4) represents the model incorporating the accounting variables from Equation (2) along with the two macroeconomic variables from Equation (3). The results for the explanatory variables in Equation (4) are similar to those in the two previous models.

When the variables GDP and EUR are added to the model with only accounting variables, they are found to be statistically significant in explaining the dependent variable, as shown in the individual significance tests. Additionally, in the Wald test, the null hypothesis that the coefficients associated with GDP and EUR are equal to zero (H0: \( \beta 8 = \beta 9 = 0 \)) is rejected (\( p \)-value = 0.0000). The conclusions obtained from the two previous models (Equations (2) and (3)) remain valid in this model (Equation (4)).

In summary, the first research hypothesis is not supported. Hypotheses 2 through 4 are confirmed. There are accounting variables beyond traditional theories that explain investment. Macroeconomic variables, GDP and EUR, explain investment and provide incremental explanatory power in the model that includes only accounting variables.

5. Conclusions

The objective of this study is to analyse the explanatory variables of investment in a sample of small, labour-intensive firms operating in a sector highly dependent on external demand and the global economy. The sample consists of 3859 companies over the period from 2010 to 2022.

The methodology employed involves estimating models using the GMM method. For the estimated models, statistical tests are performed: the Hansen test for instrument validity and the test for autocorrelation to ensure that the instrumental variables from the second lag do not exhibit autocorrelation. Additionally, two more statistical tests are conducted: the individual significance test of the model parameters and the global significance test. The adjusted R\(^2\) coefficients are also presented, but it should be noted that the values of this coefficient do not have the same interpretation as in other models. In the models analysed, the dependent variable is a growth rate, and the coefficients tend to show low values.

Several factors contribute to the relevance of this study. Specifically, the companies in this sample have characteristics that may differ significantly from those analysed in other studies, which are generally larger and more capital-intensive. The characteristics of the companies in the sample may lead to different, but regionally relevant, results since these firms are responsible for creating jobs and income that would not exist without them.

The cash flow theory explains that liquidity is an explanatory factor for investment, resulting in a positive relationship between these two variables. This study finds a statistically significant but negative relationship between liquidity and investment (Kalusová and Badura 2022). Thus, this theory is not confirmed, nor is it consistent with the pecking order theory. This result is inconsistent with most studies (Alti 2003; Rosa and Mukhibad 2022; Nakajima and Sasaki 2016; Rashid and Karim 2018).

A negative and statistically significant relationship, rather than the expected positive relationship, is observed between asset turnover and investment according to neoclassical theory (Makarim and Noveria 2014). In the sample companies, which are small in size, managers are usually also the owners. They focus on optimising existing assets before
making new investments. Additionally, these firms often operate with limited resources, prioritising the maximisation of efficiency and labour productivity over investment.

The solvency ratio (LEV) does not influence investment decisions, contrary to agency theory as observed in several studies (Danso et al. 2019; Campello et al. 2010). This may be because in small firms, managers are generally also owners, thereby minimising conflicts and not confirming agency theory.

In addition to traditional theories, other potentially explanatory variables for investment were analysed. ROA is not statistically significant for explaining investment, a conclusion that does not align with existing empirical studies (Rahmiati and Huda 2015; Endiana 2016). The debt structure (DS) is statistically significant and negative for explaining investment. Companies prefer financial stability to avoid default risks, as the sector is highly dependent on external demand and economic fluctuations.

Labour-intensive companies in a sector highly dependent on external demand generally have low profit margins and volatile cash flows. As a result, they prioritise financial stability over investment. In these companies, the owner is often also the manager, leading to financial conservatism to address the uncertainties typical of the sector. Additionally, the need for long-term sustainability causes these companies to use profits to strengthen their financial base and ensure operational continuity, rather than making investments.

Company size is statistically significant and positive for explaining investment, as larger companies have better access to financing, a result consistent with existing studies (Almeida et al. 2020). Given this, it can be said that the results obtained for accounting variables, except for company size, do not align with most empirical studies. These results may be explained by the specific characteristics of the analysed sample, which consists of small, labour-intensive companies in a sector highly dependent on external demand. Most empirical studies analyse larger, more capital-intensive firms.

Macroeconomic variables, GDP and EUR, are statistically significant and positive, suggesting that a growing GDP supports investment (Nunes et al. 2012; Abdul Kareem et al. 2023). The positive relationship between EUR and investment can be explained by external demand and GDP fluctuations, encouraging investment despite high costs. This result does not align with most studies (Mian and Sufi 2020; Farinha and Félix 2015).

This study is relevant for understanding the specifics of small, labour-intensive companies. The analyses show that factors such as liquidity, solvency, asset turnover, ROA and debt structure influence investment differently compared to larger, capital-intensive firms, which are the focus of most existing studies. Additionally, company size and macroeconomic variables like GDP and EUR also play important roles, highlighting the need for financial strategies tailored to the unique characteristics of these small firms.

Despite the relevance of the obtained results, some limitations of this research should be noted. The sample only included companies from one sector, of one nationality and not publicly traded. This limitation prevents the analysis of other potentially explanatory variables such as investment opportunities, financial constraints and dividend policies.

The developed work thus raises hypotheses/questions that could inform future research. A future study could address the mentioned limitations by including a sample of companies with different characteristics to assess the presence or absence of specificities based on the sector, nationality and whether they are publicly traded.

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