



Master's thesis

Is Ratchet Behavior Crowding Out Investment?

**New Results for Corporate
Financialization in South Africa**

by

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Abstract

The concept of financialization has been applied to explain stagnating growth and rising inequality in South Africa, yet representative micro-data studies that test the main hypotheses of corporate financialization are rare. In this work, I analyze whether increased dividend payout ratios crowd out internal investment in South Africa. My analytical lens is the recently developed conceptualization of corporate financialization as “ratchet behaviour”, which argues that the downward rigidity of dividends is the major cause of increasing payout ratios. Dividend smoothing is thus an asymmetric process which “ratchets up” payout ratios over time.

Using a newly harmonized sectoral panel dataset ranging from 2006 to 2024, I provide descriptive and econometric evidence on the crowding out hypothesis. I employ fixed effects regressions to show that payout ratios and investment are negatively related. Further, I use an event study design based on local projections to analyze the differential investment and payout ratio response to negative profit shocks between smoothing and non-smoothing groups.

By applying a sensitivity analysis to study the impact of different event classification parameters, I show that mild dividend smoothing has a positive impact on short-run investment rates, which I hypothesize to reflect better capital market access. In the long run, however, dividend smoothing leads to decreased investment rates through a depletion of companies’ internal funds, and leave payout ratios persistently elevated. My results corroborate previous studies on corporate financialization, and extend those studies by a temporal dimension. The sign switch from positive investment impact in the short run to negative investment impact in the long run is inconsistent with lower short-run investment opportunities. This implies that my results are more robust to the critique of reverse causality that commonly challenges empirical research on corporate financialization.

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1. Introduction

South Africa’s macroeconomic condition is severe: economic growth and investment is stagnating, the unemployment rate increased to over 30 percent and inequality measures of South Africa are the highest in the world (Francis and Webster 2019; OECD 2025; Czajka and Gethin 2025). In the last decade, political economists have increasingly employed the concept of financialization to explain these developments towards economic stagnation and extreme inequality in South Africa (Ashman et al. 2021; Isaacs and Kaltenbrunner 2018; Andreoni, Robb, et al. 2026), echoing the wider debate around financialization in Global North economies (Stockhammer 2026).

Financialization refers to a broad array of developments by which financial markets, motives and practices gain importance in shaping the functioning of economies on the micro-, meso- and macroeconomic scale (Mader et al. 2020). Theories of corporate financialization play a pivotal role in the general discourse on financialization, by describing how a shift towards shareholder value orientation as guiding maxim of corporate governance redirects funds from capacity creating internal investment into financial investment or dividend distribution; thereby corporate financialization theory links firm level dynamics with the macroeconomic tendencies towards stagnation and inequality that can be observed in most advanced countries in recent decades (Tori and Onaran 2018; Tori and Onaran 2020; Hein 2022; Rabinovich and Reddy 2024).

For the South African case, previous research provides a rich descriptive and historical account of different mechanisms of financialization, yet representative econometric studies that test the main hypotheses of corporate financialization theory are rare. In my master thesis, I want to fill this gap in the literature, by using a newly harmonized sectoral dataset to analyze whether increased dividend payments are crowding out investment in South Africa. My contribution makes use of a recent re-conceptualization of corporate financialization as “ratchet behavior”, which argues that the downward rigidity of dividends is the major cause of increasing dividend payout ratios (Mertens 2025b). I test my hypothesis of a crowding out of internal investment through higher payout ratios by making use of a fixed effects and a local projections model to examine contemporaneous and long-run effects. My results confirm the previous literature and show that corporate financialization is reducing investment in South Africa. By taking note of the temporal trajectory of investment and payout ratio responses to dividend smoothing shocks, I can alleviate the critique of reverse causality that challenged previous research.

The rest of my thesis is structured as follows: in Section 2, I review the literature on financialization, with a special emphasis on corporate financialization and studies for South Africa. Section 3 introduces my data sources and methodologies. Section 4 presents the descriptive and econometric results. Section 5, discusses limitations of my methodology and implications of the results in more detail. Section 6 concludes.

2. Literature Review on Financialization

2.1. Financialization: a Multi-Faceted Concept

In recent years, the topic of financialization has gained significant traction as a trans-disciplinary research program with increasing publications across the fields of (heterodox) economics, sociology, geography, political sciences and business studies (Stockhammer 2026). The differences in applications and perspectives document the breadth of the concept. A widely used, general definition dates back to Epstein (2005), who defines financialization as “the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies” (Epstein 2005, p. 3). Research on financialization can be grouped into multiple strands based on their scope of analysis. Van Der Zwan (2014) categorizes the literature into three strands that analyze financialization as a regime of accumulation, as a new form of corporate governance guided by shareholder maximization, and as the financialization of everyday life. I will briefly discuss each of those strands.

Starting at the micro-level, financialization has been theorized to affect the household as an economic unit as well as the individual human being in her everyday life. In a recent review of the literature, Bobek et al. (2023) differentiates between two perspectives on the household: either studies adopt a macroeconomic view on households as institutional sectors and analyze financialization’s impact on their indebtedness and demand effects or they adopt a genuine microeconomic and sociological view to explore how financialization affects social reproduction. While the former, macroeconomic view of household financialization has been criticized as treating the household as a mere statistical *unit* of analysis, the latter, microeconomic and sociological view has the social practices of households as the primary *object* of its analysis (Gonzalez 2015). Drawing on Foucault’s notion of governmentality, this latter research describes financialization as a decentralized power structure that shapes individual subjectivation (Van Der Zwan 2014), particularly in the interaction of care and debt (Karaagac 2020) and through the creation of an entrepreneurial subjectivity (Mulcahy 2017).

On the level of the firm, we can find theories of “corporate financialization”. Corporate financialization theories claim that due to a rise in shareholder value orientation (SVO) during the 1980s, firms turned towards investment in financial assets (Crotty 2003; Krippner 2005) and increased dividend payouts and stock repurchases (Lazonick and O’Sullivan 2000), thus crowding out productive internal investment with financial investment and depleting internal funds. The diagnosed macroeconomic consequences range from stagnating growth to an increase in inequality (Rabinovich and Reddy 2024). Corporate financialization theory is a key element of the macroeconomic financialization discourse, as it most directly illustrates the impact of a change in corporate governance on the the accumulation regime and thus theorizes an important link between the micro- and macro-level. I will discuss its genesis as well as empirical and conceptual controversies in more detail in the following section.

Furthermore, the financialization concept has also been applied to banks and other financial corporations. A common diagnosis in this strand of the literature is that financialization has

led to the development of the shadow banking system, which, via the widespread use of securitization, increases systemic risk (Lagoarde-Segot 2017; Caverzasi et al. 2019). Gimet et al. (2019, p. 89) note that financialization is characterized by the adoption of a “universal banking model”, in which commercial and investment branches of banks were merged under the common guiding maxim of shareholder value orientation. Additionally, they relate financialization to the increase in bank mergers and acquisitions and the resulting concentration of banks as a further cause of systemic risk. While many contributions have dealt with questions of systemic stability in the light of deregulation, liberalization and securitization (Girón and Chapoy 2012; Caverzasi et al. 2019), it is not immediately clear how these developments should be conceptually distinguished from financialization in the financial sector. This points to the problem of conceptual stretching, which I will discuss below.

Going to the macro-level, financialization can be perceived as a specific mode of accumulation. Stockhammer (2012) describes financialization as the most recent configuration of the neoliberal regime of accumulation, brought about by changes in the financial, firm and household sector. In this view, financialization and neoliberalism are interrelated and the former concept significantly broadens its scope. Similarly, Hein (2012) develops the notion of finance-dominated capitalism, indicating that financialization is the dominating force shaping modern capitalism. Finance-dominated capitalism is characterized by an increasingly unequal distribution of income, stagnating investment and growth, a shift in sectoral composition towards finance, and debt-led consumption, which partially compensates the loss of aggregate demand (Hein 2015). Analytically, these theories of finance-dominated capitalism draw on Kaleckian macroeconomic models as well as the framework of demand and growth regimes (Hein 2022). Through this systemic view, financialization becomes a large-scale theory of accumulation, that is able to explain a multitude of macroeconomic developments.

Finally, if we extend the macroeconomic scope to the international or global level, the concept of financialization has been used in relation to the specific experience of developing and emerging economies (Bonizzi 2013; Karwowski and Stockhammer 2017; Lapavistas and Soydan 2022; Bonizzi et al. 2022). Here, financialization is frequently analyzed within the context of the international financial subordination (IFS) framework, which draws on Marxism, Structuralist dependency theory, and Post-Keynesian economics to describe how global hierarchies in the productive and financial system shape and constrain the actions of states and corporations (Alami et al. 2023; Kaltenbrunner, Karaçimen, et al. 2024). Of specific relevance to this literature is the liberalization of financial capital flows which has been shown to increase the potential for bank and currency crises (Kaminsky and Reinhart 1999). Due to currency hierarchies, global financial shocks can lead to a “sudden stop” as international investors move their assets from developing and emerging economies towards currencies with a high liquidity premium (Kaltenbrunner and Paineira 2018; Rey 2015). Especially in times of crisis, monetary policy becomes highly pro-cyclical (Kaminsky, Reinhart, and Vegh 2004). Regarding the firm level, Tori and Onaran (2022) have shown that the basic mechanisms of corporate financialization also apply in developing and emerging economies. However, they note that these effects

are modulated by the institutional framework and find that a more liberalized financial sector reinforces the effects of corporate financialization. In another firm level study, Kaltenbrunner, Karaçimen, et al. (2024) show how under IFS, corporate cash holdings become a prerequisite for accessing international financial markets for firms in emerging economies.

The variety of scopes and objects of analysis that the financialization concept has been applied to indicates that the definition of financialization itself is contested. As the number of financialization-related articles proliferated across the social sciences, a debate emerged about how large the concept should be and what specifically it should stand for (Christophers 2015; Aalbers 2019; Mader et al. 2020; Rabinovich and Reddy 2024; Stockhammer 2026). Should scholars go “back to the roots” and treat financialization primarily as a firm level theory of shareholder value orientation and thus delineate it more clearly from structural forces such as globalization, marketization, intangibilization or neoliberalism? Should financialization be viewed as a cause or also as an outcome of the analysis? In how far should contributions from other social sciences or the economic mainstream - like the literature around “too much finance” (Arcand et al. 2015; Siddique and Lee 2024) - be understood as financialization? And how can the concept be prevented from becoming overly expansive, diluted, and analytically imprecise?

The last question has been addressed by Mader et al. (2020, p. 10) as the problem of “conceptual stretching”. Drawing on Sartori (1970), the idea of conceptual stretching describes how a concept is broadened by applying it to ever more general or fundamentally different cases, which ultimately endangers the meaning of the concept. Mader et al. (2020, p. 3) notes that the literature on financialization does not always sufficiently contrast financialization “from the other ‘elephants in the room,’ which include but are not limited to: commodification, marketization, globalization, neoliberalization, privatization, digitalization and precarization”. He suggests that future research should use a limiting and contextualized conceptualization of financialization that makes clear which phenomena fall under the concept and which do not. Furthermore, he recommends that the mechanisms through which financialization operates should receive more attention, in order to distinguish cause from effect. (Mader et al. 2020, pp. 10–11).

Following this advice, my master thesis will focus on the concept of corporate financialization, a firm-level theory that has recently received a new conceptual clarification by Rabinovich and Reddy (2024) and Mertens (2025b). The next section will describe the development of corporate financialization research.

2.2. Corporate Financialization

In the work on corporate financialization, two main mechanisms have been theorized to explain how financial income and payments negatively affect investment: physical investment is either replaced by financial investment or crowded out by high dividend payments through the depletion of internal funds. In both of those mechanisms, a shift towards shareholder value orientation is the cause for this change in corporate decision making (Rabinovich and Reddy 2024).

Shareholder value orientation as a guiding maxim for corporate governance developed in

the US in the 1970s and 1980s. Lazonick and O’Sullivan (2000) describe how US firms, who previously followed a managerial “retain and reinvest” strategy, were confronted with challenges during the 1960s and 1970s: high growth, mergers and acquisition had led to a proliferation of different departments in firms and the offices of management were too detached from the actual production process to make good strategic decisions (Lazonick and O’Sullivan 2000, p. 15).¹ At the same time, new competition from Japan challenged US corporations. Lazonick (2010) highlights how Japanese corporations perfected the old managerial model of US firms, by guaranteeing permanent employment and effectively integrating shop floor workers into organizational learning. In the US however, the answer was not to learn from and adopt the Japanese innovations. Instead, governance shifted according to the suggestions of agency theory, which was developed by financial economists in the 1970s. Agency theorists would blame the weak performance of US corporations on “empire-building” managers who were not sufficiently disciplined by market forces. To solve those problems, they posited, management’s decisions should be aligned with the interest of shareholders, the ultimate owners of the firm. Consequently, the new objective for firms should be the maximization of shareholder value, i.e. the market value of the company’s stocks (Lazonick and O’Sullivan 2000, pp. 15–16). This shift in corporate governance, which has later been termed the “shareholder revolution” became the starting point for theories of corporate financialization.

The first of the two mechanisms of corporate financialization, which Rabinovich and Reddy (2024) call the “financial turn in accumulation” goes back to the work of Crotty (2003) and Krippner (2005). Crotty (2003) argues, that during the shareholder revolution of the 1980s, a “portfolio conception” of the firm developed (Crotty 2003, p. 273). Managers, whose interests became aligned to those of the shareholders via stock market options, would develop a short-termist conception of the firm as a collection of assets whose stock value and revenue stream had to be maximized. This indicates a shift away from the previous, “Chandlerian” view, where managers were primarily interested in the long-term growth and stability of the firm (Crotty 2003). Under this new conception of the firm, the *source* of the revenue stream would not be of great importance, which opens the door for non-financial corporations to engage in financial investment. Fittingly, Krippner (2005) shows that the ratio of financial income to cash flow of US non-financial corporations had increased five-fold from 1950 to the 1990 and subsequent econometric work found negative relationships between financial income and internal investment (Stockhammer 2004; Orhangazi 2008; Tori and Onaran 2018).

However, the financial turn in accumulation thesis has received criticism on both conceptual and empirical grounds. Conceptually, Rabinovich and Reddy (2024) note that a defining feature of the “downsize and distribute” logic of shareholder value orientation is that firms should be cut down to their core competencies and manager’s discretionary decision-making should be constrained. It is therefore unclear why shareholders would allow managers to act as intermediate financial investors rather than simply distributing the “free” cashflow, so the

¹This reflects the “Penrose effect” in the Galbraithian theory of the firm, which sets an upper limit for a company’s speed of expansion, as new staff has to be adequately trained and integrated into the existing organization (Lavoie 2022, p. 148).

shareholders could invest it themselves (Rabinovich and Reddy 2024, p. 11). With regard to the empirical literature, they emphasize that measuring the financial profit of firms is an almost impossible requirement for gauging whether firms really shift from productive to financial investment. Financial profits cannot be inferred from financial income in the absence of a purely *financial* cost variable that is not at the same time related to the main productive activity of the firm, like interest payments are. They also note that financial assets in aggregate data have been miss-classified to include foreign direct investment, intangible or goodwill assets (Rabinovich and Reddy 2024, p. 10). Turning to microdata, Soener (2021) documents declining financial income and assets shares for the largest 37 countries, indicating that the crowding out hypothesis is unlikely. Last, Rabinovich and Reddy (2024, p. 11) argue that increased cash holding of companies may be rather used for precautionary reasons - an interpretation that is especially relevant for firms in emerging economies that have to hedge against macroeconomic uncertainty (Kaltenbrunner, Karaçimen, et al. 2024) - or as a form of tax arbitrage (Faulkender et al. 2019).

This leaves the second mechanism, in which shareholder power leads to an increase in dividend payments and stock repurchases that ultimately deplete firm's internal funds and thus crowd out investment. As Lazonick (2014) indicates, the successor of the managerial “retain and reinvest” model of corporate governance was the “downsize and distribute” model of shareholder value orientation: workforce and non-core operations of a company would be downsized and the cashflow distributed to shareholders rather than reinvested into productive capacity. Shareholders in this view are seen as distinctly short-termist and focused on value extraction. Yet, as Dallery (2009, p. 512) already pointed out in his analysis of the Post-Keynesian firm model under financialization, shareholders need not necessarily be short-termist. If they are rather interested in increasing stock prices, their interests might more closely align with the long-term growth of the firm itself. In fact, Reddy and Rabinovich (2022) shows that there is considerable heterogeneity between the time preferences of shareholders and that it is mainly hedge funds who are responsible for short-termism in corporate governance. Rabinovich and Reddy (2024, pp. 21–22) thus recommends that future research on financialization should specifically focus on establishing evidence for short-termist behavior of financialized corporations.

Compared to the “financial turn in accumulation” thesis, the “downsize and distribute” mechanism could accumulate some more robust empirical evidence in its favor, that documents the negative correlation between payout ratios and investments (Stockhammer 2004; Orhangazi 2008; Barradas 2017; Davis 2018; Tori and Onaran 2018; Auvray and Rabinovich 2019; Tori and Onaran 2020). However, a crucial empirical challenge in the econometric work consists in the possibility of reverse causality: lower investment could not only be the outcome but also the cause of higher dividend payments. If firms do not see profitable investment opportunities, the shareholder value principles would incentivize them to distribute the “excess funds” back to the shareholders via dividend payments or stock repurchases (Rabinovich and Reddy 2024, p. 13).

The work of Mertens (2025a) tries to address this problem of reverse causality by reframing

the financialization process as “ratchet behavior”. Mertens (2025b) argues that it is not the exuberant increase in dividend levels, but their inability to fall in times of crisis which gradually increases payout ratios. As payouts are downward sticky, the dividend to profit ratio “ratchets up” over time. Central to Mertens’ theory is the conception of firms as a “battlefield of contending interests between shareholders, workers, management, investments, the wider society, and the environment” (Mertens 2025b, p. 10). This conception mirrors the typically Post-Keynesian analysis of the conflict between workers and capitalists over the distribution of national income (Hein 2024). Mertens (2025b) highlights that the conflict between the different stakeholders is intensified during times where profits decline and that especially in those crisis moments, shareholder power becomes visible, as absolute dividend payments are held relatively constant. He subsequently adopts a staggered difference in difference methodology to show how “ratchet events” cause higher payout ratios and lower investment rates, especially in the long run (Mertens 2025a). In the present work, I will apply a similar empirical strategy.

Mertens argues that reverse causality would be less plausible in his design, because the decision of a firm to hold dividends constant or not in the light of declining profits could be viewed as a quasi-experiment that solely reflects corporate governance (Mertens 2025a, p. 15). Whereas the conditioning of the ratchet event on a negative profit shock helps to isolate the effect of dividend smoothing against fluctuations in investment opportunities occurring at other points in time, it does not rule out that the profit decline coincides with deteriorating investment prospects and that firms who engage in “ratcheting” self-select into this group not because of shareholder pressure, but because they face a weaker outlook for profitable investment. While my methodology faces the same constraints, my results indicate an asymmetric impact of payouts on investment in South Africa, which alleviates concerns about reverse causality, as I will argue in Section 5. Before I introduce my data and methodology however, I first discuss the literature on financialization in South Africa.

2.3. Financialization in South Africa

South Africa is widely considered the most unequal country for which comparable statistics exist. While racial inequality declined in relative terms since the end of apartheid through the ascension of a new Black elite, it still remains on an extreme level (Chatterjee et al. 2021). Pre-tax inequality slightly increased since 1993 and stands at a Gini coefficient of 0.80 in 2019. Although a progressive tax system could reduce post-tax inequality to a Gini of 0.57 in 2019, South Africa’s post-tax inequality is still among the highest of the world (Czajka and Gethin 2025). Wealth inequality is even more extreme: according to Chatterjee et al. (2022), the top 1% own more assets than the bottom 99% combined, while the bottom 50% is consistently indebted. Searching for the roots of those social divides, Francis and Webster (2019) note that the extreme inequality and poverty in South Africa is, among other factors, caused by high unemployment rates around 30% and stagnating growth. On top of those social divides, a remarkable shift in sectoral composition can be observed, with the manufacturing and finance sectors essentially switching places as largest sector in the year 2000 as is visible in Figure 1.

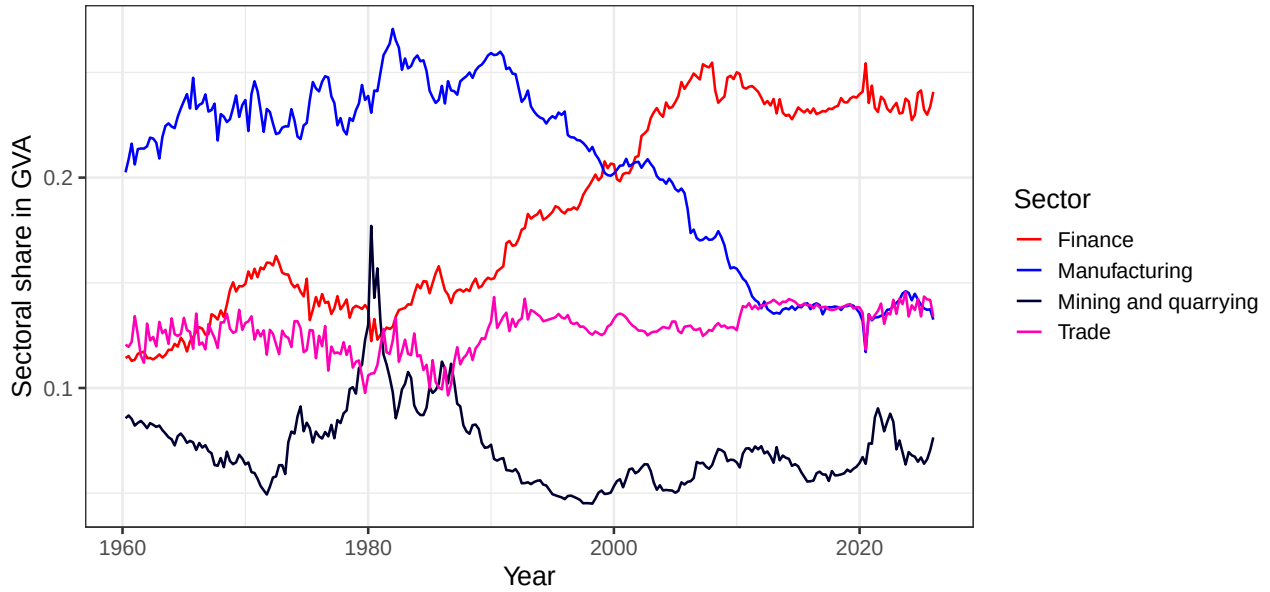


Figure 1: Shares of key sectors in gross value added, data from SARB (2025)

These developments have led political economists to adopt the framework of financialization to describe the structural causes of South Africa’s economic troubles. The literature on financialization in South Africa consists of descriptive macroeconomic accounts, case studies and firm level regression analyses, which I will review below. I will give slightly more weight to the macroeconomic studies, to first establish the general political economy discourse, before looking at firm-level behavior.

On the macroeconomic level, Ashman et al. (2021) give an overview on the suitability of the financialization framework for analyzing South Africa’s political economy. They understand financialization as a dominant force of contemporary capitalism that is able to explain South Africa’s “four lows” of low investment, low wages, low productivity and low growth by causing short-termist speculation and corruption rather than long-run growth (Ashman et al. 2021, pp. 4–6). Ashman et al. (2021, p. 9) argue that South Africa came into early contact with international finance during its history of settler colonialism, where concentration of financial services and productive capacity in conglomerate mining-finance houses, which were actively supported by the apartheid state, led to the development of the so called “mineral-energy complex”.² Further, Ashman et al. (2021, pp. 9–13) point to the effect of neoliberal reforms that deregulated financial markets as well as international capital flows which lead to the rise of the financial sector as we saw in Figure 1. Finally, Ashman et al. (2021, pp. 14–21) connect financialization to democratic decline and state capture by the patronage network around the Zuma and Gupta families through which political institutions were repurposed to advance private interests (Madonsela 2019).

Other macroeconomic studies like that of Burger (2015) found financialization responsible

²The conceptual usefulness and empirical validity of the mineral-energy complex (MEC) framework has since been questioned by Reddy (2025b), who shows that the apparent dominance of the MEC was a statistical artifact resulting from an ad-hoc definition of which sectors belong to the MEC and that the institutional conditions for the MEC do no longer exist.

for a declining wage share in South Africa. Aboobaker (2022) on the other hand disagreed with Burger (2015) and argued that commodity cycles have more explanatory power for understanding changes in South Africa’s functional income distribution. Taking an international perspective, Isaacs and Kaltenbrunner (2018) shows how capital account liberalization increased South Africa’s external vulnerabilities and contributed to domestic financialization. Studying the effects of a financial turn in accumulation with macroeconomic data, Karwowski (2018) argues that NFCs are engaging in an “investment strike” by holding large amounts of cash and having shifted the composition of their assets to more liquid financial investment, which contributed to an inflation in house prices.

Those macroeconomic analyses have been accompanied by detailed firm- and sector-level case studies. Karwowski (2015) analyses 15 firms in the mining sector and argues that they use equity markets to fund speculation with mining assets. Bowman (2018) focuses on the platinum mining sector and argues that shareholder value orientation resulted in financial instability and short-termism due to increased dividend distribution and over-investment during the boom years of 2006 to 2009. Finally, Andreoni, Robb, et al. (2026) show, in their case study of three large South African companies, how global hierarchies mediate the financialization of NFCs, by necessitating high payout ratios to attract international capital and by channeling extracted value abroad.

If we turn towards microeconomic firm-level studies, we find that the conclusion of the “investment strike” that was brought up by Karwowski (2018) was later challenged. Karwowski, Szymborska, et al. (2022) use a detailed firm-level dataset and find no evidence that corporate cash holdings are contemporaneously associated with lower investment. This fits into the general assessment of interpreting large cash holdings of firms in emerging economies primarily as a precautionary tool to weather macroeconomic insecurity and to access international capital markets (Kaltenbrunner, Karaçimen, et al. 2024) rather than a sign of a “financial turn in accumulation” (Rabinovich 2019). Besides this study, we can find some firm level studies that don’t explicitly reference the financialization framework but nevertheless estimate relationships between financial payouts and internal investment. Using a custom dataset of listed firms for the years 2002-2017, and fixed effects regressions to identify contemporaneous relationships, Steenkamp and Wesson (2023) find no contemporaneous impact of dividend payments on investment. However, they find that share repurchases are negatively correlated with investment for high-growth companies and with employment expenditures for all companies. They also caution against causal interpretation due to the possibility of reverse causality. Conroy et al. (2025) on the other hand find almost opposite effects: using the Iress database for the years 2018-2022, they document a positive correlation between share repurchases and employment expenditure, and no effect on internal investment. Lastly, Driver et al. (2023) uses a dataset containing all JSE listed firms from 1991 to 2021 sourced from Refinitiv / LSEG Datastream to study dividend payout behavior. They motivate their analysis by pointing to the hypothesized crowding out effect of dividends on investment (Driver et al. 2023, pp. 2–3). However, they do not test the relationship between payouts and investment spending as such, but only between

payouts and investment opportunity proxies, namely the market to book ratio and the asset growth rate, despite conceding themselves, that there exists no reliable indicator of investment opportunities (Driver et al. 2023, p. 7). They ultimately don't find any relationship between those investment opportunity proxies and dividend payouts in their sample (Driver et al. 2023, p. 30).

What can we learn from this review of the South African financialization literature? First, I note that, of those studies that actually make use of the financialization framework, the vast majority employs descriptive analysis and case studies as methodology. Firm-level econometric work does not engage with the concept of financialization, except for the study of Karwowski, Szymborska, et al. (2022). Second, various different conceptualizations of financialization are used and the boundaries towards other concepts such as neoliberalism, internationalization, financial liberalization or even hedging of macroeconomic risks appear blurry, a problem that I touched upon in the previous section when discussing conceptual stretching. Third, we can identify a gap in the literature that tests a long-run relationship between corporate financialization and investment with micro-data. Previous studies have only analyzed contemporaneous relationships, yet, from the theoretical discussion in Section 2.2 we are inclined to believe that the negative impacts of an increase in payout ratios materialize in the long run through an increased depletion of internal funds by means of heightening dividend payout ratios. The aim of my thesis is to fill this literature gap by asking whether corporate financialization crowds out investment in South Africa in the long run. In the following section, I describe the data and methodology I employ to answer this question.

3. Data and Methodology

3.1. Data

This section discusses the construction of my data source and of key variables. All code and data can be found in the online replication package (Wirth 2026).

Firm level data remains the gold standard for analyzing the effects of corporate financialization. However, due to limits in institutional subscriptions, I am restricted to publicly available datasets. Next to the national accounts, there are two data sources in South Africa that report dividend payments: the quarterly financial statistics (QFS) and the annual financial statistics (AFS), two firm-level surveys on income and balance sheet items (Stats SA 2026c; Stats SA 2026a). While the QFS is disaggregated into 8 sectors, the AFS has much finer sectoral disaggregation, which ultimately leads to more usable data points, even though observations are only available on the annual level.

The AFS is also a reasonably representative survey. In their sampling procedure, Stats SA categorizes companies first by their SIC main group and then by size (small, medium and large) based on their turnover (Stats SA 2025, p. 79). All large companies are included in the survey; companies in other size groups are randomly sampled. The AFS has an average sample size of 13322 companies and large companies make up an average share of 47% of the

sample.³ This indicates that large companies, who are more likely to pay dividends, are more accurately represented in the sample, whereas smaller companies are weighted to represent the entire population, which introduces sampling error (Stats SA 2025, p. 79).

Next to potential biases due to sampling, a further problem of the AFS is that the level of sectoral disaggregation changes across the years. While there is generally a trend towards more disaggregation in later years, some publications merge sectors together that have previously been disaggregated. The number and descriptions of income and balance sheet items also changes over the years. To overcome these problems, I manually standardized all variable names and developed a common classification scheme by which all sectors are aggregated, yielding a final dataset of income and balance sheet observations for 54 sectors ranging from 2006 to 2024. The detailed data cleaning process is described in the appendix in section A. I additionally excluded the sector “activities of membership organizations”, since it did not pay dividends for a large part of the sample period and since the governance of membership organization is not comparable to that of corporations. Furthermore, I excluded the sector “electricity, gas, steam and hot water supply”, as this sector’s dynamic is largely dominated by Eskom, South Africa’s public energy provider. Eskom’s investment and dividend payout decisions are not representative of the typical mechanisms of shareholder power and corporate governance that I am interested in. Rather, the company’s development and crises were heavily influenced by political contestation and state capture (Madonsela 2019; Godinho et al. 2018; Bowman 2020). After those cleaning steps, I am left with 988 sector-year observations.

Concerning the definition of my profit variable, I follow Reddy (2025a, p. 2156) and define profits as profits after company tax and before depreciation and amortization allowances, to accurately capture the internal funds available for investment or dividend distribution purposes.⁴ The dividend payout ratio itself poses another problem, that is frequently not discussed in the empirical literature: When profits become negative and firms continue to pay dividends, the payout ratio turns negative itself. This makes interpretation and regression analysis more difficult as higher payout ratios don’t always correspond to higher financialization. Arguably, companies that continue to pay dividends while making losses should be considered to be more financialized as firms with low positive payout ratios. Mertens (2025a, page 3 of the appendix) thus proposes a correction mechanism, in which negative values and large positive outliers are assigned to a dynamically evolving cap that is computed from the 3 year forward rolling average of the 95th percentile of payout ratios in each region. However, if I were to adopt this procedure to my case, I would introduce look-ahead bias for the local projections. Even without the three year rolling average, it is questionable why a sector with a negative payout ratio should be assigned to a cap that is essentially determined by that year’s payout ratio of another sector, that is likely not comparable. In the light of those problems, I decided to drop the negative profit observations from my estimations of the payout ratio for the regression exercises. This

³I computed those averages from all AFS publications; sample size is reported in the “survey methodology and design” notes at the end of the pdf reports.

⁴Depreciation and amortization allowances are non-cash items and therefore don’t reduce the company’s available funds.

decision resulted in a loss of 43 observations and leaves me with 944 sector-year observations for the payout ratio as dependent variable.⁵ Other variables as well as the classification of episodes are still estimated on the whole 988 observation dataset.

For my discussion of the shift in sectoral composition in Section 5.1, I use employment data from the Quarterly Employment Statistics (QES) (Stats SA 2026b). As Stats SA does not publish readily formatted time series for sectoral employment or earnings statistics, I use a custom-build script to extract the data points from the pdf files of the QES, taking into account data revisions in later publications. The exact procedure can be found in the *collect_QES.ipynb* script in the online appendix. The remaining data sources are unprocessed. I use the Quarterly Bulletin published by SARB (2025) for aggregate and sector-specific time series and the World Inequality Database for the post-tax Gini coefficient (WID 2025).

3.2. Methodology

3.2.1. Fixed Effects Regression

For estimating the contemporaneous impact of the payout ratio on investment, I run a simple fixed effect regression that is specified as follows:

$$\begin{aligned} inv_rate_{i,t} = & \beta_1 payout_ratio_{i,t} + \beta_2 profit_rate_{i,t} + \beta_3 liq_ratio_{i,t} \\ & + \beta_4 liq_ratio_{i,t-1} + \beta_5 inv_growth_{i,t} + \alpha_i + \gamma_t + u_{i,t} \end{aligned}$$

with the following variable definitions:

- $inv_rate_{i,t} = \frac{investment_{i,t}}{total_assets_{i,t}}$ is the investment rate.
- $payout_ratio_{i,t} = \frac{dividends_{i,t}}{\pi_{i,t}}$ is the payout ratio, which is only defined for positive profits. Undefined observations are dropped from the estimation. Here and in the following, I'm abbreviating profits with the symbol π .
- $profit_rate_{i,t} = \frac{\pi_{i,t}}{total_assets_{i,t}}$ is the profit rate.
- $liq_ratio_{i,t} = \frac{total_current_assets_{i,t-1}}{total_assets_{i,t-1}}$ is the liquidity ratio and controls for the available liquid funds.
- $liq_ratio_{i,t-1} = \frac{total_current_assets_{i,t-1}}{total_assets_{i,t-1}}$ is the lagged liquidity ratio and controls for the available liquid funds of the last period.
- $inv_growth_{i,t-1} = \frac{inv_rate_{i,t-1} - inv_rate_{i,t-3}}{inv_rate_{i,t-3}}$ is the lagged two-year investment growth rate and controls for pre-existing investment trends.

Subscripts i and t denote sectors and time periods. Time-invariant sector-specific differences are captured by α_i , sector-invariant time-specific effects by γ_t and residual variation by the error term $u_{i,t}$.

⁵In the AFS of 2007, the forestry and fishing sector is missing a profit entry, which resulted in one additional lost observation.

3.2.2. Classification of Ratchet Events

For assessing the long run impact of an increase in payout ratios, I follow the notion of a “ratchet event” established by (Mertens 2025b). A ratchet event is defined as dividend smoothing during a downturn. First, I create a series of dummies to classify downturn events for each industry according to the three parameters s, c and w .

$$downturn_{i,t} = \mathbf{1} \left[\underbrace{\frac{\pi_{i,t} - \pi_{i,t-1}}{\sigma_i(\pi_{i,t} - \pi_{i,t-1})} < -s}_{\text{shock decline}} \cap \underbrace{\frac{\pi_{i,t} - \bar{\pi}_{i,t-1}^{3y}}{|\bar{\pi}_{i,t-1}^{3y}|} < -c}_{\text{continuous decline}} \cap \underbrace{\frac{\pi_{i,t-1}}{\bar{\pi}_{i,t-1}^{3y}} < w}_{\text{no windfall}} \right] \quad (1)$$

An event has to satisfy three conditions to be classified as a downturn. First, there has to be a year-on-year profit decline. To account for differences in the variance of profits between sectors, the year-on-year decline is normalized by the standard deviation σ_i of profits in the respective sector. This shock decline has to be negative and larger in absolute terms than the parameter s . A higher shock decline threshold s thus admits only large shocks into the downturn series. Second, there has to be decline below trend levels. The profit decline relative to its lagged three year rolling average, where $\bar{\pi}_{i,t}^{3y} = \frac{1}{3} \sum_{k=1}^3 \pi_{i,t-k}$, has to be larger in absolute terms than the parameter c . A high continuous decline threshold c admits events that are the culmination of a persistently negative profit history, even if their year-on-year profit shock is small. Through a combination of different s and c values, I capture qualitatively different profit downturns that may be short-run fluctuations or long-term profitability declines. Third, the profit decline should not be the baseline effect of a previous windfall profit, a requirement inspired by Mertens (2025b, p. 18). Formally, the share of profits in the period before the shock in the lagged three year rolling average has to be smaller than the parameter w . A lower windfall threshold w will filter out more windfall episodes which results in fewer episodes to be classified as downturns. After downturns have been identified, each downturn event is classified as either ratchet or non-ratchet:

$$\begin{aligned} ratchet_{i,t} &= downturn_{i,t} \cdot \mathbf{1} \left[\frac{dividends_{i,t} - dividends_{i,t-1}}{dividends_{i,t-1}} > -d \right] \\ non_ratchet_{i,t} &= downturn_{i,t} \cdot \mathbf{1} \left[\frac{dividends_{i,t} - dividends_{i,t-1}}{dividends_{i,t-1}} \leq -d \right] \end{aligned} \quad (2)$$

For ratchet events, the relative decrease in dividends has to be smaller in absolute numbers than the parameter d . Larger decreases in dividends are categorized as non-ratchet events. Generally, changing the parameter d will shift the allocation of already identified downturns to either ratchet or non-ratchet events. Thus, both the treatment as well as the comparison group will change its size. A lower dividend decline threshold d will result in a tighter classification of ratchet events, and more dividend smoothing. A negative value for the threshold d will only classify those episodes as ratchet events where dividends *increase* during a downturn. An

example classification is shown in Figure 17 in the appendix.

3.2.3. Local Projections

To analyze the long-run effect of ratchet events on investment, I employ the local projections method of Jordà (2005) to estimate impulse response functions. Compared to VARs, local projection are more robust to misspecification since each horizon is estimated individually. This is especially relevant for the long run effect that I'm interested in, since local projections don't accumulate errors as VARs do. Moreover, estimation by OLS at each horizon allows for the straightforward inclusion of control variables and fixed effects. For each horizon $h \in \{0, \dots, 10\}$ I estimate:

$$\begin{aligned} \Delta^h inv_rate_{i,t} = & \beta_{1,h} ratchet_{i,t} + \beta_{2,h} non_ratchet_{i,t} \\ & + \beta_{3,h} profit_shock_{i,t} + \beta_{4,h} profit_decline_{i,t} \\ & + \beta_{5,h} liq_ratio_{i,t-1} + \beta_{6,h} inv_growth_{i,t-1} \\ & + \alpha_i + \gamma_t + u_{i,t+h} \end{aligned} \quad (3)$$

where the dependent variable $\Delta^h inv_rate_{i,t} = inv_rate_{i,t+h} - inv_rate_{i,t-1} = \frac{investment_{i,t+h}}{total_assets_{i,t+h}} - \frac{investment_{i,t-1}}{total_assets_{i,t-1}}$ is the cumulative change in the investment rate between $t-1$ and $t+h$. Controls for liquidity ratio and investment growth are defined as in Section 3.2.1. The profit shock variables are defined as follows:

- $profit_shock_{i,t} = \frac{\pi_{i,t} - \pi_{i,t-1}}{\sigma_i(\Delta\pi)}$ measures the standardized year-on-year profit change and controls for the severity of the profit shock.
- $profit_decline_{i,t} = \frac{\pi_{i,t} - \bar{\pi}_{i,t-1}^{3y}}{|\bar{\pi}_{i,t-1}^{3y}|}$ measures the deviation of profits from their recent trend and controls for the severity of the continuous profit decline.

Sector fixed effects α_i absorb time-invariant differences in investment rates across sectors, while time fixed effects γ_t control for aggregate shocks common to all sectors. Standard errors are clustered at the sector level to account for serial correlation induced by the overlapping nature of the h-period ahead outcomes and for heteroskedasticity across sectors.

The coefficients $\beta_{1,h}$ and $\beta_{2,h}$ trace the impulse response functions of investment to ratchet and non-ratchet events respectively. Similar to Mertens (2025b) I adopt a difference in difference framing to identify the effect of holding dividends constant irrespective of the size of a profit shock. The treatment effect is thus the difference between the coefficients of the ratchet and non-ratchet events:

$$\tau_h = \beta_{1,h} - \beta_{2,h} \quad (4)$$

As both $\beta_{1,h}$ and $\beta_{2,h}$ come from the same regression, the standard error of the treatment effect is given by:

$$SE(\tau_h) = \sqrt{Var(\hat{\beta}_{1,h}) + Var(\hat{\beta}_{2,h}) - 2Cov(\hat{\beta}_{1,h}, \hat{\beta}_{2,h})} \quad (5)$$

The decision of companies to smooth dividends during a profit decline reflects corporate governance decisions influenced by shareholder power. For identification, I need to argue that, conditional on my controls, the decision to smooth dividends at $t = 0$ does not depend on any future investment outcome. The biggest threat to this identification is reverse causality, as discussed in Section 2.2. While I can not completely rule out reverse causality, the temporal progression of my IRFs make the crowding out story more plausible, as I argue below in Section 5.

To give a complete picture of the effects of ratchet events on the long dynamics of the economy and to assess potential transmission channels, I estimate equivalent local projections for the payout ratio, the profit rate and the dividend rate. Specifically, I replace $\Delta^h inv_rate_{i,t}$ as the dependent variable with $\Delta^h payout_ratio_{i,t}$, $\Delta^h profit_rate_{i,t}$ and $\Delta^h div_rate_{i,t}$ in turn, while maintaining the right-hand side specification of equation (3) unchanged. Equivalent to profit and investment rates, the dividend rate is defined as dividends over total assets. The resulting impulse response functions trace the dynamic response of each channel to ratchet and non-ratchet events. Correspondingly to the investment specification, $\tau_{\tau_h} = \beta_{1,h} - \beta_{2,h}$ measures the treatment effect of dividend smoothing during a profit decline on the dependent variable of interest.

3.2.4. Sensitivity Analysis

The choice of the four parameters s, c, w and d can result in different classification of downturn and ratchet events and influence the outcome of my local projections. Rather than arbitrarily setting those parameters, I performed a sensitivity analysis by estimating the full set of local projections for all dependent variables for each combination of parameters from a $15 \times 15 \times 15 \times 10$ grid, with $s, c \in \{0, 0.1, 0.2, \dots, 1.4\}$, $d \in \{-0.5, -0.4, \dots, 0.9\}$ where negative threshold values indicate an increase of dividends during a downturn episode, and $w \in \{0.5, 0.75, \dots, 2.75\}$. To ensure that regression estimates are not driven by only few observations, I filter out all classifications that produce fewer than ten ratchet and ten non-ratchet episodes. For each parameter combination, I then compute summary statistics of the IRFs of the treatment effect by taking the average of the coefficients for different horizon values. Let $\mathcal{H}$ denote a horizon window and $\tau_{\mathcal{H}}$ the corresponding summary statistic, where $\mathcal{H} \in \{\text{short}, \text{medium}, \text{long}, \text{terminal}\}$. I calculate the average effect $\bar{\tau}_{\mathcal{H}}$ as follows:

$$\bar{\tau}_{short} = \frac{1}{3} \sum_{h=0}^2 \tau_h \quad (6)$$

$$\bar{\tau}_{medium} = \frac{1}{4} \sum_{h=3}^6 \tau_h \quad (7)$$

$$\bar{\tau}_{long} = \frac{1}{4} \sum_{h=7}^{10} \tau_h \quad (8)$$

$$\bar{\tau} = \frac{1}{11} \sum_{h=0}^{10} \tau_h \quad (9)$$

$$\tau_{terminal} = \tau_{10} \quad (10)$$

I employ three complementary visualization tools to analyze the overall distributions of the summary statistics and their sensitivity to different parameter values. First, I plot histograms of each summary statistic across the parameter grid, coloured by a parameter of interest to assess this parameter's impact on the distribution. Second, for each summary statistic $\tau_{\mathcal{H}}$ of interest and each parameter $p \in \{c, s, d, w\}$, I compute the average outcome $\bar{\tau}_{\mathcal{H},p} = \mathbb{E}[\hat{\tau}_{\mathcal{H}} \mid p]$, marginalizing over all combinations of the remaining three parameters. This main effects plot traces how the average outcome of each summary statistic varies with each parameter individually, providing a one-dimensional summary of the sensitivity surface. I add a confidence band of ± 2 standard errors of the conditional mean to indicate the degree of dispersion across the marginalized parameter combinations. Third, I consider all $\binom{4}{2} = 6$ pairs of parameters and for each pair compute the average outcome $\bar{\tau}_{\mathcal{H},p_1,p_2} = \mathbb{E}[\hat{\tau}_{\mathcal{H}} \mid p_1, p_2]$, marginalizing over the remaining two parameters. I plot each pair in a heatmap to provide a two-dimensional summary of the sensitivity surface, allowing the identification of interaction effects between parameters that would be invisible in the one-dimensional main effects plots.

With these three visualization tools, I get an overview of the shape of the $\bar{\tau}_{\mathcal{H}}$ distribution and the impact of each parameter. However, the uncertainty of the local projection estimation is not yet catered for. To account for the fact that estimates of varying precision enter the distribution equally, I complement each histogram with the precision-weighted mean across parameter combinations,

$$\bar{\tau}_{\mathcal{H}}^w = \frac{\sum_{(c,s,d,w)} \hat{\tau}_{\mathcal{H}}(c, s, d, w) \cdot SE(\hat{\tau}_{\mathcal{H}}(c, s, d, w))^{-2}}{\sum_{(c,s,d,w)} SE(\hat{\tau}_{\mathcal{H}}(c, s, d, w))^{-2}} \quad (11)$$

which weights down parameter combinations that produce imprecise estimates. Since local projection standard errors are generally serially correlated by construction (Montiel Olea and Plagborg-Møller 2021), horizon-window averages cannot be treated as single regression estimates and their standard errors cannot be straightforwardly combined. Therefore, I can not use classical single-equation inference tools and my sensitivity analysis produces only suggestive evidence for the summary statistics. For the terminal values of the dependent variables however, I can calculate the t-statistic as $t = \tau_{terminal} / SE(\tau_{terminal})$ which I additionally report as a histogram across the parameter grid. This allows me to infer which parameter combinations produce statistically significant results in the long run.

4. Results

4.1. Descriptive Results

In Figure 2, we see that in the last two decades, the aggregate payout ratio in South Africa has fluctuated strongly and increased from 22.6% in 2006 to 34.3% in 2024. This increase gives a first impression on the plausibility of the financialization thesis. The general trend is robust to excluding the electricity sector, as shown in Figure 18 in the appendix. It should be noted however, that large companies are better represented in the AFS survey, as discussed in Section 3.1. The financialization of the unweighted average company may thus follow somewhat different dynamics.

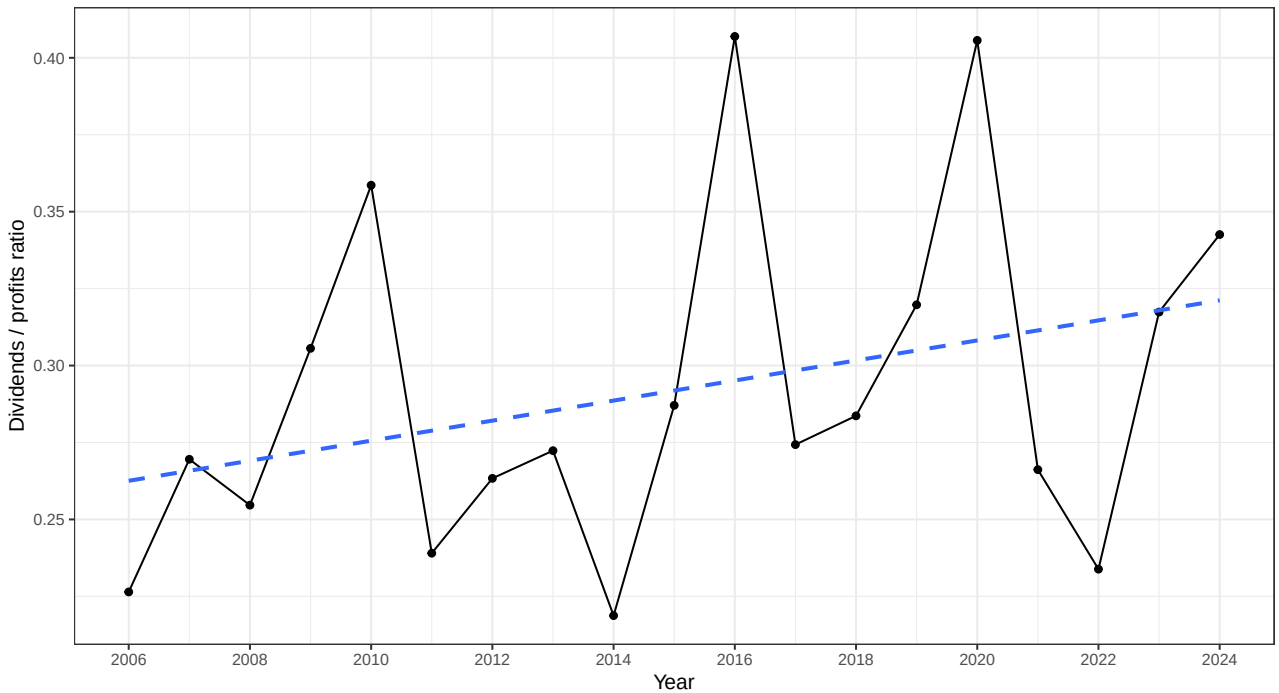


Figure 2: Aggregate payout ratio, data taken from Stats SA (2026a)

Figure 3 shows the aggregate payout ratio per industry groups. Observations where annual profits were negative at the level of the industry group were removed. We see that different sectors follow different trajectories of payout ratios. An upward trend can be seen in most sectors with the notable exceptions of the manufacturing sector, which has seen an increase in payout ratios until 2020 followed by a decline below 2006 values, and the transport sector, that showed a generally negative trend. As noted above, the dynamic of the electricity sector, in which we can see a dramatic increase in payout ratios since 2018 is likely dominated by idiosyncratic corporate governance power struggles in Eskom, that can not be generalized to the wider economy.

To assess whether increasing payouts coincided with decreasing investment, I plot the dividend to investment ratio per industry group in Figure 4. A few new insights emerge from this: in the trade sector, higher dividends did visibly crowd out investment and the ratio of dividends to investments fell from 2006 to 2024. Similarly, the manufacturing and transport sectors are

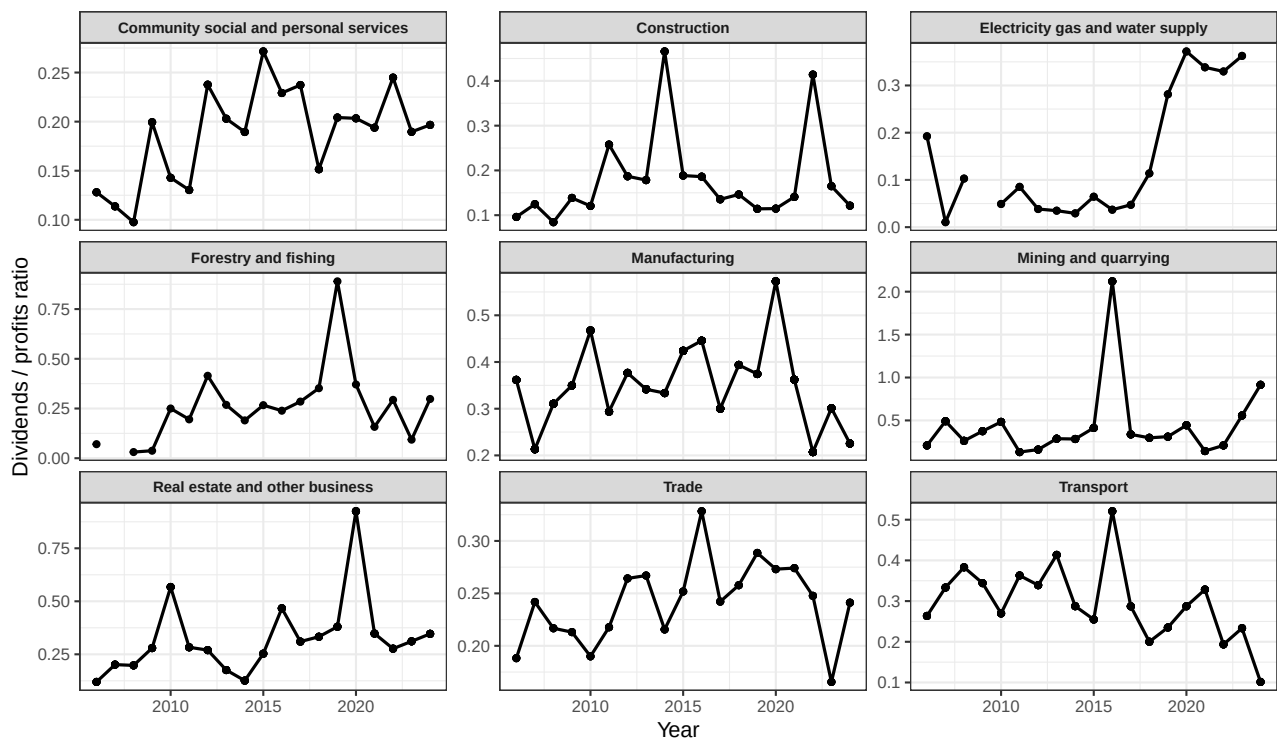


Figure 3: Aggregate payout ratio per industry group, data taken from Stats SA (2026a)

characterized by a falling dividend to investment ratio. Notably, the decreasing dividend to investment ratio is driven by decreasing dividends in the manufacturing sector and investment also stagnated with a slight downward trend, as can be seen in Figure 19 in the appendix. For the other sectors, the ratio increased over the last two decades.

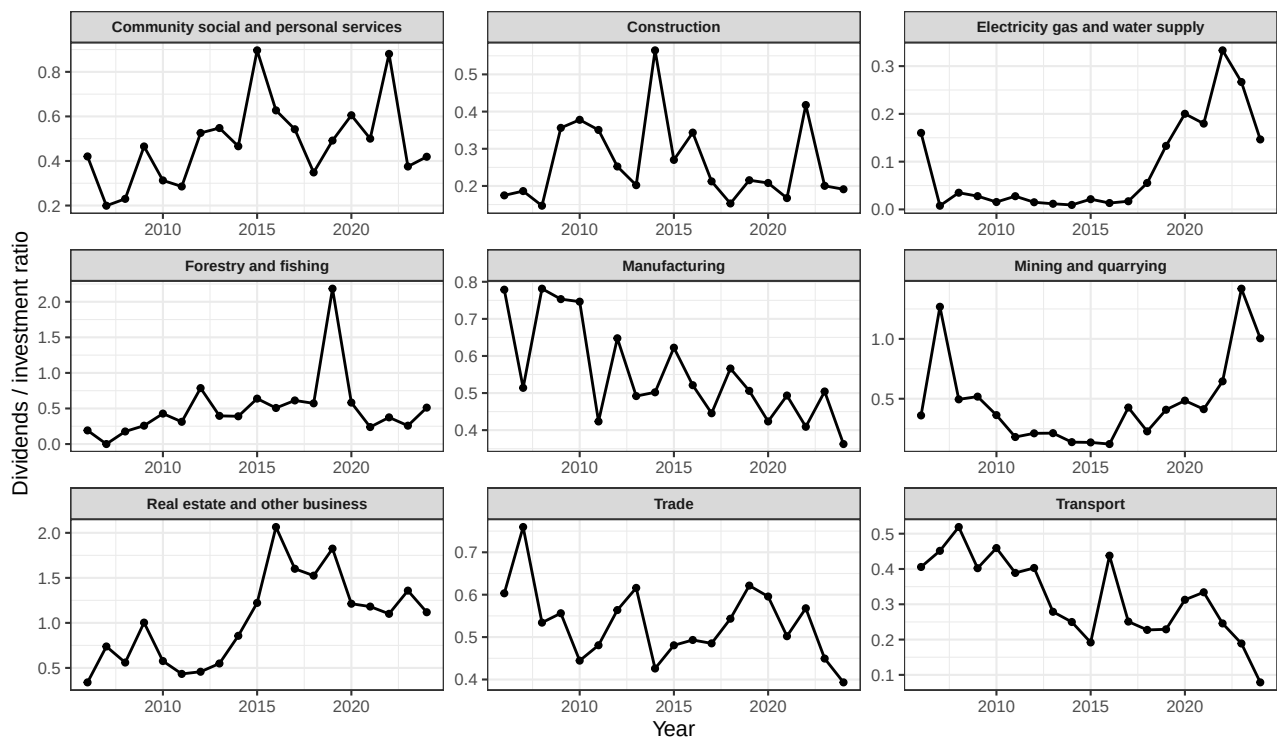


Figure 4: Dividend / investment ratio per industry group, data taken from Stats SA (2026a)

The figures that I just presented give a broad overview of dividend and investment dynamics in South Africa. For establishing a more robust association between those variables however, we have to go beyond common trends and analyze whether there is a systematic correlation between payout ratios and investment across the different sectors. The next section presents the outcome of my fixed effects regression in an attempt to answer that question.

4.2. Panel Regressions

Table 1: Fixed effects regression for determinants of the investment rate

Dependent Variable: Model:	inv_rate			
	(1)	(2)	(3)	(4)
<i>Variables</i>				
payout_ratio	-0.004* (0.002)	-0.004** (0.002)	-0.005** (0.002)	-0.004 (0.003)
profit_rate	0.039** (0.017)	0.042** (0.018)	0.034** (0.017)	0.035 (0.029)
liq_ratio		-0.059** (0.023)	-0.094*** (0.026)	-0.100*** (0.028)
liq_ratio_l1			0.064*** (0.016)	0.065*** (0.018)
inv_growth				1.04×10^{-5} *** (1.35×10^{-6})
<i>Fixed-effects</i>				
industry	Yes	Yes	Yes	Yes
year	Yes	Yes	Yes	Yes
<i>Fit statistics</i>				
Observations	961	961	908	857
R ²	0.68086	0.68813	0.70620	0.70388
Within R ²	0.01160	0.03413	0.05044	0.05341

Clustered (industry) standard-errors in parentheses

*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Table 1 shows the results of the fixed effects regression. The payout ratio has a statistically significant negative contemporaneous impact on the investment rate in three of four specifications. In model 4, the addition of the investment growth variable which measures the two-year change in investment leads to a decrease in sample size and therefore an increase in the standard error of the payout ratio variable, which ceases to be statistically significant. Its magnitude however is hardly changed across specifications. This indicates a robust negative correlation as predicted by previous literature.

The profit rate as a control variable has a positive impact on the investment rate as predicted by economic theory (Kalecki 1954, pp. 97–98). The effect is consistently positive throughout the specifications and loses its statistical significance once I include investment growth. The

liquidity ratio is contemporaneously negatively correlated with the investment rate. This is expected, as firms use up their liquid funds for investment. The lagged liquidity ratio is negatively associated with the investment rate, as a larger amount of liquid funds in the previous period can finance investment in the present period. Finally, there is an economically weak yet statistically significant relationship with the two year rate of growth of the investment rate itself, highlighting the autoregressive component of investment functions, that is frequently included in the empirical literature (Barradas 2017; Tori and Onaran 2018; Auvray and Rabinovich 2019; Tori and Onaran 2020).

The contemporaneous negative relationship between the payout ratio and the investment rate can emerge either through a depletion of internal funds as hypothesized by financialization theory or through forward looking behavior of management, which would distribute available funds to shareholders if no profitable investment opportunities are present. In the next section, I present the results of my local projections, to investigate whether the critique of reverse causality is applicable to corporate financialization in South Africa.

4.3. Local Projections

4.3.1. Investment Response

My main variable of interest is τ_h for the investment rate, i.e. the difference in investment response between a negative profit shock where dividends are held constant and one where dividends are decreasing, evaluated at different horizons h . In the following, I present summary measures of the distribution of τ_h of the investment rate for all possible parameter combinations s, c, w, d .

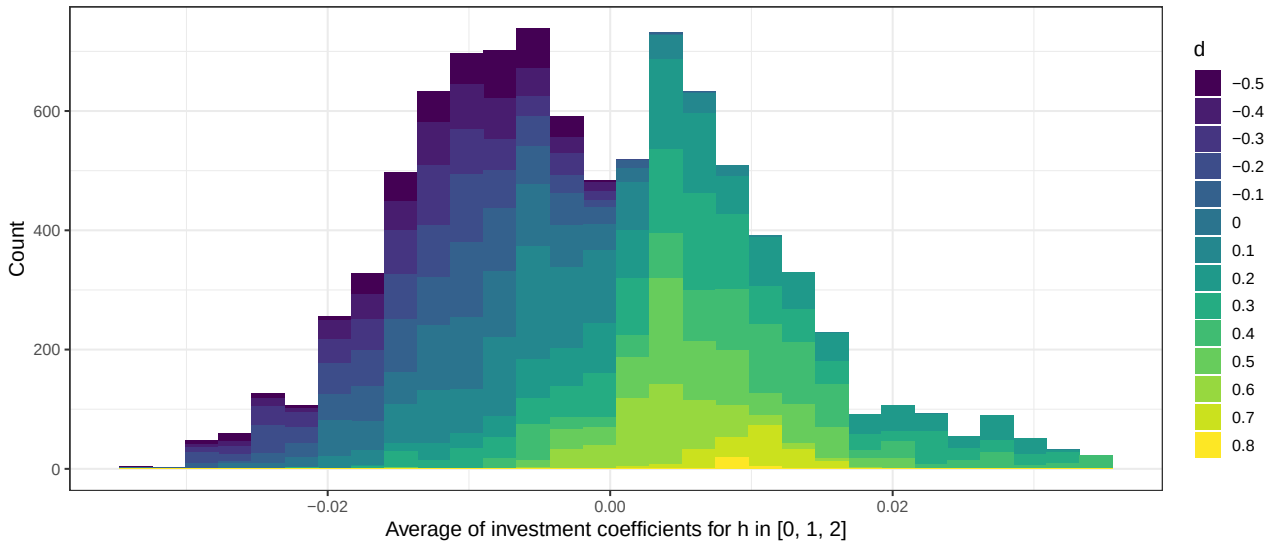


Figure 5: Histogram of the short-run effect on the investment rate, coloured by ratchet intensity d

Figure 5 shows the distribution of $\bar{\tau}_{short}$ for investment as a dependent variable for different values of d . We can see that in the first two years after the downturn event, we get a bimodal

distribution stratified by d , where higher (lower) values of d generally sit towards the positive (negative) end of the spectrum. For ratcheting firms, negative values of d relate to an increase in dividend payments during a downturn event, whereas moderate and high values of d relate to a moderate or very soft form of dividend smoothing. We can see that high amounts of smoothing decrease short term investment, while low amounts of smoothing increase it. I will discuss potential explanations for this effect in Section 5. If we weight down imprecise estimates, the bimodal shape disappears, but the distribution roughly maintains its mean and the stratification along the d parameter as can be seen in Figure 20 in the appendix.

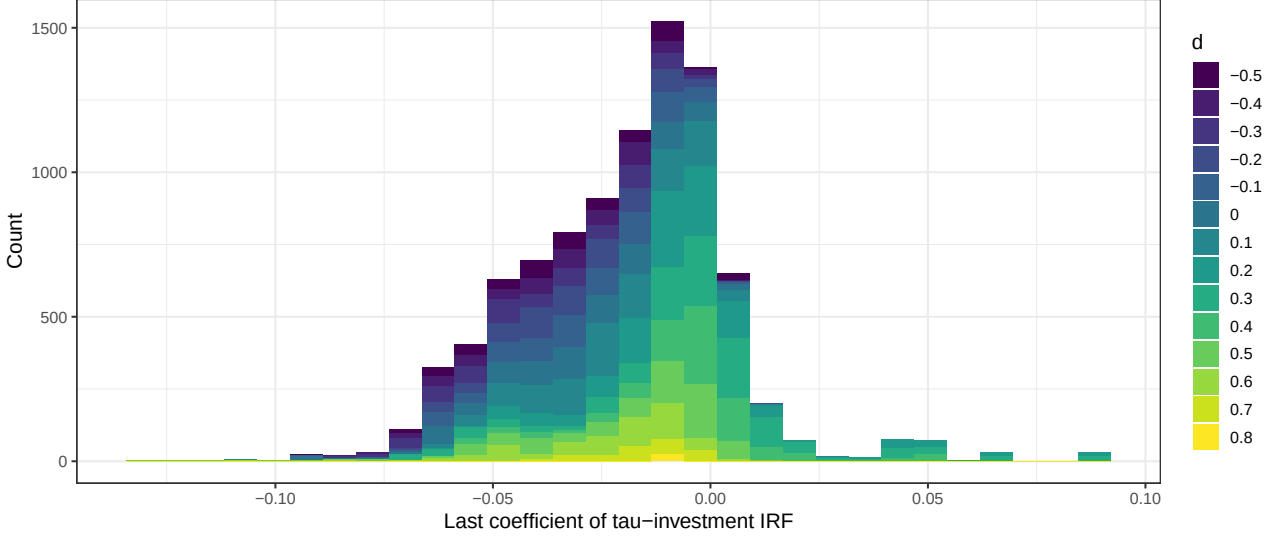


Figure 6: Histogram of the effect on the investment rate 10 years after the downturn, coloured by ratchet intensity d

If we go from the short to the medium and long run, the right part of the distribution that is characterized by higher values of d moves to the left and crosses zero. The trajectory of this shift is visible in Figures 20, 21 and 22 in the appendix and the final outcome 10 years after the downturn event is presented in Figure 6. We note that almost all parameter combinations are associated with a negative impact of ratcheting on long-run investment expenditure, even those that produced an “optimal” amount of smoothing for short-term investment performance. Lower values of d generally predict lower investment expenditure in the long run.

The main effects plot in Figure 7 verifies this impact of the ratchet intensity d , showing a nonlinear response to different levels of dividend smoothing, where $d \in (0.2, 0.3, 0.4)$ has a comparably more positive impact on investment outcome. We further can see that more severe year-on-year profit shocks s , dividend smoothing leads to worse investment performance in the long term, compared to non-smoothing. For the parameter c which measures the severity of the continuous profit decline relative to a lagged three year rolling average, we again find a nonlinear relationship. Until $c = 0.5$, more negative profit developments lead to more negative long-term investment outcomes for the ratchet group. With higher c , the effect reverses and is associated with more positive investment expenditure. This is likely a selection effect that reflects underlying company characteristics. At high c , the firms that can afford to smooth dividends through a severe sustained decline may differ from their non-ratchet counterparts in

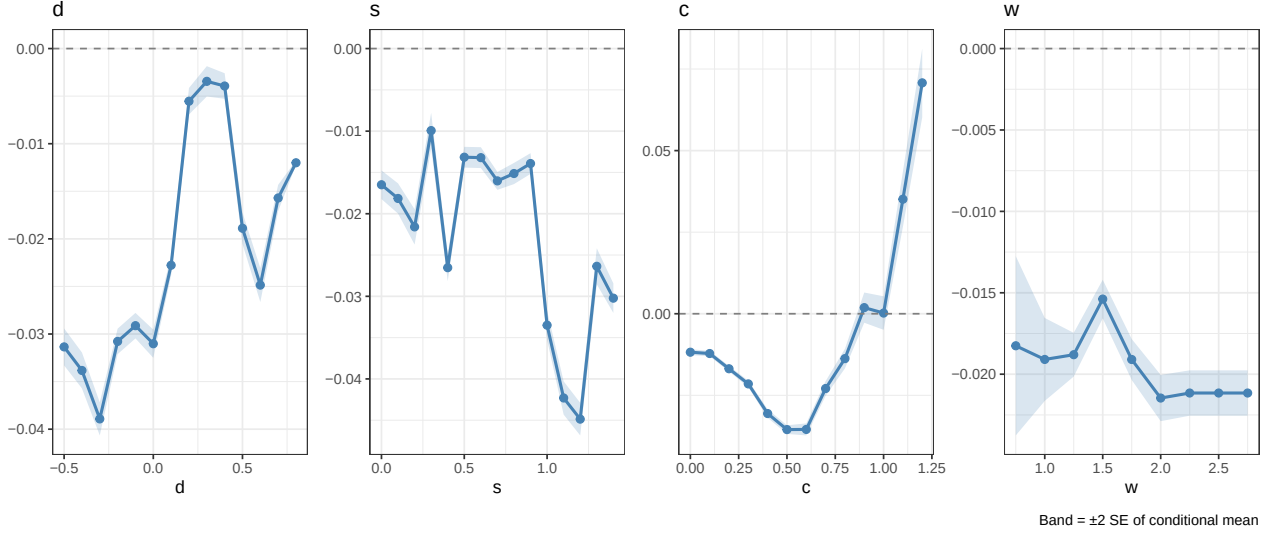


Figure 7: Main effects plot for the terminal investment effect

ways that the control variables for s and c don't fully capture, for instance in access to external financing or industry positioning. These are likely slow-moving firm characteristics that the year and industry fixed effects won't absorb if the composition shift is within industries across time. In other words, conditional on being in a persistent and severe downturn, ratchet vs non-ratchet may still be picking up latent firm quality rather than the payout decision itself, as soon as dividend smoothing does not primarily reflect corporate governance decisions anymore, but weaker firms are *forced* to cut their dividends due to a lack of available funds. I suspect that those underlying firm characteristics also show themselves on the sectoral level in my data. Finally, the windfall threshold w is negatively correlated with long run investment expenditure, which suggests that a part of the ratchet-behavior, that leads to a crowding out of investment is also performed when profits return to their baseline after a windfall year.

The pairwise heatmaps for the long run effect on investment, shown in Figure 8 give more insight into some of the nonlinearities of the main effects plot. In the $d \times s$ panel, we can see that beneficial effects of “mild smoothing”, where $d \in (0.2, 0.3, 0.4)$ only occur for small year-on-year shocks with $s \leq 0.3$. Similarly, the $d \times c$ panel shows that they only occur at high values of $c \geq 0.8$, but this may be a composition effect, given that most observations with high c values are dropped from the minimum-episodes filter.⁶ Finally, the $s \times c$ panel indicates, that the self-selection effect of weak firms into the non-ratcheting groups for high values of c , that was discussed in the previous paragraph, seems to be limited to low values of s .⁷ In other words, this selection effect only applies when firms face a low year-on-year shock but a continuous profit decline. Pairwise heatmaps for the short-run effect are shown in Figure 23 in the appendix but will not be discussed here due to space constraints.

To test whether the negative long term investment outcome that we saw in Figure 6 is

⁶The missing observations in the heatmap plots are due to the robustness filter of dropping all parameter combinations that result in fewer than 10 ratchet and 10 non-ratchet events.

⁷Here again, a composition effect is taking place, since parameter combinations with high s and c are dropped due to minimum episodes requirements.

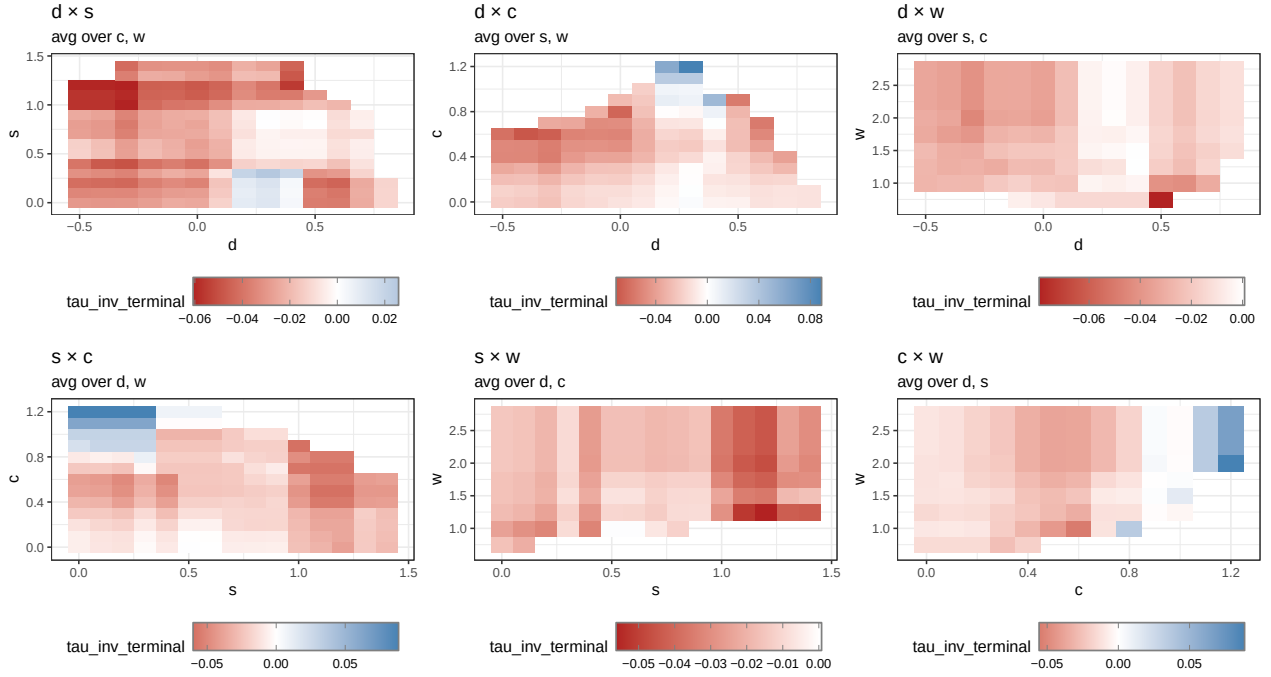


Figure 8: Pairwise heatmaps for the terminal investment effect

statistically significant and representative of the average effect, I first want to make a selection on the parameter space that chooses representative values.⁸ I restrict the shock size s to the interval $[0.7, 1.3]$, to ensure that shocks are symmetrically distributed around the sectorial standard deviation of profit shocks. This implicitly already restricts the space of c via the minimum episode requirement. Furthermore, I set w to its maximum value of 2.75 in order to eliminate composition effects that result from the minimum episode filter, which essentially disables the windfall filter.⁹ I leave c and d unrestricted they are not normalized like s and I have no information on their population distribution. From this restricted parameter space, I plot the t-statistic of $\tau_{terminal}$ as a histogram across all parameter combinations, shown in Figure 9. 46% of combinations are statistically significant at the 10% level and 37% at the 5% level, all on the negative side. No parameter combination yields a statistically significant positive effect. A smaller d parameter, which signifies tighter ratcheting, seems to be again correlated with a more negative investment outcome.

To sum up this section, I have shown that dividend smoothing has a generally negative impact on long run investment expenditures, even for parameter combinations, which resulted in short-run beneficial effects. After filtering for representative parameter values, the negative effect is statistically significant at the 5 % level for 37% of the parameter selection. Positive long-run impacts are likely driven by selection effects of severe continuous profit declines and

⁸In choosing the initial size of the parameter grid, I opted for values that allowed me to analyze extreme values even though they may be less typical for the (unknown) distribution of parameters that would yield representative results.

⁹Setting w to its highest value is actually a *conservative* choice here, because I do not implicitly weight down the space of parameter combinations that are only possible with high values of w and that give positive effects on the long term investment outcome as can be seen in the $c \times w$ panel of Figure 8.

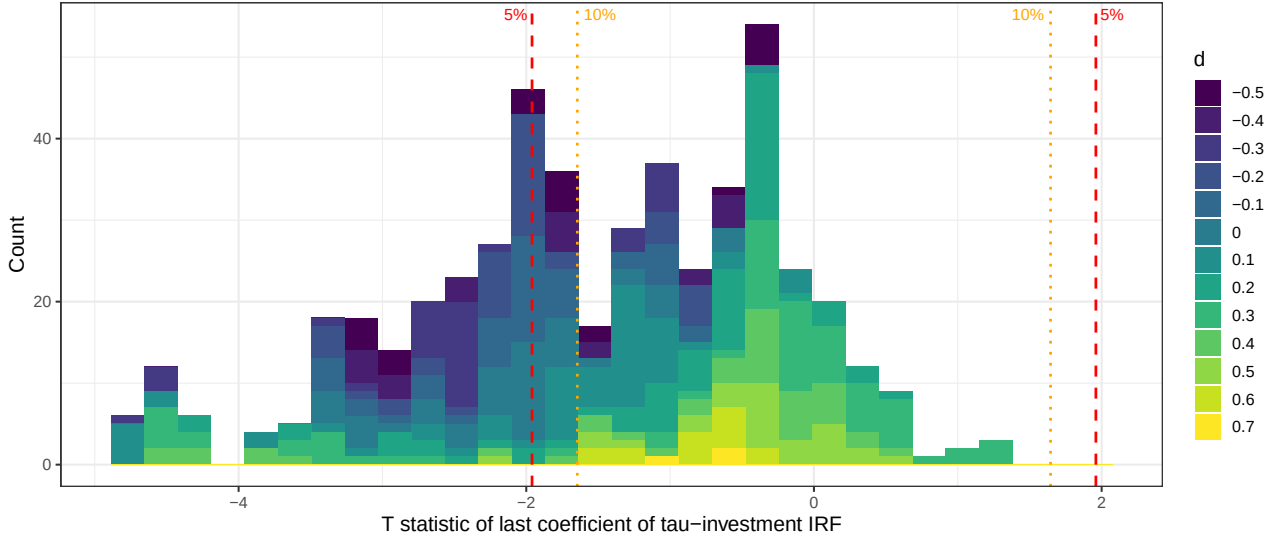


Figure 9: Histogram of the t-statistic of $\tau_{terminal}$ for the investment rate, coloured by ratchet intensity d

small year-on-year shocks, that force weak firms into the non-ratcheting group, and which can not be completely controlled for with variables capturing profit decline severity, or industry and year fixed effects. Negative long-run impacts are increased by a higher intensity in dividend smoothing, larger year-on-year shocks, and up to a threshold of $c = 0.5$ by larger continuous profit declines relative to the lagged three year rolling average. They are additionally more likely with a higher windfall threshold w indicating, that dividend smoothing during the year after a windfall profit also reduces long term investment spending.

The financialization literature and specifically (Mertens 2025b) argue that downward sticky dividends “ratchet up” the payout ratio and can thus explain the detrimental long run effects of dividend smoothing on investment that I have just documented. The next section investigates whether this mechanism can be observed in South Africa.

4.3.2. Payout Ratio Response

In the following, I discuss the evolution of the differential effect between treatment and control group, τ_h , for the payout ratio as the dependent variable of the local projections. By construction, the ratchet group has a higher payout ratio at the year of the downturn event ($t = 0$), as profit decline and dividends are kept stable. The effect dominates the short-run of the payout ratio and is persistent throughout the medium and long run. In the appendix, Figures 24 and 25 trace the temporal evolution of the precision-weighted average effects for the short and medium. Here, I present the impact on the long-run average in Figure 10, which documents the persistence of the positive impact of dividend smoothing on the long run payout ratio. This stable increase in the payout ratio is consistent with the mechanism of “ratcheting up” payout ratios as described in (Mertens 2025b).

If we look at the terminal value for $h = 10$ specifically, we see that the unfiltered distribution shifts back and is centered around 0 again as can be seen in Figure 26 in the appendix. To test,

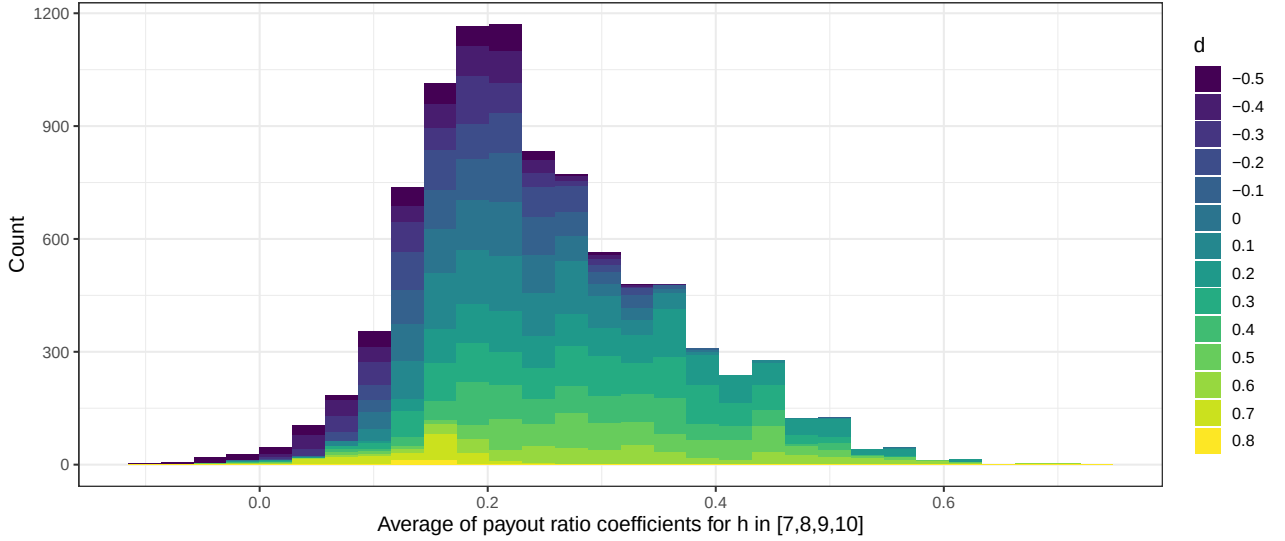


Figure 10: Histogram of the precision-weighted long-run effect on the payout ratio, coloured by ratchet intensity d

whether this shift is robust to a representative parameter selection, I employ the same subset as in the last section, where $s \in [0.7, 1.3]$ and $w = 2.75$. In Figure 11, I plot the t-statistic of $\tau_{terminal}$ for the payout ratio projections. Due to the negative shift in the distribution from the long run average to the terminal value, I end up with a less significant long run result for the payout ratio, even after filtering. Only 12.6% of the distribution are significantly positive at the 5% threshold and 7.6% at the 5% threshold. In the light of the stable average effects for the short, medium and long run, this raises the question of the cause of such a shift at the last horizon period.

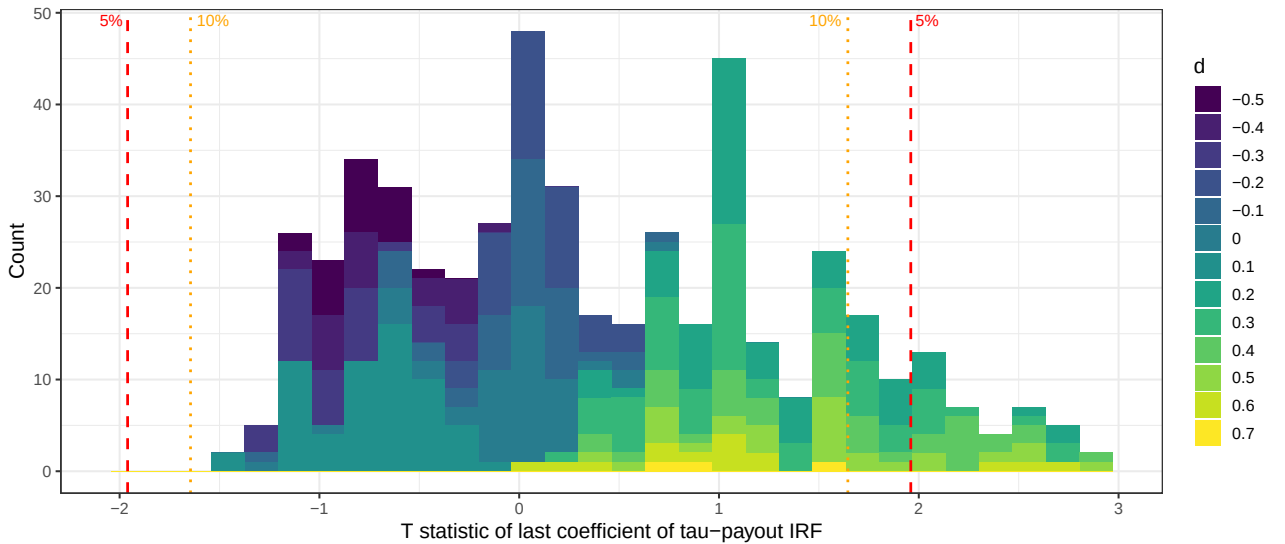


Figure 11: Histogram of the t-statistic of $\tau_{terminal}$ for the payout ratio, coloured by ratchet intensity d

I offer two ways to interpret this leftward shift in the distribution. First, my local projection estimates are already tightly specified with only 19 years of data. At large horizons, the available sample size drops, and the estimate for the terminal value is thus noisier than the

long run average, which includes 4 earlier episodes. Thus, the shift may be caused by outliers in the data. Second, the negative values in the distribution may be driven by specific parameter combinations that select for unrepresentative firms with small or negative values for d .

To explore this second case further, note first that the impact of ratcheting on dividend payments for an unrestricted parameter space is still positive in the final horizon.¹⁰ Negative payout ratios thus have to be driven by positive effects of dividend smoothing on profits. Figure 12 shows the impact of dividend smoothing on the profit rate 10 years after the downturn event. Overall we see that dividend smoothing has a slightly negative impact on long run profitability. Positive effects on the profit rate are associated either with very high or very low values of d . While the former represent companies that did hardly smooth dividends at all, the latter cases could represent “cash cows” (Madsen 2017), i.e. companies who can afford strong dividend smoothing or even dividend increases in downturns and still maintain long-run profitability due to a quasi-monopolistic market position and relative independence of cash flow from previous investment expenditure. Still, while small or negative d values dominate the negative part of the payout ratio distribution in Figure 11, they can not explain the entirety of negative observations. A larger sample size with a longer time frame would be necessary to assess whether the $\tau_{terminal}$ coefficient for the payout ratio is a statistical outlier or a genuine mean-reversion of the payout ratio.

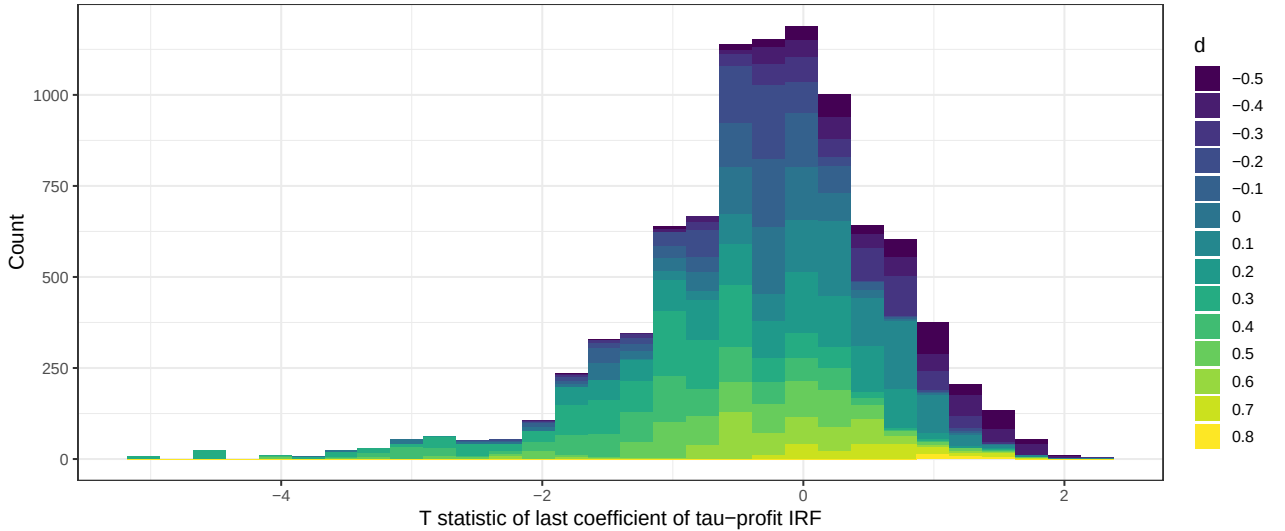


Figure 12: Histogram of the t-statistic of $\tau_{terminal}$ for the profit rate, coloured by ratchet intensity d

In summary, my model suggests that dividend smoothing increases the payout ratio in the short, medium and long run with a potential reduction of the effect after 10 years. The mean of the distribution is still positive after restricting the sample to representative shocks by constraining the s parameter symmetrically around 1. Only a handful of parameter combinations yield statistically significant positive results. If we accept the suggestive evidence that the mean of the t-statistic of $\tau_{terminal}$ for payouts is positive, then a constant stream of profit shocks, of

¹⁰For the evolution of dividend payments, see Figures 27, 28 29 and 30 in the appendix.

which some lead to dividend smoothing, will continuously “ratchet up” the payout ratio, by means of overlapping and accumulating positive long-term effects. This would confirm the ratchet mechanism as introduced by Mertens (2025b) and together with my results on the negative impact on the investment rate, corroborate the crowding out effect of higher dividend payments, as hypothesized in the financialization literature. In the following section, I synthesize my results and discuss limitations of my approach as well as implications for corporate financialization theory.

5. Discussion

Given the results presented above, South Africa may well be considered a financialized economy. Yet, if we recall the dangers of conceptual stretching that I discussed in Section 2.1, it is worth detailing the exact nature of its financialization and the mechanisms involved. In my thesis, I argue that the South African economy is influenced by corporate financialization, characterized by the mechanism of higher dividend payments crowding out long term investment and thereby leading to stagnating growth. I do not argue that this is the only concept of financialization that is applicable to South Africa or that its effects outweigh those of other factors like e.g. the persistent load shedding that is having its toll on the economy. Nevertheless, I hope to have sufficiently shown in Sections 2.2 and 2.3 that corporate financialization, and specifically the dividend payout or “downsize and distribute” channel is of special relevance for the theories of financialization, and that its impact on long-term investment has not yet been systematically studied in South Africa.

In this discussion section, I want to touch upon some of the implications and limitations of my findings and relate them to previous literature. I start with a short discussion of the sectoral shift to finance, as this shift has been of major concern in South Africa’s financialization discourse. Subsequently, I continue with the descriptive and econometric analysis of corporate financialization.

5.1. The Sectoral Shift to Finance

If we take a look at the macroeconomic aggregates, one of the most striking trends that point towards financialization has been the rise of the financial sector,¹¹ which has during the course of 1990 until 2010 essentially replaced the manufacturing sector as South Africa’s biggest industry, as I showed in Figure 1. The Post-Kaleckian financialization literature often analyzes the macroeconomic impact of such sectoral shifts via their effect on functional income distribution measured by the wage share (Hein 2015, pp. 925–926).

Indeed, Gouzoulis et al. (2023, p. 198) find that an increasing share of the financial sector in GDP decreased the wage share from 1971 to 2019. Via the functional income distribution channel, this shift to finance could have a *positive* impact on growth, as authors like Onaran

¹¹I follow both Ashman et al. (2021) and the classification in Stats SA (2026a) and SARB (2025), who define the financial sector broadly as encompassing finance, insurance, real estate and business services.

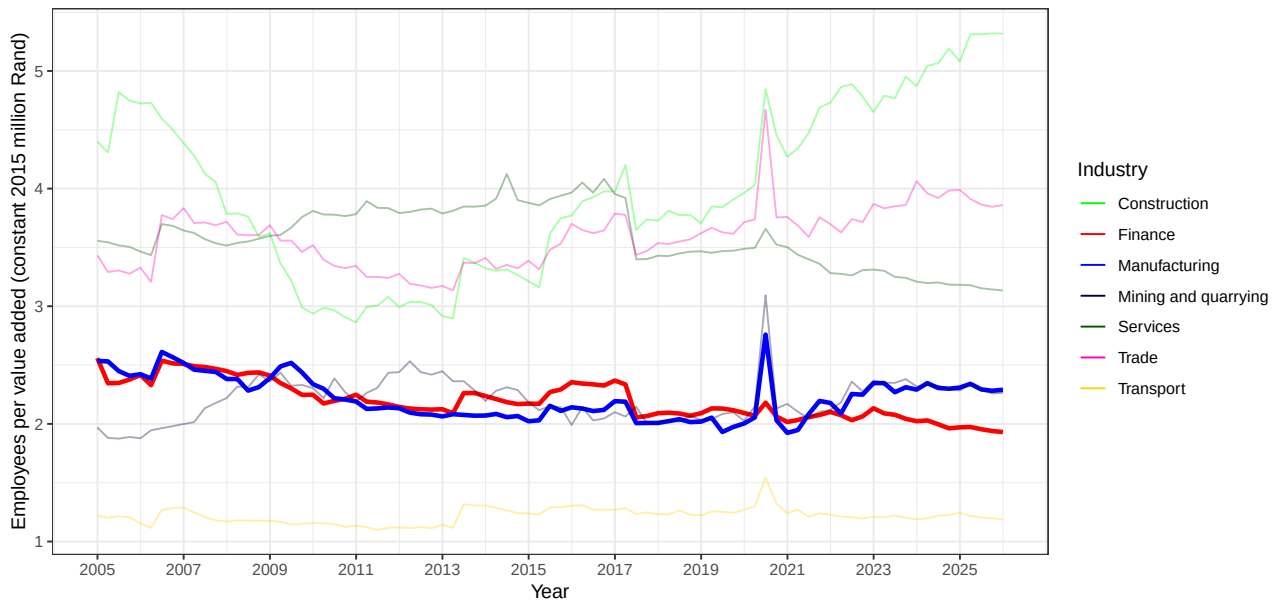


Figure 13: Employment intensity per million rand in value added, data combined from SARB (2025) and Stats SA (2026b)

and Galanis (2012, p. 33) and Ntshwanti (2022) find the the South African economy to be profit-led.¹² If higher growth is induced by a lower wage share, it is questionable if this is always beneficial for the overall society. Independent of growth, distributional outcomes matter for their own sake, especially in a country as unequal as South Africa. However, the distributional impact of changes in the wage share are not straightforward in South Africa. Merrino (2020, p. 18) warns against a naive interpretation of the wage share as an inequality proxy and argues that it would in fact be positively correlated with inequality due to structurally high unemployment. I test this claim in the appendix in Section B and can not find any support for the thesis that wage the share and the Gini index are positively related. In fact, they share a negative, yet statistically insignificant relationship. However, the unemployment rate itself shows a positive correlation with the Gini index that is significant at the 10% level, suggesting that it is a better proxy for inequality than the wage share. This statistical relationship reflects the popular view that unemployment is a major factor in determining social stratification and poverty in South Africa (McKeever 2024, pp. 6–8). The rift between those with and without employment is thus of special importance for understanding the country’s inequality (Francis and Webster 2019, pp. 795–796).

Noticing this importance, Ashman et al. (2021) directly connect the shift from manufacturing to finance with a loss of jobs, stating that “the [financial] sector employed 550,000 people, only 3.5% of South African jobs”, while referencing the international labour organization as a source (Ashman et al. 2021, p. 13). I could not confirm their source despite considerable effort; South Africa seems to be missing in the ILO’s sectoral employment statistics (ILO 2026). According to Stats SA’s quarterly employment statistic, the financial sector has employed 1,565,000 people in 2004, growing to 2,263,000 in 2025 (Stats SA 2026b). Currently it stands

¹²I am aware that the shift to finance has most likely had a negative impact on sustained growth, via other channels than functional income distribution, that I will discuss below.

as South Africa’s second largest employer, after the “services” sector, as can be seen in Figure 31 in the appendix. When looking at sectoral employment intensity per unit of value added, the financial and manufacturing sector co-move at the same level until 2020, when manufacturing’s labour intensity slightly increases in relative terms, as is shown in Figure 13. These figures question the conclusion that the rise of the financial sector has led to a *direct* negative effect on employment via composition effects.

5.2. The Lack of Investment and Increase in Payout ratios

Irrespective of direct effects on employment, the shift in sectoral composition marks a deeper change in the macroeconomic structure of South Africa and its impact on economic growth is mediated by more channels than that of functional income distribution discussed above. The demise of manufacturing that corresponds to one part of the shift to finance reflects the phenomenon of “premature deindustrialization”, by which the industrial base of an emerging economy gets eroded, when it prematurely moves into the tertiary sector (Rodrik 2016). The applicability of the premature deindustrialization framing for South Africa has been shown by Imbs (2013). The country seems to be stuck in a “middle income trap” characterized by low growth and investment rates (Andreoni and Tregenna 2021). Notwithstanding structural constraints, South Africa has an urgent need for higher investment expenditure to break this spell, yet new investment is hindered by corporate financialization, as I argue.

The development economics literature largely agrees that public and private investment into the real economy is a crucial prerequisite for sustained economic growth, especially in emerging economies (Ofosu-Mensah Ababio et al. 2022). Higher investment in South Africa would help to increase economic growth, reduce the extreme unemployment and inequality rates and alleviate poverty (Ashman et al. 2021; Francis and Webster 2019). Still, South Africa is currently not investing enough to meet its development goals (Goko et al. 2026). This is not a recent phenomenon: South Africa’s investment rate as a percentage of GDP has been falling since 2009, starting from an already low level in historical comparison, as is shown in Figure 14. Since 2021, investment rates have been consistently under 15% of GDP.

At the same time, we saw an upward trend in the aggregate dividend payout ratio since 2006 as I showed in Figure 2, which fits into the picture of corporate financialization causing lower investment. However, a look on the sectoral dynamics in Figure 3 complicates that picture: even though most industry groups show rising payout ratio, the manufacturing and transport sectors show a falling one. While in the case of manufacturing, the volatility of the payout ratio prevents a clear judgement on the direction of the trend, the case for the transport sector is more evident, it appears that this sector de-financialized in terms of its dividend payout dynamics. If we consider the investment to dividend ratio per industry group shown in Figure 4 the manufacturing and trade sectors both show a clearly negative trend, indicating that in those industry groups, investment has grown stronger than dividends. Especially for the manufacturing sector, which was the main victim of financialization in the sectoral shift view, this result appears in conflict with the crowding out hypothesis. Note, that what we see here

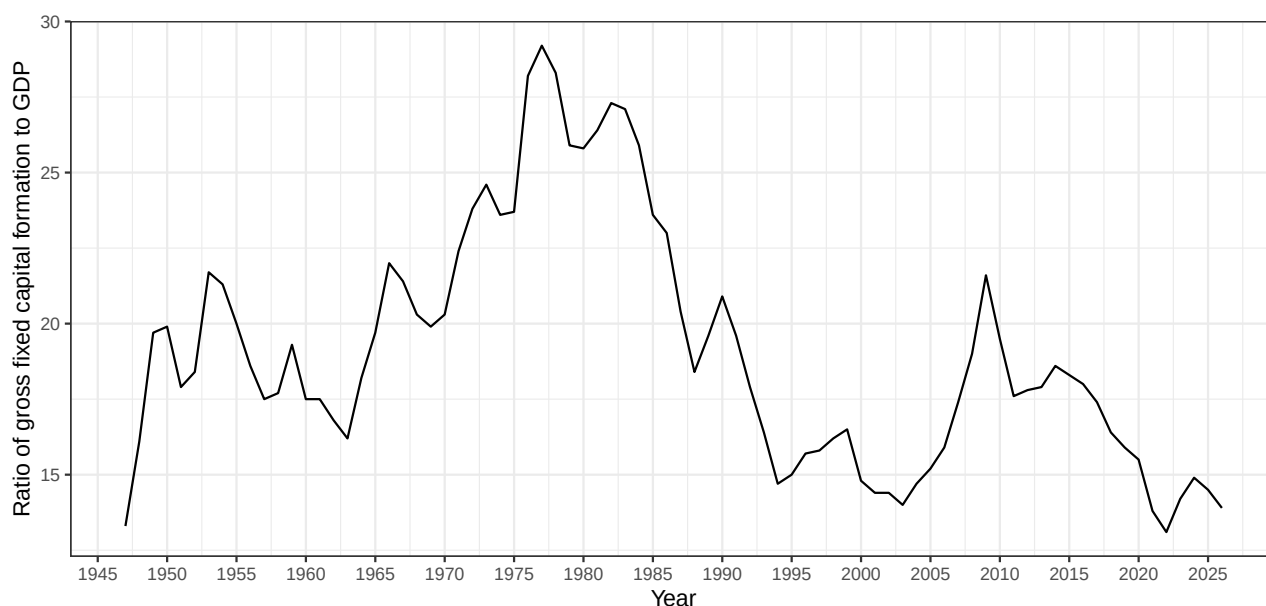


Figure 14: Percentage of gross fixed capital formation in GDP in South Africa, data from SARB (2025)

could be a composition effect driven by large firms and that the average company in a non-mathematical sense could still experience rising payout ratios. But while Mertens (2025b, p. 8) favors this perspective of an unweighted average, the financialization of larger companies has a greater impact on the economy than that of smaller companies and it is unclear, why we should care less about the aggregate evolution of a sector than about the experience of an averagely sized firm. Whatever the best analytical perspective should turn out to be, the decreasing payout and dividend to investment ratio in the manufacturing sector requires attention when applying the corporate financialization concept in South Africa. Future research is needed to explain these sectoral differences in payout ratio development. Firm-level case studies like those of (Andreoni, Robb, et al. 2026) can help in building an understanding by offering detailed descriptions on institutional differences between sectors, that mediate financialization.

5.3. Dividend Smoothing and Corporate Financialization as Short-Termism

If aggregate payout ratios matter, as I argued for in the case of the manufacturing sector, than the aggregate payout ratio on the scale of the whole country is of most importance for overall economic development. For South Africa, I showed in Figure 2 that the aggregate payout ratio is upward trending, and my fixed effects regression results confirm that there is a statistically significant negative relationship between the payout ratio and the investment rate, that is robust to controlling profit and liquidity ratios. Nevertheless, the conceptual critique of Rabinovich and Reddy (2024) reminds us that such relationships are not necessarily causal ones, as reverse causality can generally not be ruled out. In an attempt to get closer to a causal effect of corporate financialization on the investment rate, I adopted the “ratchet event” framing of Mertens (2025b) in a local projections setting. Similarly to Mertens, I can show

that dividend smoothing has adverse effects on long-term investment. My sensitivity analysis allows me to analyze the impact of different categorization of downturn and ratchet events on this effect, which appears to be considerably large. In the following, I will first discuss some of the limitations of my design, before highlighting the relevant insights.

To begin with, let me note the factors that limit the strength of my inference. There is the concern, that even with sector-fixed effects and control variables, there is some self-selection into the respective ratchet and non-ratchet groups that is not the effect of discretionary corporate governance decisions. As I have shown in Figures 8, high values of the c parameter together with low values of the s parameter select for events that represent continuous profitability declines. Firms that face such a persistent crisis may not be able to pay dividends, independently what corporate governance would like to do under normal circumstances. Thus, such effects question the quasi-experiment framing of the dividend payout decision, that Mertens (2025b) argues for. There are some remedies for this problem: the parameter space can be restricted in the analysis to exclude obvious cases of selection bias and more control variables can be added, that try to capture those time-varying differences leading to involuntary self-selection in either group. Those controls may however not be available or sensible to aggregate for a sectoral view. In general, it is possible that aggregation effects may blur underlying firm behavior, which recalls the need to use firm-level data in future studies. More granular data would also enable the estimation of sector-specific effects, which is currently not feasible due to sample size constrictions.

Further, I may misrepresent the parameter space distribution in my inference exercise, as only the s parameter is standardized. It may be possible, that by leaving d and c unrestricted, I am giving more weight to arbitrary end points of the distribution, that are not representative for typical behavior during a downturn. For example, if increasing dividends during downturn events is actually a very uncommon behavior, I would biasing the results by including negative values of d equally in the calculation of the average final effect as positive and higher values of d . However, if we look on Figure 8, we see in the plots including the d parameter, that the minimum episodes filter is filtering out more observations for higher than for lower values of d . This suggests, that very low amounts of dividend smoothing are actually less prevalent than increasing dividends during downturns, which makes my estimations more conservative, since untypically higher values of d , who might be overrepresented due to an unbalanced parameter selection are associated with weaker effects on the investment rate (Figure 7). Additionally, I want to note that the inclusion of the windfall threshold W , that is inspired by the specification of (Mertens 2025b) may actually be questionable. If dividend smoothing is also happening during downturns that are the baseline effect of prior windfall profits and if this ratchets up the payout ratio and crowds out investment, it is unclear why we should omit such episode, since they are part of a firm's usual experience.

Finally, my current specification does not systematically test for parallel trends prior to the treatment period, a crucial assumption in difference in difference designs. Although I am controlling for the pre-treatment investment growth and possible confounders as the severity

of profits and the liquidity ratio, the selection effects demonstrated above indicate that ratchet groups may differ substantially from non-ratchet groups already before the treatment and that the naive view of self-selection into either group as a “quasi-experiment” (Mertens 2025b, p. 13) is not applicable for all parameter combinations. Future specifications of my model have to include this important test and filter out parameter combinations that select for unobserved confounders which are not captured by the controls. Until then, we have to keep in mind that certain parameter combinations with extreme values of d or c may be contaminated with selection effects rather than representing unbiased treatment effects.

After having laid out my limitations, let me now come to the main insight of my ratchet event study. First, note that in my model dividend smoothing reduces average long-term investment. This effect is generally vulnerable to the critique of reverse causality as laid out in Section 2.2. However, the temporal trajectory of the investment distribution makes the reverse causality story less likely: In the short run, the investment response to a ratchet event has a bimodal distribution which is clearly stratified along the intensity of dividend smoothing as I showed in Figure 5. The negative side of the distribution may well reflect a combination of reverse causality and self-selection of events representing “cash cows”¹³ or firms with low investment opportunities into the treatment group. For the positive side of the distribution however, dividend smoothing leads to a higher short-run investment rate. In general, a part of the distribution with higher values of d also feature positive investment rates in the medium and even long run, as can be seen in Figures 21 and 22. Only at the terminal value, 10 years after the shock, is most of this “low smoothing” part of the distribution moving into negative values, as shown in Figures 6 and 9. For medium and high values of d , the positive impact during the earlier years can not be explained by missing investment opportunities and the late shift into negative territory is hard to explain by other factors besides a depletion of internal funds through maintained heightened dividend ratios, which leads to an eventual crowding out of investment.¹⁴

What though explains this increase in short-run investment rates? While the Post-Keynesian literature has early on discussed the short-termist nature of corporate financialization (Dallery 2009, p. 510), empirical investigation into potential short-term benefits with regards to *investment* are, to the best of my knowledge, rare. Previous conceptual and econometric studies have often highlighted that increased dividend payouts lead to increases of the company’s shareholder value, often measured as earnings per share and a deterioration of internal investment

¹³The term “cash cow” stems from a portfolio planning matrix of the Boston Consulting Group that categorized companies according to market share and growth. Cash cows are established companies with high market share and low growth (Madsen 2017). As such, their profits are relatively independent of previous investment decisions and they are likely more free to discretionarily distribute dividends. Leary and Michaely (2011) notes that cash cows smooth dividends more, which I confirm in my model if low d values are interpreted as representing cash cows, that end up with lower than average investment (Figure 9), and higher than average profit rates (Figure 12). Their lower than average payout ratios are probably a results of the above-average profit rates, as long-run dividend rates aren’t tilted in favour of lower d observations (Figure 30)

¹⁴This temporal asymmetry is also more robust to a parallel trends violation: even if unobserved firm characteristics lead to different pre-treatment trends that bias the short-run outcomes, it is not clear which effects besides long run depletion of funds should lead to a sign flip after many years of higher than average investment rates.

(Lazonick and O’Sullivan 2000; Reddy and Rabinovich 2022; Lopes et al. 2026). While the contemporaneous results of my FE model agree with this literature - I also find that a higher payout ratio is associated with lower investment - my local projections give a more nuanced picture: for some firms, a modest amount of dividend smoothing leads to higher short-run investment rates, while for others, who smooth dividends more heavily, the effect is negative. When it comes to the determinants of investment, Kalecki (1954, pp. 96–97) reminds us that, next to the expected profitability of new investment, the availability of internal and external funds is crucial. Internal funds are ultimately key to access the capital market at all, and a lower share of internal financing in new capital expenditure leads to “increasing risk” when borrowing from the market (Kalecki 1954, pp. 91–92). However, in my case I argue that it is the increased access to external funds that can explain heightened short-run investment rates after dividend smoothing.

Mainstream dividend signaling theory argues that dividend smoothing is caused by informational asymmetry: Managers have inside knowledge about the future profitability of the firm that outside investors are lacking (Bhattacharyya 2007, p. 6). In order to prove their profitability to outside investors, strong firms adopt dividend smoothing as a costly signal that can not be sustainably imitated by weaker firms. By smoothing dividends, those firms increase their share price and improve their access to the capital market (Al-Malkawi et al. 2014, p. 160). Consequently, I argue that firms who do modest dividend smoothing - in my model those with medium and high d - have better access to external finance than their non-smoothing counterparts. At the same time, they have retained more internal funds than heavy-smoothing firms who are represented by low or negative d . The combination of better access to external funds and only modest reduction in internal funds can explain their comparatively higher investment rates in the short run.

This positive impact of dividend smoothing is only temporary however. As Mertens (2025b) shows and my model confirms, dividend smoothing persistently increases the payout ratio. The initially better access to external finance of the modestly smoothing ratchet group is overcompensated by a depletion of funds in the long run, due to persistently higher dividend payout ratios. This suggests that, while the capital market values stability of dividend ratios, the higher level of the payout ratio itself does not induce a persistent improvement in access to external funds that is sufficiently high to counterweigh the reduction of internal funds.

Note that in models of dividend smoothing, the mainstream view ignores the possibility of hysteresis in the payout ratio, which they assume to be fixed. The current workhorse model of dividend smoothing in neoclassical economics goes back to Lintner (1956) who developed the model based on qualitative firm surveys. Interestingly, the qualitative results of Lintner’s paper acknowledge that payout ratios out of profits may change and that the “target” rate itself is subject to corporate governance decisions. Lintner (1956, p. 99) writes that “consideration of what dividends should be paid at any given time turned, first and foremost in every case, on the question whether the existing rate of payment should be changed”. Furthermore, he notes that there would be a widespread “belief on the part of many managements [...] that the market puts

a premium on stability or *growth* in rate” Lintner (1956, 99, my emphasis). In the formulation of his mathematical model however, Lintner introduces a “fixed target payout ratio r_i applied to current profit” (Lintner 1956, p. 107). Subsequent work that adapted the Lintner model did not fundamentally change this. While the dividend rate, that firms adjust towards in a smoothing manner, is endogenized, the target itself is usually determined by a fixed ratio of current earnings, as in Al-Malkawi et al. (2014, p. 160) and Ha et al. (2017, p. 70). Neither of those authors discuss that the payout ratio itself may become upward trending. Fairchild (2010) may be an exception to this literature, in acknowledging that “investors are behaviorally conditioned to believe that dividend cuts are bad news” which may lead to underinvestment (Fairchild 2010, p. 394). However, he sees the solution to this problem only in a reduction of informational asymmetry through a better communication of dividend payout decisions by management, thereby neglecting structural shareholder power that positively influences the trend of the payout ratio. Overall, the mainstream models building on Lintner (1956) seem to ignore that firms will not equally smooth positive and negative shocks, as a fall in dividends is more penalized by the capital market than a rise in dividends during windfalls periods. It is not only stability as such that counts, because upward instability is not punished. Instead, shareholder power systematically “ratchets up” the dividend payout ratio and crowds out investment in the long run.

Summarizing the foregoing discussion, I want to highlight the main insights of my work. First, the sectoral shift from manufacturing to finance, that has been an important stylized fact in the South African financialization debate (Burger 2015; Mohamed 2016; Isaacs and Kaltenbrunner 2018; Andreoni, Robb, et al. 2021; Ashman et al. 2021; Aboobaker 2022) has ambiguous consequences on growth, employment and distribution, through the classical Kaleckian analysis of compositional and distributional channels, as South Africa is a profit-led economy with structurally high unemployment and employment intensities between the financial and the manufacturing sector are comparable. However, notwithstanding distributional channels, the demise of manufacturing clearly reflects a premature deindustrialization of the South African economy that is mirrored in low growth and investment rates. Corporate financialization theory can explain structural obstacles to higher investment, that arise from a depletion of corporate’s internal funds through higher dividend payout ratios. I demonstrated that these higher payout ratios are not only contemporaneously related to lower investment, but can ultimately - in the form of ratchet events - predict lower investment and a persistence of higher payout ratios in the long run. In the short run however, moderate amounts of dividend smoothing likely benefits investment via better access to capital markets. This nonlinear temporal trajectory makes my results more robust to the critique of reverse causality.

6. Conclusion

Financialization is a relevant concept to understand the political-economic structures shaping South Africa’s development. The sectoral shift from manufacturing to finance, accompanies by

low growth, investment and employment as well as extreme inequality suggest the application of financialization as an analytical lens. Yet, the literature on financialization is broad, encompassing multiple social sciences and scopes of inquiry. Thus the concept's boundaries are not always clearly defined.

In the present work, I make use of a sub-theory of financialization studies, namely corporate financialization, to analyze how a rising dividend payout ratio is crowding out investment in South Africa. I use a newly harmonized sectoral dataset and employ both descriptive and econometric methods. In a fixed effects regression, I show that the dividend payout ratio and the investment rate are negatively correlated. Although the aggregate payout ratio has trended upwards, different sector groups exhibit diverging characteristics. Especially the volatile and downward trending payout ratio and the declining dividend to investment ratio for the manufacturing sector give a puzzle for future research, considering that - measured by those metrics - the sector de-financializes in an otherwise increasingly financialized economy.

In order to get closer to a causal interpretation of corporate financialization, I subsequently employ a local projections design based on “ratchet events”, where I analyze the differential investment and payout ratio response to negative profit shocks between ratchet and non-ratchet groups. To test for the influence of event classification on the results, I run a sensitivity analysis over a wide grid of parameter values. I show that dividend smoothing decreases long-run capital expenditure, although in the short run beneficial effects are observed for some parameter combinations. Furthermore, it persistently elevates the payout ratio, indicating hysteresis effects that lead to a long-lasting reduction of firm's internal funds.

My results corroborate both previous theoretical work on corporate financialization and the empirical re-framing of increasing payout ratios as ratchet behavior introduced by Mertens (2025b). Further, I could show that the nonlinear temporal trajectory of the crowding out mechanism alleviates concerns of reverse causality, that usually apply to studies of corporate financialization. My finding suggests that corporate financialization is fundamentally a problem of short-termism, as recognized by early work on the subject and re-emphasized by Rabinovich and Reddy (2024, pp. 20–22). The analysis of different reaction paths to financialization shocks with respect to the sector and time dimensions give productive avenues for future research. A better understanding of the mechanisms driving corporate financialization could help to inform policy efforts in tackling its detrimental effects and promoting a more equitable economic development in South Africa.

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I hereby declare

- that I have written the submitted academic work entirely by myself without anyone else's assistance, and that I have not used any sources or aids other than those stated. Wherever I have drawn on literature or other sources, either in direct quotes, or in paraphrasing such material, I have given, in accordance with academic standards, the reference to the original author or authors and to the source where it appeared.
- that if I have used AI-based tools that were classified as reportable at the time of submission of my paper, I have fully listed them in the "AI directory" section with the product name, the source (e.g., URLs), the purpose of use, details of the parts of the academic work affected, as well as the inputs/prompts. In addition, I have indicated the use of AI in the respective sections in the main text.

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- that the use of quotations, or of close paraphrasing, from books, magazines, newspapers, the internet or other sources, which are not marked as such, or the use of AI tools without detailed documentation, will be considered as an attempt at misconduct, and that the academic work will be graded with a fail. I have notified the examiners and the board of examiners in the case that I have submitted the academic work, either in whole or in part, for other examination purposes.
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Wien, the 27.05.2026, Florian Wirth

AI Directory

No.	AI-tool	Purpose of use	Affected sections	Remarks, procedures, prompts
1.	Claude Sonnet 4.6 (url: https://claude.ai)	Optimization of sensitivity analysis algorithm.	No section directly affected, all text was written by me. Instead the AI use affects some parts of the <i>sensitivity_analysis_df_creation.R</i> script in the replication package.	The AI-tool was used to adopt multithreading support for my R script for the creation of the sensitivity analysis dataframe. The prompt given on 13.05.2026 was: "Help me to exploit parallelism to make this script run faster". The output was then thoroughly checked and further modified by me.



Plagiarism declaration

The following statutory declaration is a part of the thesis, and should be included in the bound work.

I, the undersigned,

Last name: **Florian**

First name: **Wirth**

Cohort: **Cohort 2026 (2024-2026 or 2025-2026)**

Major: **Major B (Paris - one year programme)**

Title of Master's thesis: **Is Ratchet Behavior Crowding Out Investment? New Results for Corporate Financialization in South Africa**

Name of supervisor for Paris: **Paul Hadji-Lazaro**

Name of the other supervisor (if any): **Eckhard Hein**

Name of a 3rd supervisor (if any):

Hereby formally declare that I have written the submitted Master's thesis entirely by myself without anyone else's assistance. Where I have drawn on literature or other sources, either in direct quotes, or in paraphrasing such material, I have referenced the original author or authors and the source in which it appeared.

I am aware that the use of quotations, or of close paraphrasing, from books; magazines, newspapers, the internet or other sources, which are not marked as such, will be considered as an attempt at deception, and that the thesis will be graded as a fail. In the event that I have submitted the dissertation – either in whole or in part- for examination within the framework of another examination, I have informed the examiners and the board of examiners of this fact.

I authorize the publication of my master's thesis on the EPOG websites: **Yes, I authorize the publication of my master's thesis**

Signed on 31-05-2026

Place: **Wien**

Date:

Signature:

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Appendices

A. Data Tidying Procedures

This section describes the data cleaning process in the scripts *collect_AFS.ipynb* and *tidy_AFS.R*. All data and files are available in the replication package (Wirth 2026). In the *collect_AFS.ipynb* script, raw data is taken in the form of xlsx files from the “disaggregated industry estimates” of the annual financial statistics Stats SA (2026a). First I collect year, sic-code, corresponding industry, variable name and value. Variable names are standardized manually if it is clear that they relate to the same concept. Since 2007, capital expenditure is disaggregated in the second sheet named “carrying value schedule”. My main capital expenditure variable is the total of the “additions” column in this second sheet. A check with the overlapping years confirms, that this is the same variable that is also recorded in the “capital expenditure on new assets” column in the first sheet. The resulting observations are saved to the *afs_raw.csv* dataframe in tidy format.

In the *tidy_AFS.R* script, I check for each year, if all SIC codes follow a unique hierarchical grouping. For the years 2006 and 2007, I found 90 cases, where a lower digit code (e.g. SIC 30 - manufacturing of food beverages and tobacco products) was simultaneously recorded with a higher digit code (e.g. SIC 305 manufacturing of beverages). I manually checked each of those cases and flagged parent items whose turnover was less than the sum of turnover of their children as well as child items whose sum of turnover was less than their parent’s turnover item for deletion.

Subsequently, I developed a common classification scheme to find the biggest number of sectors that is contained in all years. The following SIC codes had to be removed altogether from the sample:

- SIC 305 (beverages), they can not be coerced into one classification, since AFS 2008 (and potentially earlier years) exclude alcoholic drinks and AFS 2012 lumps together softdrinks & water with alcoholic drinks
- SIC 306 (tobacco) since there is no entry in 2008
- SIC 341 (glass products) since there is no entry in year 2008

Other sectors were manually added starting at the broadest aggregation that is still available in each year. I end up with a common classification scheme of 54 unique sectors. All raw observations are then aggregated according to this common classification scheme, yielding the dataframe *afs_harmonized.csv*.

B. Correlation Between Wageshare and Inequality

Merrino (2020, p. 18) argues that the wage share co-moves with inequality. It should be noted that, besides restricting herself to a simple visual comparison of the wageshare with different

distribution measures, Merrino (2020) bases the computation of those latter distribution measures on the “real earnings” variable in the PALMSv3.3 dataset. This variable was removed from newer versions of the PALMS dataset (Kerr et al. 2025), because of low quality imputations by Stats SA, that can not be differentiated from unimputed entries as documented in Kerr (2025). For justifying this decision, Kerr et al. (2025, p. 2) remarks that “QLFS earnings data up until 2019 that is currently publicly available is so bad that it should not be used by researchers at all and hence I have taken the decision to drop it from PALMS”. In contrast, my analysis below uses the annual post-tax Gini coefficient provided by WID (2025), which I hope to be of better quality.¹⁵

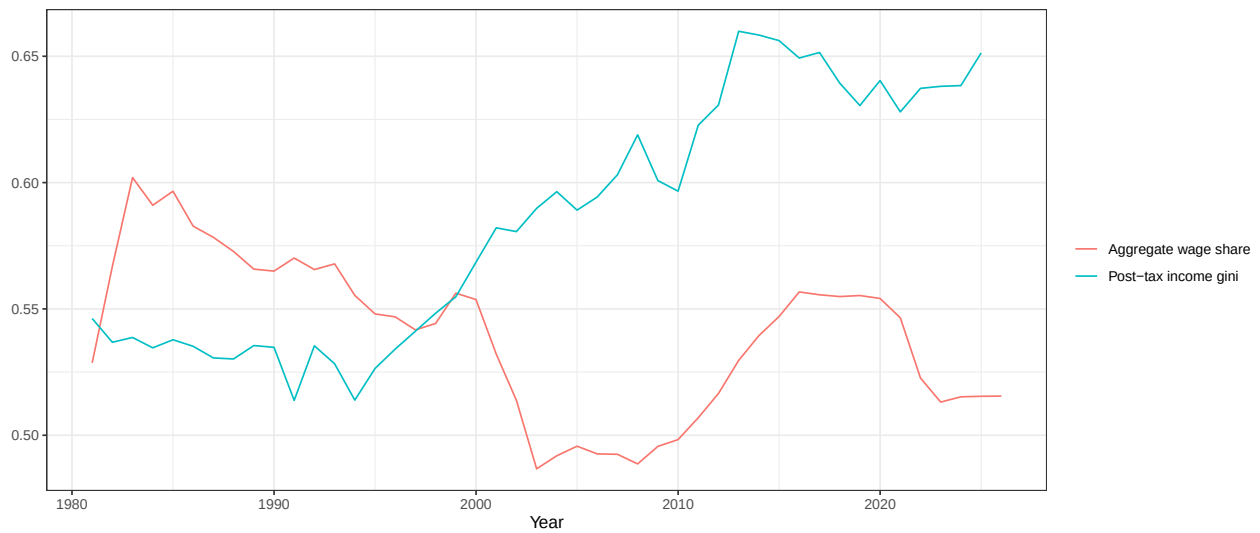


Figure 15: Post-tax income Gini and aggregate wageshare in South Africa since 1980, data from WID (2025) and SARB (2025)



Figure 16: Cross-correlation function of post-tax income Gini and aggregate wageshare in South Africa, data from WID (2025) and SARB (2025)

¹⁵While pre-tax data would be a cleaner measure to compare with the wage share, the pre-tax gini for South Africa as provided by WID (2025) is interpolated from only a few data points

Figure 15 does not show a clear negative correlation between the wageshare and Gini index. I test the correlation formally with a simple OLS model. The procedure can be found in the script *wageshare_analysis.R* in the replication package (Wirth 2026). As both variables are time series data, I test for stationarity first. According to ADF and KPSS tests, both variables have a unit root. Therefore, I differentiate both variables to make them stationary. The Johansen cointegration test shows that the variables are not cointegrated. Using an OLS regression in first differences of the form $\Delta gini_t = \beta \Delta wage_share_t + u_t$, I find a negative ($\beta = -0.087$) yet statistically insignificant ($p = 0.39$) relationship. Figure 16 shows that there is also no statistically significant cross-correlation present between both variables up to a length of ± 5 lags.

Next, I test the relationship between the Gini index and the unemployment rate. After rejecting cointegration tests, and confirming that the unemployment rate is $I(1)$, I run an OLS in first differences of the form $\Delta gini_t = \beta \Delta unemployment_rate_t + u_t$. I find a positive ($\beta = 0.08$) relationship that is statistically significant at the 10% level ($p = 0.079$). This suggests that for post 1980's South Africa, the unemployment rate is a better proxy for inequality than the aggregate wage share.

C. Additional Figures

C.1. Classification and Descriptives

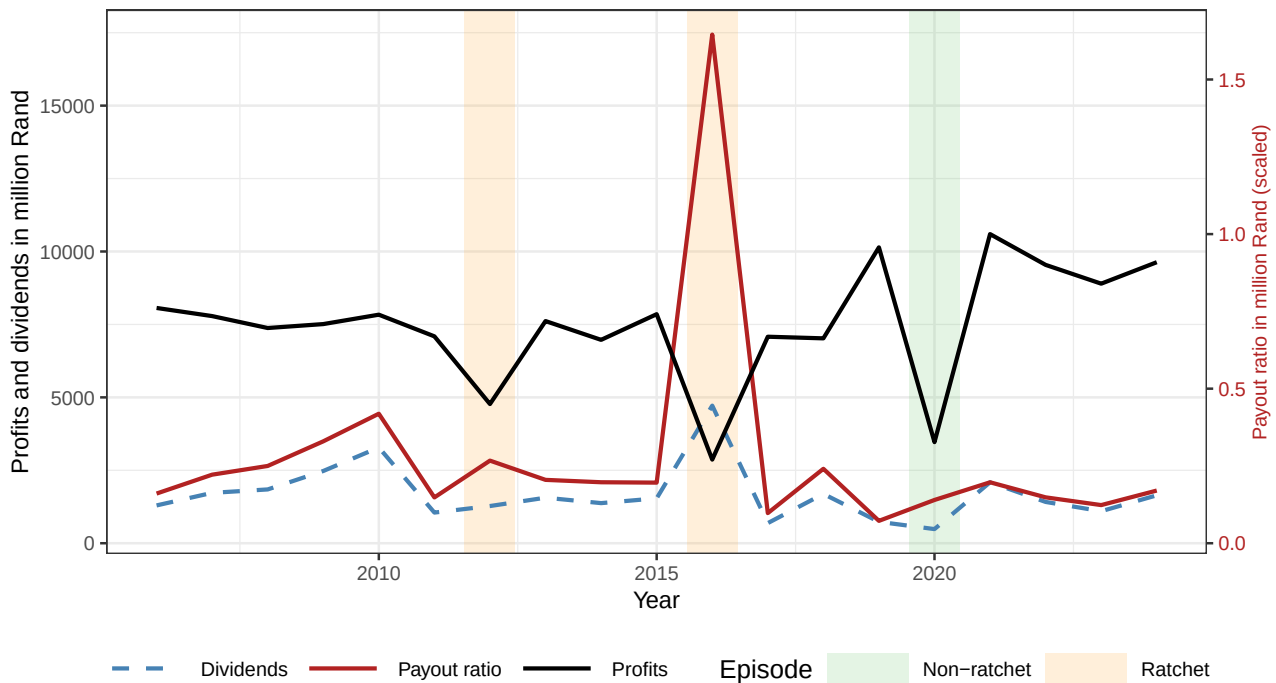


Figure 17: Example classification for the plastic sector with $s = c = d = 0.3$, $w = 1.5$

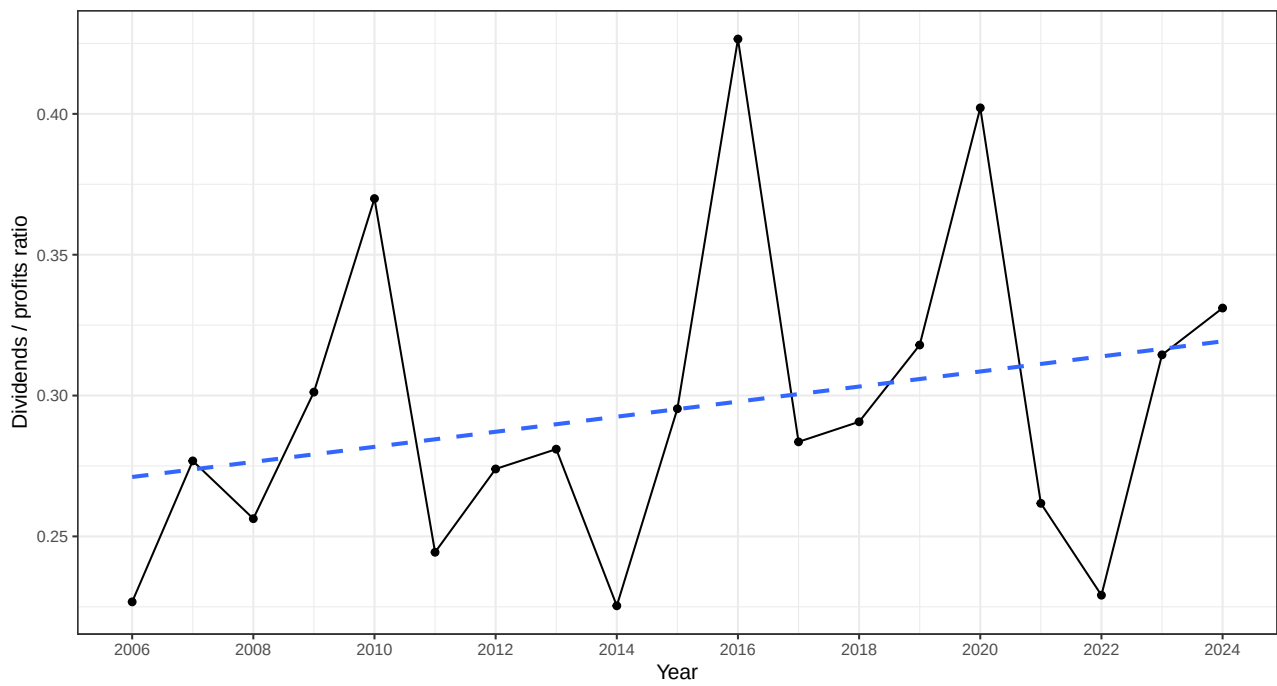


Figure 18: Aggregate payout ratio, computed as sum of dividends over sum of profits, electricity sector excluded, data taken from Stats SA (2026a)

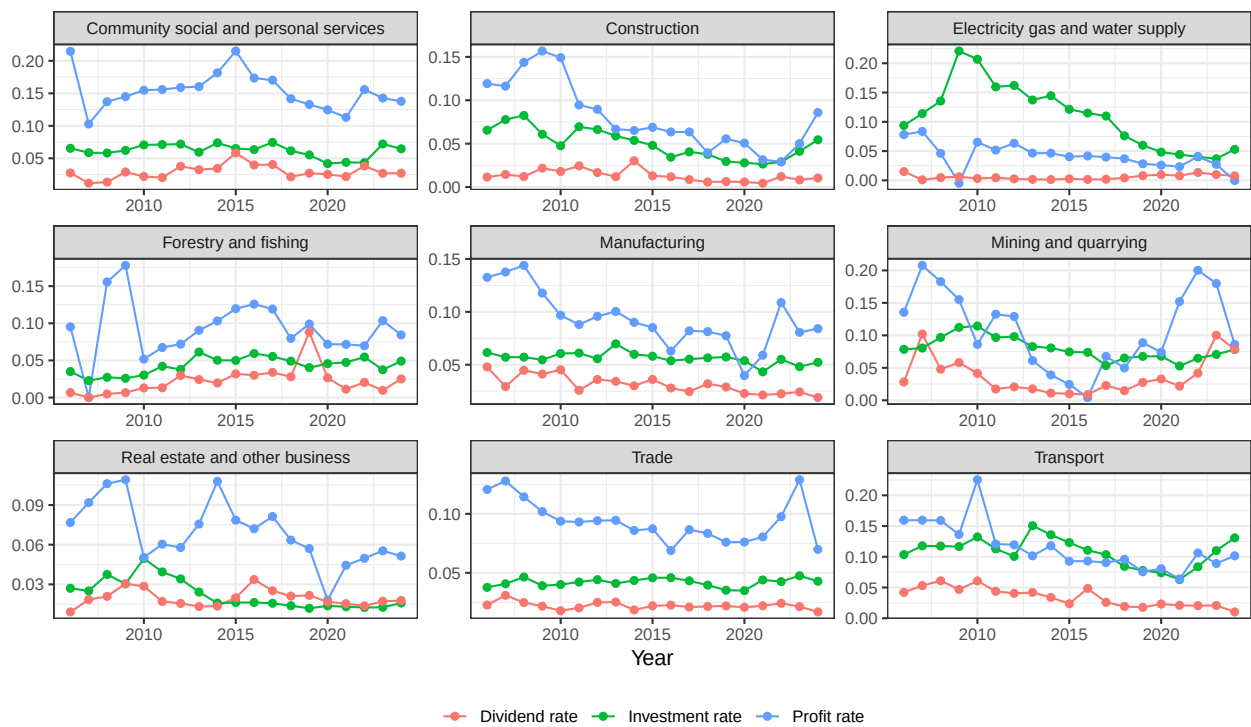


Figure 19: Profit, dividend and investment rate normalized by total assets, data taken from Stats SA (2026a)

C.2. Sensitivity Analysis: Investment Response

Figures 20, 21 and 22 presents the short, medium and long run investment response with a precision weighted mean as calculated in equation 11. Note that while the bimodal distribution that we got in Figure 5 in the main text disappears due to the precision weighting, the general tendency of the distribution to shift to negative values remains.

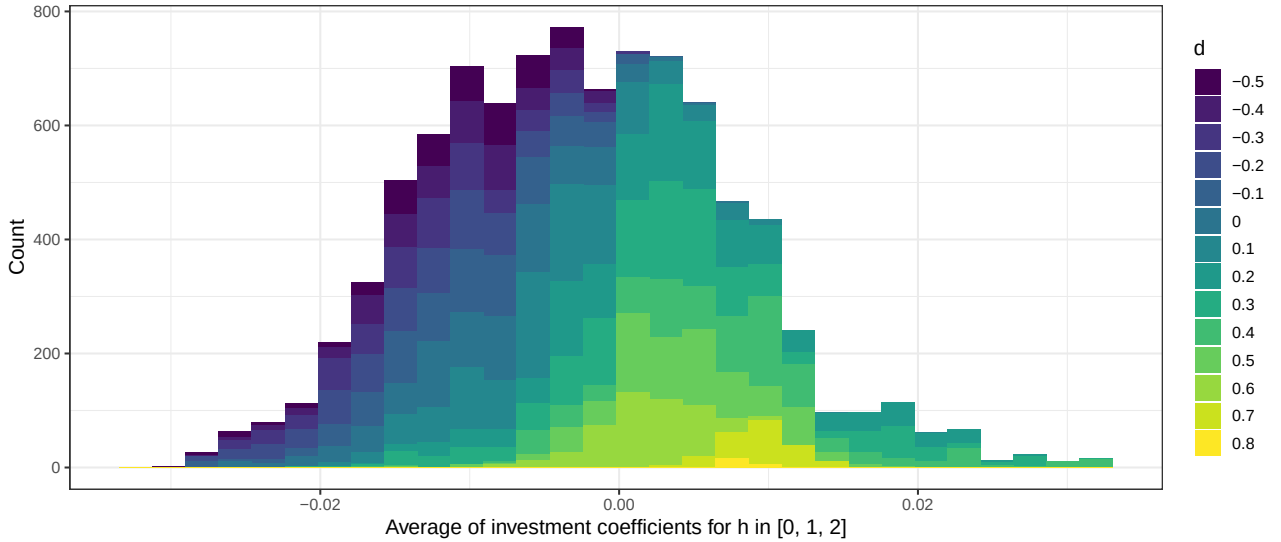


Figure 20: Histogram of the precision-weighted short-run effect on the investment rate, coloured by ratchet intensity d

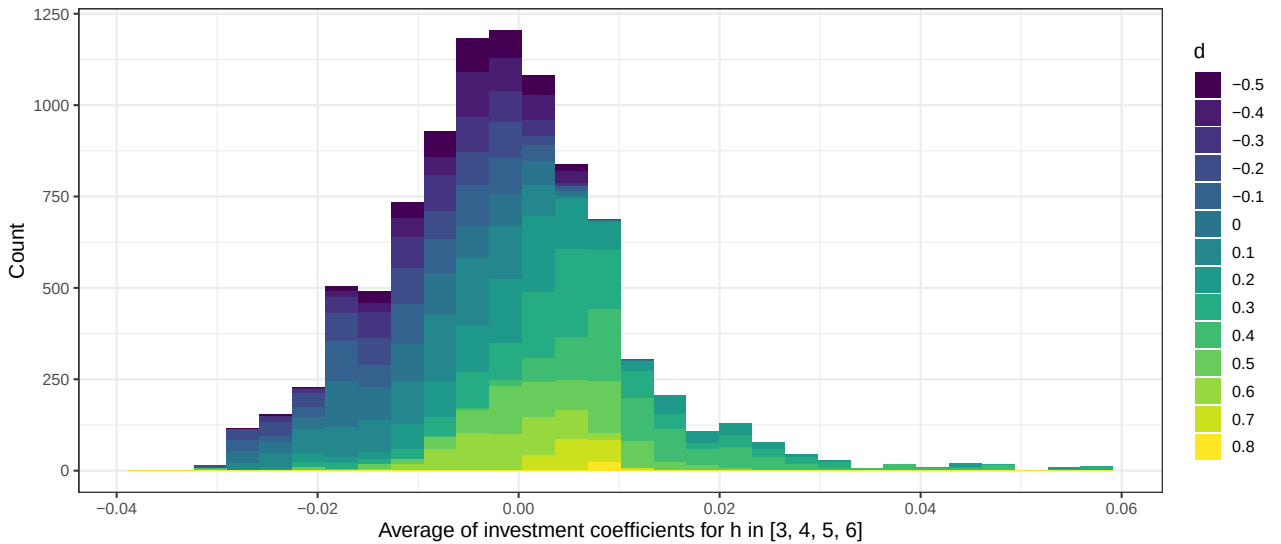


Figure 21: Histogram of the precision-weighted medium-run effect on the investment rate, coloured by ratchet intensity d

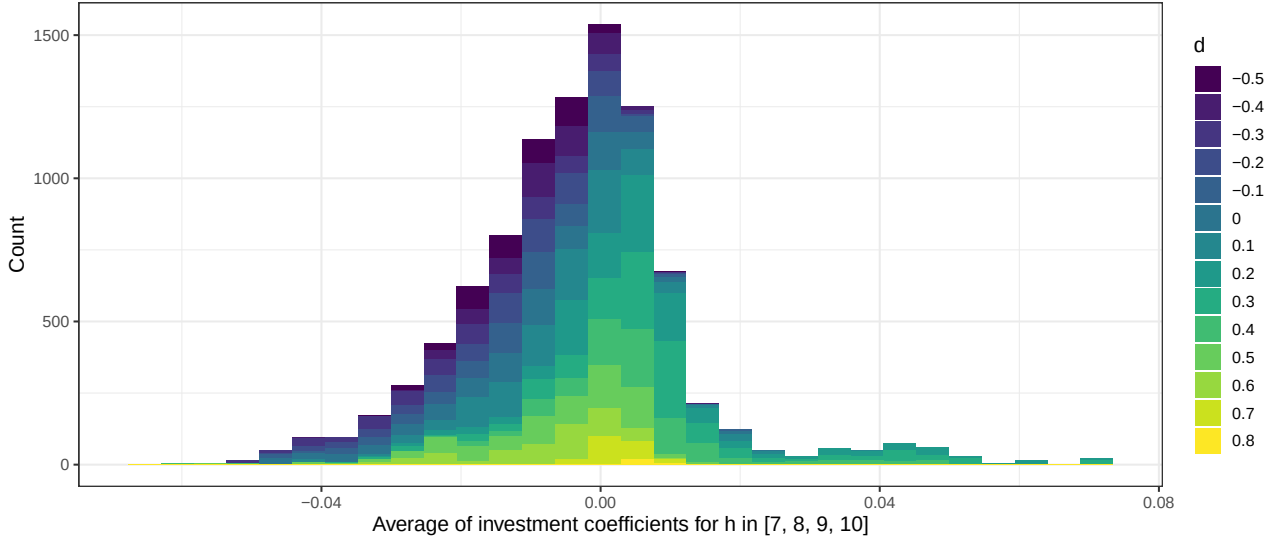


Figure 22: Histogram of the precision-weighted long-run effect on the investment rate, coloured by ratchet intensity d

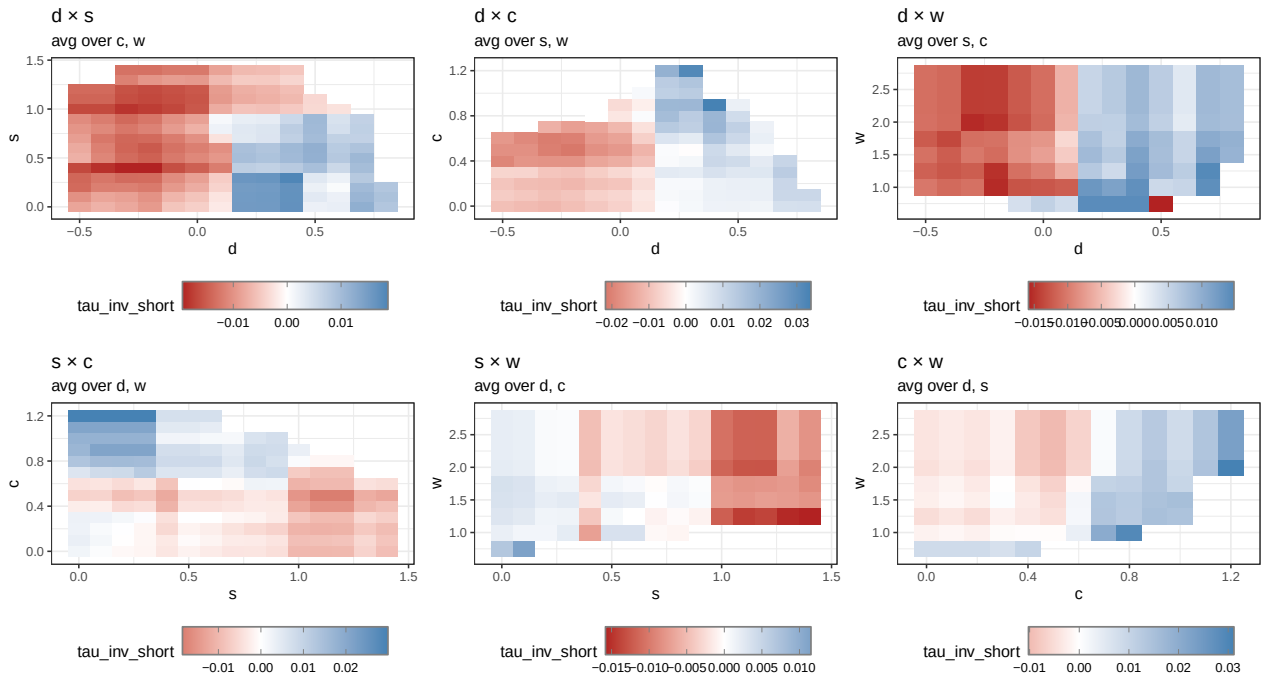


Figure 23: Pairwise heatmaps for the short run effect on the investment rate

C.3. Sensitivity Analysis: Payout Response

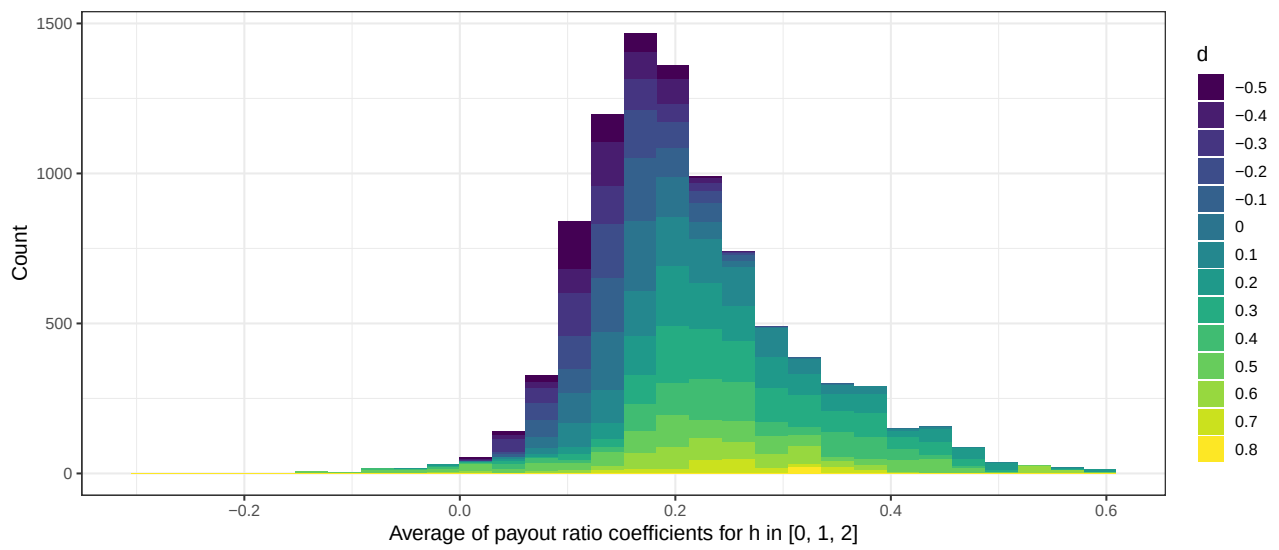


Figure 24: Histogram of the precision-weighted short-run effect on the payout ratio, coloured by ratchet intensity d

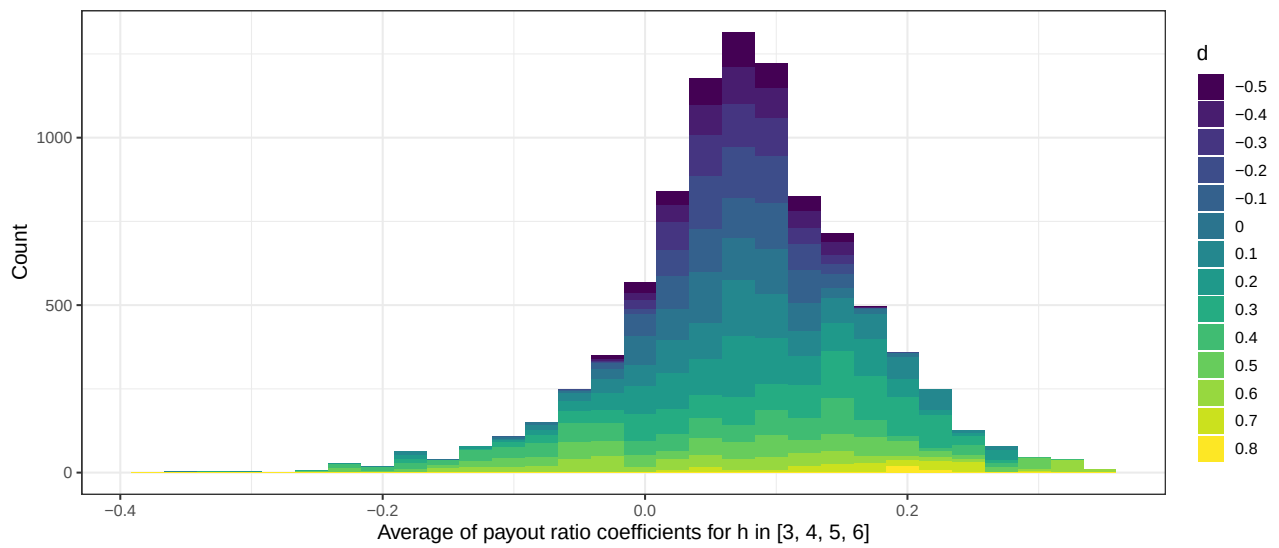


Figure 25: Histogram of the precision-weighted medium-run effect on the payout ratio, coloured by ratchet intensity d

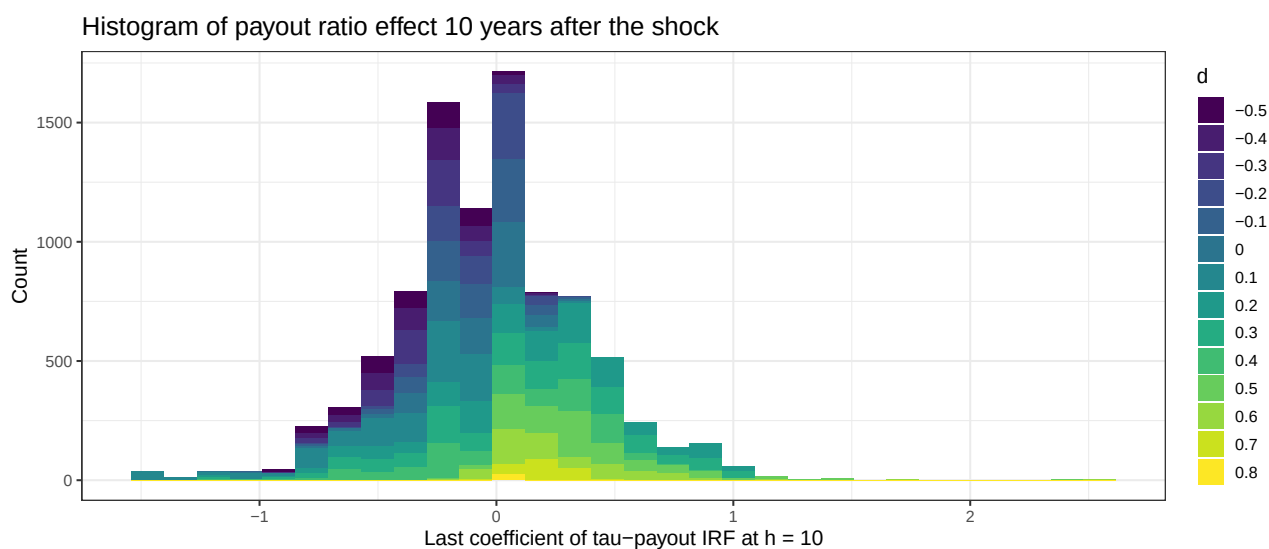


Figure 26: Histogram of the effect on the payout ratio 10 years after the downturn, coloured by ratchet intensity d

C.4. Sensitivity Analysis: Dividend Response

I measure the dividend rate as $dividend_rate_{i,t} = \frac{fracdividends_paid_{i,t}}{total_assets_{i,t}}$

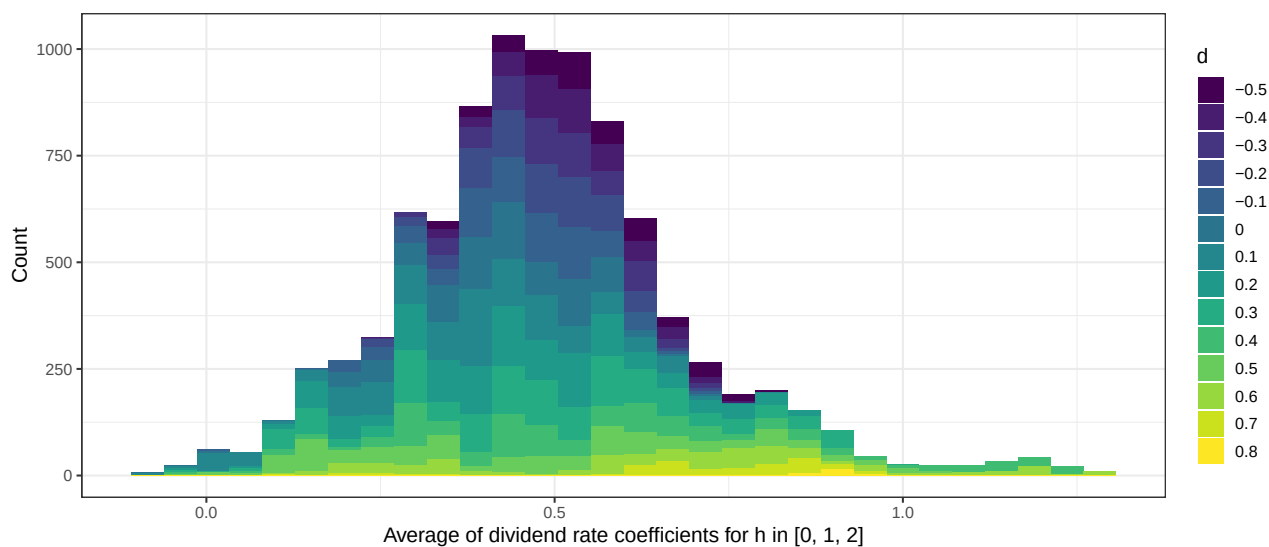


Figure 27: Histogram of the short-run effect on the dividend rate, coloured by ratchet intensity d

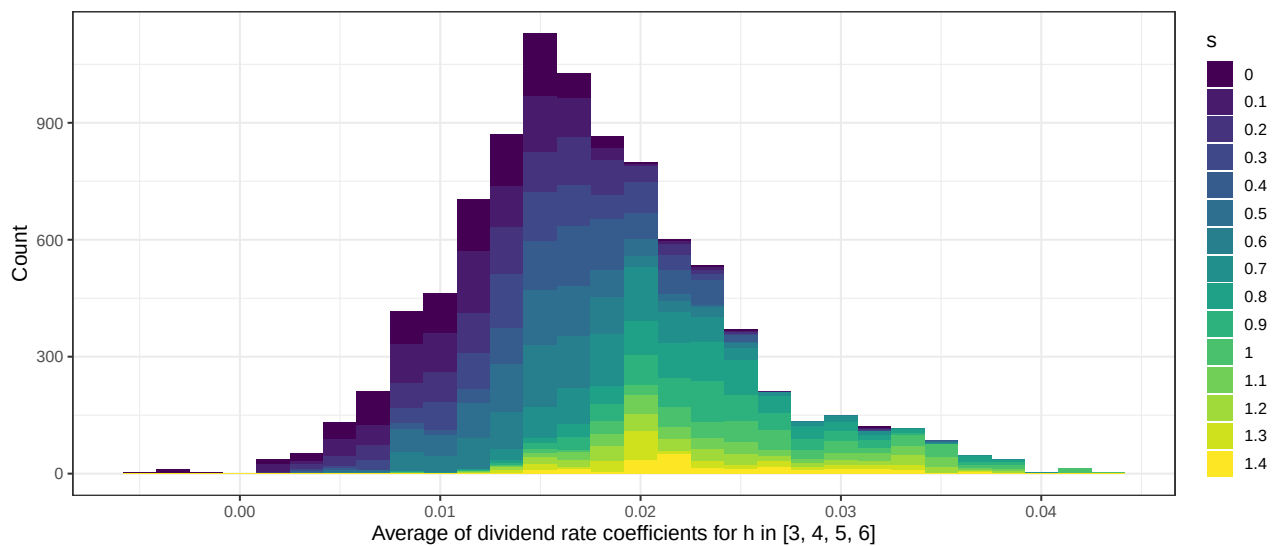


Figure 28: Histogram of the medium-run effect on the dividend rate, coloured by ratchet intensity d

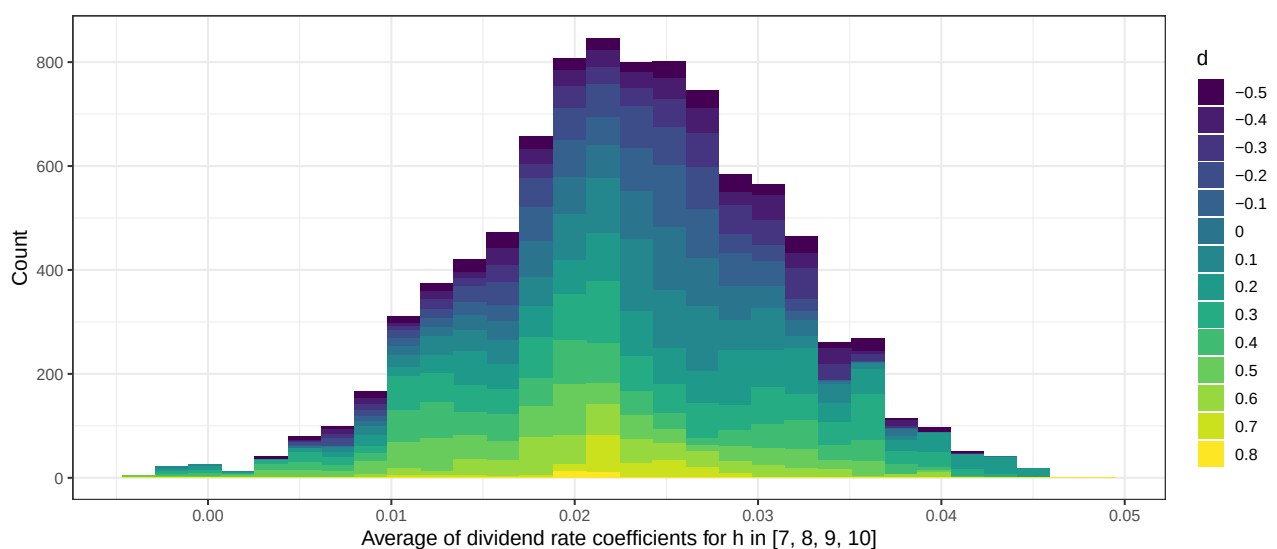


Figure 29: Histogram of the long-run effect on the dividend rate , coloured by ratchet intensity d

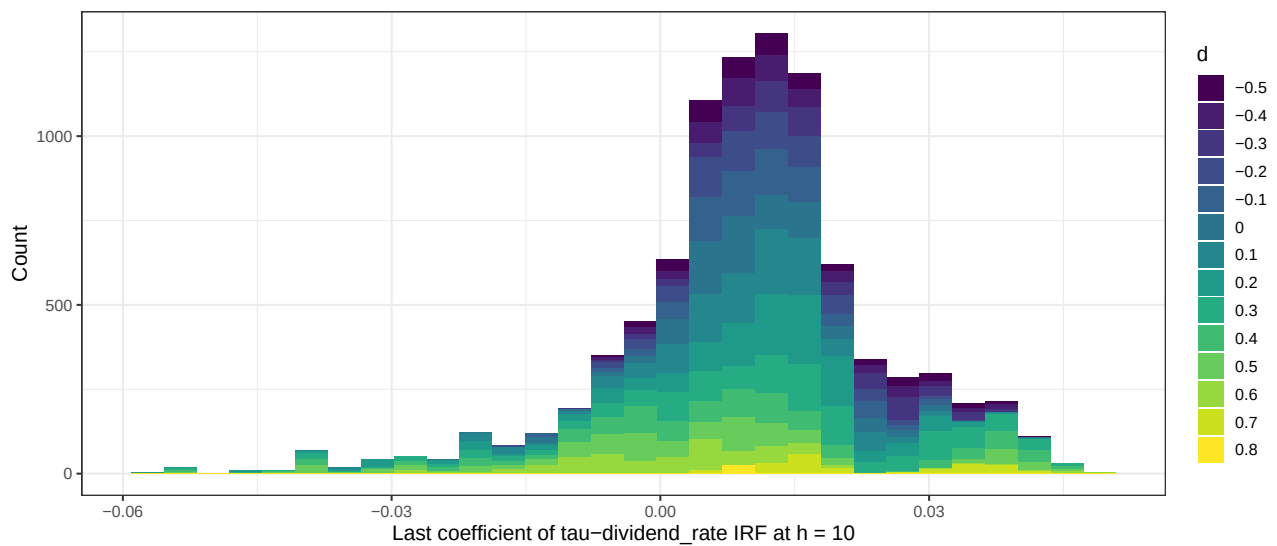


Figure 30: Histogram of the effect on the dividend rate 10 years after the downturn, coloured by ratchet intensity d

C.5. Employment Statistics

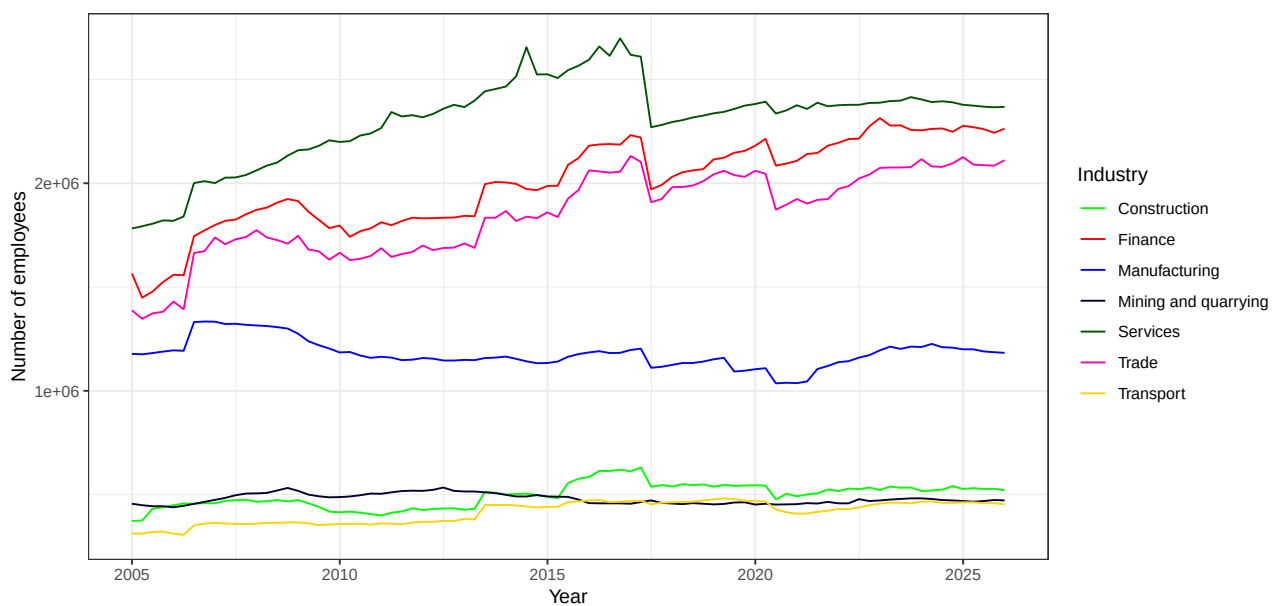


Figure 31: Employees per industry, data from Stats SA (2026b)