DOI: 10.1111/acfi.13272

RESEARCH ARTICLE

ACCOUNTING & FINANCE afaanz

The impact of organisation capital on inventory efficiency

Tongxia Li[1] | **Chun Lu**[1] | **Lei Xu**[2]

[1]Graduate School of Business Administration, Hitotsubashi University, Tokyo, Japan

[2]UniSA Business, University of South Australia, Adelaide, South Australia, Australia

Correspondence
Lei Xu, UniSA Business, University of South Australia, Adelaide, SA, Australia.
Email: lei.xu@unisa.edu.au

Abstract

This study examines the influence of organisation capital on inventory efficiency. While the importance of human capital in enhancing operational efficiency is widely recognised, the effect of organisation capital has not been well documented in existing research. Our findings reveal a positive effect of organisation capital on inventory efficiency. We also identify underlying mechanisms that contribute to the positive impact of organisation capital on inventory efficiency. These include increased innovation, improved employee orientation and reduced financial constraints. Furthermore, our analysis shows that organisation capital strengthens the positive relation between inventory efficiency and firm performance.

KEYWORDS

employee orientation, financial constraint, innovation, inventory efficiency, organisation capital

JEL CLASSIFICATION

D23, G31, L25

1 | INTRODUCTION

For many firms, investment in inventory is a significant financial commitment and its efficient management can provide firms with a competitive advantage (Axsäter, 2006). Inventory efficiency is associated with leanness, or the minimisation of waste such as occurs with the accumulation of excess inventories (Eroglu & Hofer, 2011). Previous research has concentrated on identifying factors that drive inventory efficiency (e.g., Ak & Patatoukas, 2016; Blinder & Maccini, 1991; Feng et al., 2015; Lieberman et al., 1999; Mishra et al., 2013; Rotemberg & Saloner, 1989). Our study adds to this line of research by exploring whether organisation capital is another factor that influences inventory efficiency.

Organisation capital, as described by Lev et al. (2009), is the unique combination of a firm's structural and organisational designs, business processes and accumulated capabilities and knowledge that foster sustainable competitive advantages. It encompasses intangible assets that embody the talents and expertise of a firm's employees (Eisfeldt & Papanikolaou, 2013, 2014). Organisation capital stands as a significant component of intangible capital, estimated at 30% for US firms (Corrado et al., 2009). Despite the importance of organisation capital, and prior studies showing it can enhance management decisions and firm outcomes (e.g., Attig & Cleary, 2014; Danielova et al., 2023; Eisfeldt & Papanikolaou, 2013; Francis et al., 2021; Leung et al., 2018; Li et al., 2018), its relationship with inventory efficiency is relatively unexplored.

Intangible capital has been categorised into four groups: discovery and learning, customer-related, human resource and organisation capital (Lev et al., 2009). Of the intangible capital types, prior research has mostly focused on the relationship between human resource capital and inventory efficiency (Barcos et al., 2013; Hassan & Karim, 2022; Lieberman et al., 1999; Liu & Kim, 2020; Schonberger, 2007). Human resource capital embodies management style, which contrasts with organisation capital that reflects management practices, culture and capability (Attig & Cleary, 2014; Lev et al., 2009). In addition, organisation capital differs from human resources capital in that it is firm-specific and cannot be easily imitated by competitors (Prescott & Visscher, 1980). Therefore, organisation capital is likely to complement human resource capital as a factor that drives inventory efficiency.

We examine contrasting hypotheses regarding the relationship between organisation capital and inventory efficiency. On one hand, a positive relationship is hypothesised. Organisation capital has a demonstrated ability to enhance innovation (Francis et al., 2021) and employee training and productivity, which are both factors associated with improved inventory efficiency (Barcos et al., 2013; Lee et al., 2015; Lev et al., 2009; Lieberman et al., 1999; Liu & Kim, 2020). Moreover, since inventory investments often require external financing, which is impacted by a firm's financial conditions (Hwang et al., 2021), a decrease in borrowing costs resulting from investment in organisation capital (Danielova et al., 2023) can potentially increase inventory efficiency.

On the other hand, the alternative hypothesis suggests a negative relationship between organisation capital and inventory efficiency. The accumulation of organisation capital may increase external employment opportunities for managers (Lustig et al., 2011), potentially leading to higher voluntary employee turnover. Additionally, firms with more organisation capital often rely heavily on key talents for superior performance (Eisfeldt & Papanikolaou, 2013). Voluntary turnover and the loss of crucial employees can deplete organisation capital, negatively impacting organisational performance (Dess & Shaw, 2001; Francis et al., 2021), and consequently decrease inventory efficiency.

We test the contrasting hypotheses using a sample of US manufacturing firms spanning the period from 1970 to 2021. To estimate the accumulation of firms' organisation capital, we follow prior studies that implement a perpetual inventory approach based on historical selling, general and administrative (SG&A) expenses (Eisfeldt & Papanikolaou, 2013; Peters & Taylor, 2017). This approach relies on the intuition that part of SG&A expenses represents an investment in organisation capital. Our measurement of inventory efficiency is the ratio of total sales to inventory, which aligns with recent operational management studies (Chen et al., 2005; Mishra et al., 2013; Modi & Mishra, 2011).

We find a positive association between organisation capital and inventory efficiency. This finding remains robust when employing alternative measures of organisation capital and inventory efficiency and when using different depreciation and growth rates in the estimation of organisation capital. Further analysis indicates that the positive association between organisation capital and inventory efficiency is stronger for firms in industries that have complex innovation processes; for firms with higher employee intensity, mobility and unionisation; and for financially constrained firms.

We also recognise the potential for endogeneity problems that may bias our main findings. To address these concerns, we employ several techniques to ensure the validity of our main results. First, we include a variety of firm characteristics in our baseline regression to address potential problems with omitted variables. Second, we conduct a high-dimensional fixed effects regression analysis, which controls for unobserved, time-invariant firm-specific factors. Third, we use a first-difference regression approach to eliminate any potential bias caused by any time-invariant factors that may affect both variables. Fourth, we employ a matching method to control for selection bias. For all of these model specifications, a positive relationship is found between organisation capital and inventory efficiency.

We also conduct analyses using a quasi-natural experiment. This approach exploits the staggered recognition of the Inevitable Disclosure Doctrine (IDD) by US state courts (Danielova et al., 2023). The IDD is designed to prevent employees from joining a competitor firm if there is a risk of disclosing their former employer's trade secrets (Klasa et al., 2018). The recognition of IDD can trigger increased investment in organisation capital by firms (Danielova et al., 2023; Li et al., 2018), providing an opportunity to examine the relationship between organisation capital and inventory efficiency. Our difference-in-differences (DiD) analysis shows that a firm's inventory efficiency improves following the recognition of the IDD in the state in which its headquarters is located.

We then conduct two further tests to confirm the positive effect of organisation capital on inventory efficiency. The first test explores if this effect extends to asymmetric inventory adjustment. Studies by Kroes and Manikas (2018) and Hwang et al. (2021) suggest that when sales decrease, the decrease in inventory is less pronounced than when sales increase (referred to as asymmetric inventory adjustment or inventory stickiness). Our findings indicate that organisation capital reduces the severity of inventory stickiness. The second test examines the extent to which firms with higher levels of organisation capital benefit more from inventory efficiency. Our findings reveal that organisation capital strengthens the positive relationship between inventory efficiency and firm performance.

Our study contributes to the existing literature in two ways. First, it contributes to the operations management literature by adding to understanding factors that drive inventory efficiency. While previous research has explored the relationship between human resource capital and inventory efficiency (e.g., Barcos et al., 2013; Hamm et al., 2022; Liu & Kim, 2020), the association between organisation capital and inventory efficiency has been underexplored. This study offers a comprehensive analysis that establishes organisation capital as a factor that determines inventory efficiency.

Second, our study contributes to the expanding literature on the influence of organisation capital and other forms of intangible capital on corporate decision-making and outcomes. Intangible capital has been demonstrated to play a significant role in determining a firm's market value (Belo et al., 2014, 2022; Lev et al., 2009; Lev & Radhakrishnan, 2005; Vitorino, 2014) and to have important implications for corporate policies. While existing literature generally indicates that organisation capital positively impacts firm performance, there is limited evidence on the relationship between organisation capital and corporate policies, and how this relationship affects firm value (Francis et al., 2021). This study sheds light on the role of organisation capital in enhancing firm value through efficient inventory management.

The rest of the paper proceeds as follows. Section 2 details the hypotheses. In Section 3, we discuss the sample selection, variable measurements and regression model. Section 4 discusses our empirical results, and Section 5 concludes.

2 | LITERATURE AND HYPOTHESIS DEVELOPMENT

Intangible capital constitutes a significant portion of a firm's value, with organisation capital emerging as the largest category of intangible capital for US firms (Corrado et al., 2009).

Previous studies find that organisation capital can mitigate the sensitivity of investment to cash flow (Attig & Cleary, 2014), lower the cost of borrowing (Danielova et al., 2023), enhance productivity (Atkeson & Kehoe, 2005; Lev et al., 2009), foster innovation (Francis et al., 2021), improve post-merger operating performance (Li et al., 2018) and assist firms make the transition to favourable life-cycle stages (Hasan & Cheung, 2018). These findings show a 'bright side' to organisational capital that suggests a positive impact on inventory efficiency.

However, previous research has also identified a potential 'dark side' to organisation capital. Eisfeldt and Papanikolaou (2013) argue that, because organisation capital is unique to each firm and embodied in the key talents of managers, firms with a larger accumulation of organisation capital rely heavily on their workforce for superior performance. In this setting, management turnover results in increased replacement costs and loss of human capital, which negatively impacts performance (Dess & Shaw, 2001; Francis et al., 2021). Based on these different viewpoints, we propose two contrasting hypotheses about the relationship between organisation capital and inventory efficiency.

On one hand, we posit that firms with more organisation capital are associated with higher inventory efficiency. The first reason for this is that firms with higher levels of organisation capital tend to be more innovative (Francis et al., 2021). Lee et al. (2015) find a positive association between innovation (including both process and product innovation) and inventory efficiency. Product innovation increases inventory turnover by satisfying customer demand and increasing sales, while process innovation improves inventory efficiency by streamlining orders, sales and reducing inventory levels in the production process. Process innovation is believed to have a more lasting impact on inventory efficiency than product innovation. Other studies have highlighted the role of the just-in-time (JIT) system, a type of process innovation that delivers inventory as needed, in improving inventory efficiency (Balakrishnan et al., 1996; Huson & Nanda, 1995).

The second reason to expect a positive relationship between organisation capital and inventory efficiency is based on the positive impact that organisation capital has on employee capacity to manage inventory. Firms with higher organisation capital are likely to invest more in employee training and compensation, which can enhance employee skills and orientation and improve teamwork (Lev et al., 2009). Lieberman et al. (1999) point out that while the JIT system is widely used by manufacturers, it is subject to employee control. Prior literature on JIT shows that efficiency is improved by reducing setup times, machine breakdowns and work errors (Hall, 1983; Monden, 1981a, 1981b; Suzaki, 1987), which require the active involvement of employees. Accordingly, Lieberman et al. (1999) show that firms with more highly trained employees have higher inventory efficiency. Barcos et al. (2013) argue that efficient inventory management requires the active engagement of all employees in the production process and that firms should build a supportive organisational culture, recognise and reward good performance, invest in employee training and skill development, facilitate teamwork and empower employees (Reid & Sanders, 2005). Barcos et al. (2013) and Liu and Kim (2020) show that better employee orientation significantly increases inventory efficiency. Hassan and Karim (2022) find that firms with a weak corporate culture hold more inventory to reduce operational risk, and Hwang et al. (2021) document that managers keep higher levels of inventory as a hedge against labour risk. Given that organisation capital is associated with better employee skills, orientation and lower operational risk from labour, we expect a positive relationship between organisation capital and inventory efficiency.

The third reason to expect a positive relationship between organisation capital and inventory efficiency is related to the impact that organisation capital has on financing constraints. Inventory investment relies heavily on external financing which can be significantly impacted by a firm's financial condition (Hwang et al., 2021). Carpenter et al. (1994) show that during a liquidity crisis, financially constrained firms are more likely to reduce inventory investment compared to other expenditures that have higher adjustment costs. In

contrast, financially flexible firms are more likely to retain additional inventory to shield against negative demand shocks, avoiding high adjustment costs for fixed capital (Dasgupta et al., 2019). Hwang et al. (2021) highlight that financial constraints limit a firm's ability to maintain production and inventory levels. To the extent that organisation capital reduces borrowing costs (Danielova et al., 2023) and lowers the cost of financing inventory, firms with more organisation capital have greater capacity to finance and manage inventory, leading to higher inventory efficiency.

In conclusion, to the extent that firms with more organisation capital are more innovative, have employees who are better equipped to manage inventory, and have greater financial flexibility, inventory efficiency will be enhanced. Based on this, we propose the following hypothesis:

> **H1.** Holding all other factors constant, firms with more organisation capital have higher inventory efficiency.

On the other hand, we hypothesise that organisation capital and inventory efficiency may be negatively related. The basis for this hypothesis lies in the notion that firms with a larger accumulation of organisation capital heavily rely on their workforce for superior performance (Eisfeldt & Papanikolaou, 2013). Lustig et al. (2011) posit that an increase in organisation capital could create better external employment opportunities for key personnel in successful firms, potentially leading to a higher rate of voluntary turnover. This, in turn, can result in increased replacement costs and loss of human capital, negatively impacting organisational performance (Dess & Shaw, 2001; Francis et al., 2021). This idea is supported by the findings of Bernstein (2015), who shows that the loss of talented inventors can have a detrimental effect on the productivity of the remaining innovators. In the same way, we hypothesise that the departure of key staff members may negatively impact a firm's inventory management and decrease inventory efficiency, especially for firms with high levels of organisation capital due to their unique and firm-specific characteristics (Eisfeldt & Papanikolaou, 2013). Therefore, we propose the following hypothesis:

> **H2.** Holding all other factors constant, firms with more organisation capital have lower inventory efficiency.

3 | METHODOLOGY

3.1 | Sample construction

Our initial sample includes all firms listed in the US within the Compustat database. Following Eisfeldt and Papanikolaou (2013), our sample period commences in 1970 and ends in 2021, representing our latest accessible year.[1] A detailed description of the sample screening process is pre-

[1]Our sample covers a more extensive period than prior literature in both organisation capital and inventory management. For example, Danielova et al. (2023) examine the effect of organisation capital on cost of bank loans, analysing a sample of firms from 1986 to 2011. In their study of US acquisition deals spanning 1984–2014, Li et al. (2018) show that acquirers with high organisation capital outperformed those with low organisation capital. Ak and Patatoukas (2016) explore the relationship between customer-base concentration and inventory efficiencies in the manufacturing sector, using data from firms between 1977 and 2006. Examining US manufacturers from 1983 to 2017, Hamm et al. (2022) delve into how labour unions affect inventory holding. It is worth noting that the SG&A expenditures, necessary to construct our organisation capital measures, are available in Compustat from 1950. Consequently, we extend our initial sample to 1950. However, we drop the years 1950–1959 from our analysis since 'ceq', used to calculate the market-to-book ratio, is only available from 1960. The results are presented in Table A2 in Appendix S1. Our main findings remain robust when we extend the sample. Additionally, even after removing *MTB* from the list of control variables and extending the sample start to 1950, our main results remain robust.

sented in Panel A of Table 1. We focus on the manufacturing industry (SIC codes 2000–3999) as prior studies on inventory management show that the operational effects of inventory holdings are more pronounced in this sector (Ak & Patatoukas, 2016; Eroglu & Hofer, 2011; Hamm et al., 2022; Hwang et al., 2021; Lu et al., 2023).[2] Moreover, manufacturers represent a broad sample of firms, well positioned in the middle of supply chains, featuring more complex production processes compared to some other industries. The production of goods involves various stages, from raw material procurement to the processing of final products. This complexity can directly impact inventory management strategies and the need for effective organisational capital.

Several additional criteria are employed for sample selection. Initially, we exclude observations with missing, zero or negative values for total assets, book value of equity, inventory or sales revenue. Subsequently, we eliminate observations for which total inventory equals or exceeds total assets. Finally, any remaining observations with missing values for independent variables in the main regression are also removed. Our final sample includes 74,825 firm-year observations for 6853 unique firms. To minimise the impact of outliers, we winsorise all continuous variables at the 1st and 99th percentiles.

Panel B of Table 1 presents the distribution of the sample across the two-digit SIC industry groups. The number of firm-year observations varies substantially across industries. The electronic equipment industry (electronic and other electrical equipment and components, except computer equipment) represents the largest percentage of our sample (17.36%), followed by industrial and commercial machinery and computer equipment (13.90%). In contrast, the tobacco products industry has the fewest observations (0.21%) due to its specific legal restrictions.

3.2 | Measuring organisation capital

The calculation of organisation capital is based on annual SG&A expenditures and follows the approach outlined in Peters and Taylor (2017). SG&A expense is identified from the Compustat database (Compustat item: *XSGA*), which includes expenses for management remuneration, employee training, consulting, information technology, R&D investment, advertising and marketing. These expenditures are considered crucial in generating organisation capital (Eisfeldt & Papanikolaou, 2013).

The stock of organisation capital is estimated using a perpetual inventory method. The calculation involves accumulating the deflated value of SG&A expenses:

$$Organization\ Capital_{i,t} = \left(1-\delta_0\right) Organization\ Capital_{i,t-1} + \left(XSGA_{i,t} \times \theta_0\right) \tag{1}$$

where δ_0 is the depreciation rate and θ_0 is the percentage of SG&A costs that are invested in organisation capital. To apply the calculation rule in Equation (1), an initial stock and depreciation rate must be selected. The initial stock is calculated as follows:

$$Organization\ Capital_{i,t_0} = \frac{\left(XSGA_{i,t_0} \times \theta_0\right)}{g+\delta_0} \tag{2}$$

[2]Table A3 in Appendix S1 presents the results using a sample that excludes financial firms. The coefficients on the two measures of organisation capital remain significant and positive, indicating the robustness of our main findings for this alternative sample. However, the magnitudes of the coefficients are somewhat smaller than those reported in Table 4 (see Section 4.2). We then examine the effect of organisation capital on inventory efficiency by using those of non-manufacturers. The results indicate that the coefficient on organisation capital is only positive and significant when using *OCTA* (refer to the next section for the definition) as the measure of organisation capital. Additional tests on coefficient differences suggest that the effect of organisation capital is more pronounced for manufacturers. Consequently, the positive influence of organisation capital on inventory efficiency for the full sample is driven primarily by manufacturers.

TABLE 1 Sample selection and distribution.

Panel A: Sample selection

	Number of observations	Number of unique firms
Firm-year observations available in Compustat for the years 1970–2021	536,923	40,575
Less: firm-year observations without 'gvkey' or 'fyear'	(156)	(0)
Keep: firm-year observations in the manufacturing industries	165,665	12,139
Less: firm-year observations that with a zero/negative book value of equity or total assets	(16,719)	(333)
Less: firm-year observations that are missing values for inventory and sales revenue	(11,334)	(743)
Less: firm-year observations in which total inventory is greater than or equal to total assets	(8285)	(676)
Less: firm-year observations with missing values for variables in the main regression model	(54,502)	(3534)
Final sample of firm-year observations	74,825	6853

Panel B: Sample distribution by industry

2-digit SIC	Industry description	Obs.	%	Unique firms
20	Food and kindred products	4880	6.522	424
21	Tobacco products	160	0.214	13
22	Textile mill products	1173	1.568	119
23	Apparel and other finished products made from fabrics and similar materials	1845	2.466	188
24	Lumber and wood products, except furniture	1426	1.906	114
25	Furniture and fixtures	1209	1.616	92
26	Paper and allied products	2257	3.016	170
27	Printing, publishing and allied industries	1976	2641	185
28	Chemicals and allied products	9706	12.972	1007
29	Petroleum refining and related industries	1349	1.803	97
30	Rubber and miscellaneous plastics products	2069	2.765	203
31	Leather and leather products	666	0.890	43
32	Stone, clay, glass and concrete products	1341	1.792	133
33	Primary metal industries	2631	3.516	235
34	Fabricated metal products, except machinery and transportation equipment	3139	4.195	282
35	Industrial and commercial machinery and computer equipment	10,403	13.903	972
36	Electronic and other electrical equipment and components, except computer equipment	12,991	17.362	1154
37	Transportation equipment	4102	5.482	323
38	Measuring, analysing and controlling instruments; photographic, medical and optical goods; watches and clocks	9803	13.101	922

(Continues)

TABLE 1 (Continued)

Panel B: Sample distribution by industry

2-digit SIC	Industry description	Obs.	%	Unique firms
39	Miscellaneous manufacturing industries	1699	2.271	177
Total		74,825	100	6853

Note: This table presents the sample selection and distribution across industries for our study on the impact of organisation capital on inventory efficiency. Panel A provides an overview of the sample screening process for the sample period of 1970–2021, including the number of observations and unique firms at each stage of the selection process. Panel B report the distribution of our sample based on the 2-digit SIC code.

where $XSGA_{i,t_0}$ is the firm's non-missing SG&A expenses in the first year of our sample, and g represents the growth rate of SG&A expenses. Missing values of SG&A expenses are replaced with zero. We follow Peters and Taylor (2017) in using a depreciation rate of 20% ($\delta_0 = 20\%$) and include only 30% ($\theta_0 = 30\%$) of SG&A expenses as spending into organisation capital. The average growth rate of SG&A costs, g, is set at 10% (Danielova et al., 2023). Finally, to normalise the results, organisation capital is expressed as a proportion of a firm's book value of total assets (*OCTA*) and the value of total capital (*OCTC*).

3.3 | Measuring inventory efficiency

We follow Mishra et al. (2013) in defining inventory efficiency as the ratio of total sales to inventory, adjusted at the four-digit SIC code level. This measure is in line with recent operational management studies that have used a similar approach to the operationalisation of inventory efficiency (e.g., Chen et al., 2005; Modi & Mishra, 2011). Our calculation of inventory efficiency is represented by the following formula:

$$INVT\_EFF_{i,t} = \frac{\frac{Sales_{i,t}}{Inventory_{i,t}} - \left(\mu_{INVT\_EFF}\right)_{i,t}}{\left(\sigma_{INVT\_EFF}\right)_{i,t}} \tag{3}$$

where $INVT\_EFF_{i,t}$ is inventory efficiency in year t for firm i, $Sales_{i,t}$ is a firm's total sales in year t, $Inventory_{i,t}$ is inventory held by a firm in year t, $\left(\mu_{INVT\_EFF}\right)_{i,t}$ is the industry average inventory efficiency for firms in year t, and $\left(\sigma_{INVT\_EFF}\right)_{i,t}$ is the standard deviation of inventory efficiency for firms in the same industry in year t.

To ensure consistency with prior literature, we convert 'last-in, first-out (LIFO)' inventories to 'first-in, first-out (FIFO)' inventories by adding back the LIFO reserve. This is done to minimise the impact of inventory accounting on our results (Ak & Patatoukas, 2016; Feng et al., 2015; Hwang et al., 2021; Lu et al., 2023; Mishra et al., 2013).

3.4 | Empirical model

To examine the relationship between organisation capital and inventory efficiency, we use the following ordinary least squares (OLS) regression model:

$$INVT\_EFF_{i,t} = \alpha_0 + \alpha_1 Organization\ Capital_{i,t} + \gamma X_{i,t} + \nu_i + \omega_t + \varepsilon_{i,t} \tag{4}$$

where $INVT\_EFF_{i,t}$ is the inventory efficiency, as defined in the previous section, and the primary independent variable is organisation capital measured using either *OCTA* or *OCTC*. $X_{i,t}$

encompasses various control variables. The model incorporates firm fixed effects v_i and year fixed effects ω_t, and we adjust for firm-level standard errors.

A significantly positive coefficient for α_1 shows that firms with more organisation capital have higher inventory efficiency (H1). Conversely, a negative coefficient shows that firms with more organisation capital have lower inventory efficiency (H2).

The control variables ($X_{i,t}$) included in the model are identified from previous research (Ak & Patatoukas, 2016; Feng et al., 2015; Hamm et al., 2022; Mishra et al., 2013) and include firm size (*SIZE*), corporate leverage (*BLVE*), firm performance (*ROA*), market-to-book ratio (*MTB*), capital expenditure (*CAPEX*), tangibility (*TANGIBLE*), sales growth (*SALEGROW*), sales volatility (*STDSALE*), gross margin (*GMARGIN*), income loss (*LOSS*) and firm age (*FIRMAGE*). Definitions of these variables are provided in detail in Table A1 in Appendix S1.

4 | EMPIRICAL RESULTS

4.1 | Descriptive statistics, univariate test and correlation results

Table 2 presents the descriptive statistics of the key variables and the results of univariate tests. The average of *INVT_EFF* is −0.029 and the standard deviation is 0.842, which is similar to the values reported by Mishra et al. (2013). The negative value of *INVT_EFF* indicates that, on average, firms maintain a lower total inventory relative to the industry in any year. The average value of *OCTA* is 0.358, with a median of 0.284, comparable to the findings of Hasan and Uddin (2022). The descriptive statistics of the control variables also appear reasonable. For example, the average firm size in our sample is 5.24, with a mean leverage of 0.208, return on assets of 0.001, and market-to-book ratio of 1.721. On average, 26.5% of a firm's assets are in the form of property, plant and equipment (PPE), and capital expenditures constitute 5.4% of total assets. The average growth in sales of 0.127 suggests that firms experienced an increase in sales during the sample period.

To gain preliminary insights into the relationship between organisation capital and inventory efficiency, we examine the distribution of inventory efficiency across different organisation capital groups. Specifically, we create groups based on the first quartile (Q1) and fourth quartile (Q4) levels of organisation capital (i.e., *OCTA*). We then compare the means of inventory efficiency (i.e., *INVT_EFF*) between the Q1 and Q4 groups. Table 2 shows that *INVT_EFF* is significantly higher for firms in the highest (Q4) organisation capital group compared to those in the lowest (Q1) organisation capital group (difference = 0.093; $p < 0.01$). The results support H1 that firms with more organisation capital have higher inventory efficiency.

The results of the pairwise correlations between key variables are presented in Table 3. There is a positive and significant correlation between *INVT_EFF* and both *OCTA* ($\rho = 0.030$) and *OCTC* ($\rho = 0.017$), supporting the hypothesis that firms with a higher level of organisation capital have higher inventory efficiency. The correlations between *INVT_EFF* and the control variables align with previous findings in the literature (e.g., Feng et al., 2015; Mishra et al., 2013). Moreover, the largest correlation observed between *CAPEX* and *TANGIBLE* is $\rho = 0.538$, which suggests multicollinearity is not a concern. We also conduct a variance inflation factor (VIF) test and the untabulated results show that the highest VIF is 1.95 for *ROA*, followed by 1.75 for *TANGIBLE*, and the remaining VIFs are below 1.68. This test confirms that multicollinearity is not a concern.

TABLE 2 Summary statistics.

	Mean	P25	Median	P75	Std. dev.	Obs.	Q4 (highest)	Q1 (lowest)	Q4–Q1
INVT_EFF	−0.029	−0.526	−0.223	0.266	0.842	74,825	0.014	−0.080	0.093***
OCTA	0.358	0.166	0.284	0.449	0.301	74,825	0.749	0.100	0.649***
OCTC	0.904	0.243	0.505	0.989	1.540	67,239	2.033	0.203	1.830***
SIZE	5.241	3.541	5.047	6.775	2.303	74,825	3.892	6.548	−2.656***
BLVE	0.208	0.057	0.195	0.320	0.167	74,825	0.167	0.256	−0.089***
ROA	0.001	−0.006	0.043	0.082	0.190	74,825	−0.088	0.032	−0.119***
MTB	1.721	0.983	1.286	1.883	1.445	74,825	1.939	1.546	0.393***
CAPEX	0.054	0.022	0.041	0.070	0.047	74,825	0.043	0.065	−0.022***
TANGIBLE	0.265	0.132	0.236	0.365	0.171	74,825	0.200	0.360	−0.160***
SALEGROW	0.127	−0.031	0.075	0.197	0.410	74,825	0.064	0.186	−0.122***
STDSALE	0.184	0.081	0.138	0.233	0.156	74,825	0.213	0.178	0.035***
GMARGIN	0.309	0.234	0.337	0.469	0.958	74,825	0.381	0.179	0.202***
LOSS	0.269	0.000	0.000	1.000	0.443	74,825	0.440	0.201	0.239***
FIRMAGE	2.753	2.197	2.773	3.296	0.700	74,825	2.686	2.770	−0.083***

Note: This table presents descriptive statistics for all variables used in the main tests, along with the results of the univariate test. The sample includes data on Compustat firms for the period 1970–2021. All continuous variables are winsorised at the top and bottom 1%. Statistical significance is denoted by asterisks (*, **, ***) at the 10%, 5% and 1% levels, respectively. Variable definitions are provided in Table A1 in Appendix S1.

TABLE 3 Correlation matrix.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) *INVT_EFF*	1													
(2) *OCTA*	0.030	1												
(3) *OCTC*	0.017	0.563	1											
(4) *SIZE*	0.028	−0.421	−0.320	1										
(5) *BLVE*	−0.055	−0.178	−0.197	0.146	1									
(6) *ROA*	0.074	−0.387	−0.252	0.268	−0.058	1								
(7) *MTB*	0.073	0.129	0.154	−0.029	−0.200	−0.153	1							
(8) *CAPEX*	0.096	−0.157	−0.206	0.035	0.050	0.110	0.026	1						
(9) *TANGIBLE*	0.073	−0.283	−0.382	0.169	0.255	0.099	−0.169	0.538	1					
(10) *SALEGROW*	0.028	−0.113	0.008	−0.048	−0.021	0.009	0.210	0.072	−0.062	1				
(11) *STDSALE*	0.101	0.154	0.181	−0.321	0.007	−0.110	0.037	−0.011	−0.098	0.043	1			
(12) *GMARGIN*	0.029	0.052	0.018	0.059	**−0.006**	0.228	−0.043	**0.003**	−0.020	−0.011	−0.008	1		
(13) *LOSS*	−0.066	0.259	0.175	−0.248	0.101	−0.613	0.042	−0.148	−0.087	−0.068	0.137	−0.105	1	
(14) *FIRMAGE*	−0.020	−0.066	−0.150	0.432	0.012	0.198	−0.107	−0.062	0.095	−0.153	−0.277	0.035	−0.187	1

Note: This table reports Pearson's correlation coefficients for the key variables used in the tests. Bold values indicate statistically insignificant relationships using a two-tailed test. All continuous variables are winsorised at the top and bottom 1%. Statistical significance is denoted by asterisks (*, **, ***) at the 10%, 5% and 1% levels, respectively. Variable definitions are provided in Table A1 in Appendix S1.

4.2 | Organisation capital and inventory efficiency

In this study, we utilise Equation (4) to investigate the influence of organisation capital on inventory efficiency. The findings of our estimation are displayed in Panel A of Table 4. *INVT_EFF* is the dependent variable, and *OCTA* serves as the main independent variable in columns (1)–(3).

We begin by estimating the baseline model in column (1) without any control variables. Next, in column (2), we incorporate a comprehensive set of control variables, and in column (3), we include year and firm fixed effects. The results show the coefficients for *OCTA* are positive and significant at the 1% level across all three specifications. This supports H1 that firms with more organisation capital have higher inventory efficiency. The effect of organisation capital on inventory efficiency is also significant from an economic perspective. For instance, the coefficient in column (3) suggests that a one standard deviation increase in *OCTA* (0.301) results in an average increase of 0.129 ($=0.301\times0.429$) in inventory efficiency.

In columns (4)–(6), we conduct analyses using *OCTC* as an alternative measure of organisation capital. The results are consistent with our findings using *OCTA*. Specifically, the coefficient in column (6) suggests that a one standard deviation increase in *OCTC* (1.540) is associated with an average increase of 0.032 ($=1.540\times0.021$) in inventory efficiency.

Regarding the control variables, we find that their coefficients have the expected signs and are in line with prior literature (e.g., Feng et al., 2015; Mishra et al., 2013). For instance, higher profitability (*ROA*), more growth opportunities (*MTB*), higher fixed costs (*TANGIBLE*) and more sales (*SALEGROW*) are associated with higher inventory efficiency, while older firms (*FIRMAGE*) and those with higher leverage (*BLVE*) tend to have lower inventory efficiency.

4.3 | Subcomponent analysis

In this section, we further examine the relationship between organisation capital and inventory efficiency by breaking down total inventory into amounts based on different stages of production. This includes raw materials, work-in-progress (or semi-finished goods) and finished goods.

The results are presented in Panel B of Table 4. We repeat the regression models from Panel A, columns (3) and (6), using the raw materials, work-in-progress and finished goods inventory efficiency measures as the dependent variables. Our results indicate that the positive association between organisation capital and inventory efficiency holds for all three inventory types, with significant coefficients for organisation capital in each instance. In terms of economic significance, a one standard deviation increase in *OCTA* (*OCTC*) is associated with a 0.115 (0.066) increase in a firm's raw material efficiency, a 0.081 (0.031) increase in work-in-progress efficiency, and a 0.052 (0.006) increase in finished goods efficiency. Overall, these results emphasise the important role of organisation capital in the effective management of a firm's entire inventory.

4.4 | Channel tests

We conduct several cross-sectional tests to explore the underlying mechanisms behind the relationship between organisation capital and inventory efficiency. We aim to show how organisation capital drives inventory efficiency by examining the following three potential channels: (1) improved innovation, (2) creation of employee-friendly workplaces and (3) reduction of financial constraints. Each of these channels are explored separately in Sections 4.4.1–4.4.3 to

provide a comprehensive understanding of the relationship between organisation capital and inventory efficiency.

4.4.1 | The role of innovation

In developing the hypothesis, we argue that organisation capital leads to firm innovation, which can enhance inventory efficiency. Therefore, we expect the impact of organisation capital on inventory efficiency to be more pronounced for firms in industries with complex innovation processes. This is tested by dividing our sample into subgroups based on the 12 Fama and French (1997) industry classifications that exclusively encompass manufacturers. We expect the effect of organisation capital to be stronger for firms in the high-tech industries with complex innovation processes compared to those in the low-tech industries. The high-tech industries are chemical, equipment and healthcare, and the low-tech industries are durables and non-durables (Francis et al., 2021; Lee et al., 2015).[3]

Table 5 presents the subsample regression results, with Panels A and B reporting the results for *OCTA* and *OCTC* as the measure of organisation capital, respectively. The results in Panel A show that the coefficients of *OCTA* remain positive and statistically significant for firms in the chemicals, equipment and healthcare industries, while they are insignificant for firms in the durables segment. In addition, the magnitude of the coefficients for *OCTA* is much higher for the chemicals and equipment industries compared to the durables and non-durables segments. Panel B shows that the coefficients of *OCTC* are negative and insignificant for firms in the durables and non-durables industries. Conversely, the coefficients of *OCTC* are positive for firms in the chemicals, equipment (with marginal significance) and healthcare industries. These results align with our expectation that innovation drives the positive relationship between organisation capital and inventory efficiency.[4]

Following Francis et al. (2021), we further examine the role of managerial ability in this relationship. Chen et al. (2015) show that managers of superior ability are able to drive firm innovation. Moreover, research by Demerjian et al. (2012) indicates that higher quality managers are better able to effectively utilise firm resources. Francis et al. (2021) show that the effect of organisation capital on innovation is stronger for firms with lower managerial ability, indicating a substitution effect between organisation capital and managerial ability. Based on this, we predict that the relationship between organisation capital and inventory efficiency will be more pronounced for firms with lower managerial ability.

To test this prediction, we divide the sample of firms into two subgroups based on their managerial ability score, which is obtained from the research by Demerjian et al. (2012). A dummy variable is used (*HIGHMA*) that equals one for firms with an above-median managerial ability score, and zero otherwise. We re-estimate Equation (4) and incorporate *HIGHMA* and its interaction with the measure of organisation capital. As reported in column (9) of Panel A, the coefficient for the interaction term is negative and statistically significant. This confirms our expectation that organisation capital plays a more critical role in enhancing

[3]Francis et al. (2021) use the Fama and French (1997) 12 industry classification. Firms that belong to healthcare, medical equipment, drugs, chemicals, computers electronic equipment and telecommunications industries are classified as high technology firms. Firms operating in industries such as software programming, non-durables, durables, manufacturing and utilities are defined as low technology firms. Lee et al. (2015) use the Fama–French 10 industry classification. They find that innovation has a more significant (positive) effect on inventory turnover for the high technology (equipment and healthcare) segments than for non-durables and durable segments.

[4]Further analysis reveals that the coefficient on *OCTA* is larger for firms operating within the chemicals, equipment and healthcare sectors compared to those in the durables and non-durables segments. When employing the *OCTC* as the measure for organisation capital, the coefficient is statistically insignificant and negative for firms in the durables and non-durables categories, while positive and significant at the 1% level for those in the chemicals, equipment and healthcare industries. For brevity, we do not report the results.

TABLE 4 Organisation capital and inventory efficiency.

Panel A: Total inventories

	(1)	(2)	(3)	(4)	(5)	(6)
OCTA	0.083***	0.290***	0.429***			
	(0.029)	(0.035)	(0.041)			
OCTC				0.009*	0.030***	0.021***
				(0.005)	(0.006)	(0.007)
SIZE		0.033***	0.024*		0.023***	−0.040***
		(0.005)	(0.014)		(0.005)	(0.012)
BLVE		−0.277***	−0.176***		−0.268***	−0.159***
		(0.049)	(0.044)		(0.051)	(0.047)
ROA		0.401***	0.401***		0.273***	0.268***
		(0.042)	(0.039)		(0.040)	(0.039)
MTB		0.040***	0.024***		0.042***	0.023***
		(0.005)	(0.004)		(0.006)	(0.004)
CAPEX		0.775***	0.337***		0.887***	0.312***
		(0.172)	(0.108)		(0.184)	(0.118)
TANGIBLE		0.473***	0.149*		0.452***	0.183**
		(0.068)	(0.087)		(0.072)	(0.093)
SALEGROW		0.038***	0.036***		0.018*	0.024**
		(0.010)	(0.010)		(0.011)	(0.010)
STDSALE		0.672***	0.274***		0.684***	0.292***
		(0.050)	(0.042)		(0.051)	(0.044)
GMARGIN		0.002	0.020***		0.012**	0.027***
		(0.006)	(0.006)		(0.006)	(0.007)
LOSS		−0.038***	−0.050***		−0.043***	−0.055***
		(0.013)	(0.009)		(0.013)	(0.010)
FIRMAGE		−0.042***	−0.103***		−0.020	−0.020
		(0.014)	(0.029)		(0.014)	(0.029)
Constant	−0.059***	−0.487***	−0.133		−0.421***	0.099
	(0.015)	(0.045)	(0.098)		(0.045)	(0.099)
Year fixed effects	No	No	Yes	No	No	Yes
Firm fixed effects	No	No	Yes	No	No	Yes
Adj. R^2	0.001	0.046	0.565	0.001	0.042	0.566
Obs.	74,825	74,825	74,825	67,239	67,239	67,239

Panel B: Raw materials, work-in-progress and finished goods

	Raw materials		Work-in-progress		Finished goods	
	(1)	(2)	(3)	(4)	(5)	(6)
OCTA	0.384***		0.285***		0.169***	
	(0.046)		(0.052)		(0.043)	
OCTC		0.046***		0.025**		0.005*
		(0.008)		(0.012)		(0.003)

TABLE 4 (Continued)

Panel B: Raw materials, work-in-progress and finished goods

	Raw materials		Work-in-progress		Finished goods	
	(1)	(2)	(3)	(4)	(5)	(6)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.548	0.549	0.516	0.522	0.532	0.539
Obs.	60,238	54,151	49,529	44,457	58,057	52,237

Note: This table presents the results of an OLS regression analysis examining the impact of organisation capital on inventory efficiency. Panel A reports the results using total inventories, while Panel B reports the results using different types of inventories. Standard errors are clustered at the firm level and reported in parentheses. All continuous variables are winsorised at the top and bottom 1%. Statistical significance is denoted by asterisks (*, **, ***) at the 10%, 5% and 1% levels, respectively. Variable definitions are provided in Table A1 in Appendix S1.

inventory efficiency for firms with lower managerial ability. In conclusion, the results presented in Table 5 demonstrate that innovation explains the positive relationship between organisation capital and inventory efficiency.

4.4.2 | The role of firm characteristics related to employees

We also examine how firm characteristics related to employees influence the relationship between organisation capital and inventory efficiency. As previously mentioned, SG&A expenses include employee training and compensation. According to Lev et al. (2009), a variety of factors contribute to the efficiency of resource utilisation, with many of these factors – such as high-skilled workforces and enhanced incentive and compensation structures – being linked to the presence of organisation capital. If organisation capital impacts inventory efficiency by enhancing the working environment and employee orientation, thereby increasing productivity, this effect would be more pronounced in firms with higher employee intensity.

We calculate employee intensity (*EMPI*) as the logarithm of the ratio of the number of employees to sales revenue (Anderson et al., 2003). The dummy variable *HIGHEMPI* is used, which is coded as one for firms with an above-median employee intensity and zero for those with below-median intensity. We re-estimate Equation (4) and incorporate *HIGHEMPI* and its interaction with the measure of organisation capital. The results are presented in columns (1) and (2) of Table 6. Our findings show that the coefficients for the interaction between organisation capital and employee intensity are positive and statistically significant, which supports our expectation. Furthermore, the positive and significant coefficients for organisation capital suggest that our main results are robust even when controlling for employee intensity.

Additionally, we examine if the relationship between organisation capital and inventory efficiency is influenced by a firm's relationship with its employees. If improved employee engagement resulting from organisation capital leads to higher inventory efficiency, the effect should be more pronounced for firms that require greater attention to their relationship with employees. One such group of firms is those with higher employee turnover, which indicates a weaker relationship with employees (e,g., Ben-Nasr & Ghouma, 2018; Ghaly et al., 2015). To measure employee turnover, we calculate the absolute change in the number of employees as a proportion of the lagged number of employees.

We re-estimate Equation (4) and incorporate employee turnover (*HIGHTURN*) and its interaction with the measure of organisation capital. The results, presented in columns (3) and

TABLE 5 Organisation capital and inventory efficiency: the impact of firm innovation.

Panel A: *OCTA* as the measure of organisation capital

	Non-durables	Durables	Manufacturing	Energy	Chemicals	Equipment	Healthcare	Others	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OCTA	0.381***	0.260	0.707***	−0.193	0.488***	0.531***	0.205***	0.222	0.019**
	(0.113)	(0.194)	(0.106)	(0.530)	(0.169)	(0.078)	(0.064)	(0.265)	(0.007)
OCTA×HIGHMA									−0.061*
									(0.032)
HIGHMA									0.014
									(0.008)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.621	0.568	0.572	0.424	0.653	0.538	0.488	0.664	0.569
Obs.	10,909	5383	23,109	1349	4490	18,253	9906	1426	66,288

Panel B: *OCTC* as the measure of organisation capital

	Non-durables	Durables	Manufacturing	Energy	Chemicals	Equipment	Healthcare	Others	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OCTC	−0.003	−0.019	0.078**	−0.537	0.044***	0.019	0.026**	−0.062	0.019**
	(0.013)	(0.029)	(0.031)	(0.396)	(0.015)	(0.016)	(0.012)	(0.072)	(0.007)
OCTC×HIGHMA									−0.001
									(0.007)
HIGHMA									0.022**
									(0.010)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 5 (Continued)

Panel B: *OCTC* as the measure of organisation capital

	Non-durables	Durables	Manufacturing	Energy	Chemicals	Equipment	Healthcare	Others	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.619	0.571	0.574	0.430	0.657	0.538	0.494	0.676	0.573
Obs.	9945	4830	20,797	1199	4001	16,299	8812	1356	59,488

Note: This table reports the results of the impact of innovation on the relation between organisation capital and inventory efficiency. In Panel A, we use *OCTA* as the measure of organisation capital, and Panel B uses *OCTC*. In columns (1)–(8), we split the full sample into different sub-groups based on Fama–French 12 industry classification. Standard errors are clustered at the firm level and reported in parentheses. All continuous variables are winsorised at the top and bottom 1%. Statistical significance is denoted by asterisks (*, **, ***) at the 10%, 5% and 1% levels, respectively. Variable definitions are provided in Table A1 in Appendix S1.

TABLE 6 Organisation capital and inventory efficiency: the impact of firm-level employee characteristics.

	(1)	(2)	(3)	(4)	(5)	(6)
OCTA	0.427***		0.422***		0.461***	
	(0.042)		(0.042)		(0.045)	
OCTC		0.025***		0.019**		0.022***
		(0.007)		(0.007)		(0.007)
OCTA×HIGHEMPI	0.084**					
	(0.040)					
OCTC×HIGHEMPI		0.020**				
		(0.009)				
OCTA×HIGHTURN			0.083***			
			(0.020)			
OCTC×HIGHTURN				0.021***		
				(0.005)		
OCTA×HIGHUNION					0.089*	
					(0.046)	
OCTC×HIGHUNION						0.018*
						(0.009)
HIGHEMP	−0.167***	−0.165***				
	(0.016)	(0.017)				
HIGHTURN			−0.018***	−0.014**		
			(0.005)	(0.006)		
HIGHUNION					−0.034	−0.029
					(0.021)	(0.022)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.570	0.571	0.566	0.568	0.561	0.562
Obs.	72,292	64,855	71,545	64,168	63,793	56,749

Note: This table reports the results of the impact of employee characteristics on the relation between organisation capital and inventory efficiency. Standard errors are clustered at the firm level and reported in parentheses. All continuous variables are winsorised at the top and bottom 1%. Statistical significance is denoted by asterisks (*, **, ***) at the 10%, 5% and 1% levels, respectively. Variable definitions are provided in Table A1 in Appendix S1.

(4) of Table 6, show that the coefficients for organisation capital remain positive and statistically significant, while the coefficients for the interaction between organisation capital and employee turnover are also positive and significant. These findings are consistent with our expectation that the positive impact of organisation capital on inventory efficiency is stronger for firms with higher employee turnover.

Finally, we examine the impact of labour unions on the relationship between organisation capital and inventory efficiency. Previous research suggests that labour unions have different motivations, incentives and risk preferences that influence corporate decision-making and firm outcomes (Chyz et al., 2013). Additionally, labour unions may engage in rent-seeking activities that result in managerial responses (Klasa et al., 2009; Matsa, 2010). In line with this, Hamm et al. (2022) show that the practice of stockpiling inventory by managers, aimed at reducing the operational risks posed by labour unions and strengthening

their bargaining power in labour negotiations, can have a detrimental impact on inventory efficiency.

We posit that if organisation capital improves employee orientation, it could reduce the operational risk posed by labour unions and thus enhance inventory efficiency. To test this, we use industry-level union coverage data obtained from the Union Membership and Coverage Database (Chen et al., 2011; Klasa et al., 2009).[5] The unionisation rate (*UNION*), which represents the percentage of employees covered by collective bargaining agreements in each industry, is used to create a dummy variable, *HIGHUNION*. This variable is coded as one for firms with a unionisation rate above the median and zero for those below the median.

We re-estimate Equation (4) and incorporate *HIGHUNION* and its interaction with the measure of organisation capital. The results, shown in columns (5) and (6), indicate that the interaction between organisation capital and the unionisation rate is positive and significant. This supports our hypothesis that organisation capital has a mitigating effect on the operational risk posed by labour unions and thus improves inventory efficiency.

In conclusion, the cross-sectional analysis results presented in Table 6 support our conjecture that organisation capital improves inventory efficiency by creating a more employee-friendly workplace environment.

4.4.3 | The role of financial constraints

The relationship between organisation capital and inventory efficiency may also be affected by financial constraints (e.g., Carpenter et al., 1994; Dasgupta et al., 2019; Hwang et al., 2021). Our hypothesis development (H1) was partly based on the notion that organisation capital reduces the overall cost of borrowing (Danielova et al., 2023), which lowers the cost of inventory financing and improves inventory efficiency. If this is the case, the effect of organisation capital on inventory efficiency would be more pronounced for financially constrained firms.

To test this relationship, we adopt the approach of Hwang et al. (2021) and use three measures of a firm's ability to fund its inventory: the Kaplan-Zingales Index (*KZINDEX*), book leverage (*BLVE*) and cash holdings (*CASH*). Further details about the variables can be found in Table A1 in Appendix S1. A firm is considered financially constrained if it has an above-median Kaplan-Zingales Index (*HIGHKZ*), above-median financial leverage (*HIGHBLVE*) and below-median cash holdings (*LOWCASH*). We then re-estimate Equation (4) by including these indicators and their interactions with the organisation capital measure.

The results are reported in Table 7, where the interaction between organisation capital (*OCTA*) and financial constraints consistently demonstrates a positive and significant association.[6] This pattern is also evident when using *OCTC* and the financial constraint indicator (*HIGHKZ*). These results provide evidence to support our expectation that the positive impact of organisation capital on inventory efficiency is more pronounced for firms that experience financial constraints. Moreover, the positive coefficients on organisation capital suggest that our key conclusions remain robust after controlling for financial constraints.

[5]The dataset is available at www.unionstats.com.

[6]In Table 6, we omit the coefficient for *HIGHBLVE* as we have accounted for *BLVE* in the regression analysis.

TABLE 7 Organisation capital and inventory efficiency: the impact of financial constraints.

	(1)	(2)	(3)	(4)	(5)	(6)
OCTA	0.437***		0.451***		0.445***	
	(0.042)		(0.041)		(0.041)	
OCTC		0.025***		0.025***		0.020***
		(0.007)		(0.007)		(0.007)
OCTA × *HIGHKZ*	0.052*					
	(0.030)					
OCTC × *HIGHKZ*		0.018**				
		(0.007)				
OCTA × *HIGHBLVE*			0.098***			
			(0.033)			
OCTC × *HIGHBLVE*				0.011		
				(0.009)		
OCTA × *LOWCASH*					0.055*	
					(0.031)	
OCTC × *LOWCASH*						−0.002
						(0.007)
HIGHKZ	−0.068***	−0.054***				
	(0.011)	(0.012)				
LOWCASH					−0.114***	−0.107***
					(0.010)	(0.011)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.566	0.567	0.565	0.566	0.567	0.568
Obs.	72,251	64,996	74,973	67,372	74,823	67,237

Note: This table reports the results of the impact of financial constraints on the relation between organisation capital and inventory efficiency. Standard errors are clustered at the firm level and reported in parentheses. All continuous variables are winsorised at the top and bottom 1%. Statistical significance is denoted by asterisks (*, **, ***) at the 10%, 5% and 1% levels, respectively. Variable definitions are provided in Table A1 in Appendix S1.

4.5 | Robustness checks and endogeneity concerns

In this section, we conduct a range of supplementary tests to enhance the validity and credibility of our research findings. For brevity, comprehensive details of these tests are included in Appendix S1.[7]

We begin by employing alternative measures of brand capital and inventory efficiency. The results from this sensitivity analysis indicate that our main results are not dependent on our choice of both brand capital and inventory efficiency measures. Moving forward, we acknowledge the potential impact of endogeneity on our baseline results, which could arise from omitted variables that are associated with both organisation capital and inventory investment, or the possibility that firms with more efficient inventory management also have more resources to invest in organisation capital. To mitigate these potential issues, we employ various

[7]Please refer to Sections A1–A4 and Tables A4–A7 in Appendix S1 for comprehensive details.

techniques, such as adding control variables to the baseline model, exploring alternative model specifications and employing a quasi-natural experiment. Our main findings remain robust after applying these techniques.

4.6 | Additional analyses

4.6.1 | Organisation capital and asymmetric inventory investment

Recent studies by Kroes and Manikas (2018) and Hwang et al. (2021) show that during periods of sales decrease, inventory declines less compared to when sales increase, resulting in asymmetric inventory adjustment or 'sticky' inventory management. In this section, we take into account sales changes and investigate whether organisation capital affects the manner of asymmetric inventory adjustment. Kroes and Manikas (2018) and Hwang et al. (2021) identify three factors that lead to asymmetric inventory investment:

1. Managerial expectations about future demand. Optimistic views lead to higher retention of slack resources, while pessimistic views result in lower retention.
2. Adjustment costs, such as inventory holding costs, disposal costs and stockout costs, incurred during resource adjustment can drive inventory stickiness by leading firms to smooth production and minimise unused production capacity.
3. A lack of agility, rendering a firm's manufacturing systems unable to quickly adapt to changing conditions (Swafford et al., 2006).

We propose two opposing views on the relationship between organisation capital and asymmetric inventory investment. On one hand, a firm's organisation capital may enable innovation, which could help establish a responsive manufacturing system and reduce inventory stickiness (Lee et al., 2015). On the other hand, the costs of employee-related adjustments, such as severance pay for dismissed workers and the expenses of training and hiring new ones, are incorporated into inventory decisions. Firms with higher organisation capital are likely to have higher labour adjustment costs (due to their investment in human resources), leading to a higher degree of asymmetric inventory adjustment. Furthermore, managers in firms with greater organisation capital may have more optimistic expectations about future demand compared to those with less organisation capital (Venieris et al., 2015), which may also contribute to more inventory stickiness.

To examine the link between organisation capital and inventory stickiness, we extend the model developed by Hwang et al. (2021) by incorporating a measure of organisation capital and its interaction with positive and negative sales changes[8]:

$$\begin{aligned}\Delta INVT_{i,t} = {} & \beta_0 + \beta_1\left(1/A_{i,t}\right) + \beta_2 SALE_{i,t} + \beta_3 \Delta SALE_{i,t-1} + \beta_4 DEC_{i,t-1} \\ & + \beta_5 DEC_{i,t-1} \times \Delta SALE_{i,t-1} + \beta_6 \Delta SALE_{i,t} + \beta_7 DEC_{i,t} \\ & + \beta_8 DEC_{i,t} \times \Delta SALE_{i,t} + \beta_9 Organization\ Capital_{i,t} \\ & + \beta_{10} Organization\ Capital_{i,t} \times \Delta SALE_{i,t} + \beta_{11} Organization\ Capital_{i,t} \\ & \times DEC_{i,t} \times \Delta SALE_{i,t} + \beta_{12} SIZE_{i,t} + \beta_{13} BLVE_{i,t} + \beta_{14} ROA_{i,t} \\ & + \beta_{15} MTB_{i,t} + \beta_{16} CAPEX_{i,t} + \beta_{17} TANGIBLE_{i,t} + + \beta_{18} SALEGROW_{i,t} \\ & + \beta_{19} STDSALE_{i,t} + \beta_{20} GMARGIN_{i,t} + \beta_{21} LOSS_{i,t} + \beta_{22} FIRMAGE_{i,t} \\ & + \nu_i + \omega_t + \varepsilon_{i,t}\end{aligned} \tag{5}$$

[8]We build upon the baseline model presented by Hwang et al. (2021), which is based on the modified inventory and production models of Roychowdhury (2006). Our findings remain robust even when alternative specifications are employed, such as the one used by Kroes and Manikas (2018).

In this equation, $\Delta INVT_{it}$ represents the change in total inventories divided by the lagged book value of total assets. $1/A_{it}$ is the inverse of lagged total assets, $SALE_{it}$ is total sales divided by lagged total assets, $\Delta SALE$ is the change in total sales divided by lagged total assets, and DEC_{it} is an indicator variable that takes the value of 1 if a firm experiences a sales decline in year t, and 0 otherwise. The other controls are similar to those included in Equation (4). The key parameter of interest is β_{11}, which reflects the relationship between organisation capital and the extent of asymmetric inventory adjustment. A positive coefficient indicates that an increase in organisation capital leads to lower inventory stickiness, while a negative coefficient indicates a higher degree of stickiness.

The results of estimating Equation (5) are presented in Table 8. In column (1), the baseline model includes the inverse of total assets, sales revenue, lagged and current sales changes, a sales decrease indicator and its interaction term with sales changes. The coefficient of $\Delta SALE_{it}$ is positive and significant, while the coefficient of $DEC_{it} \times \Delta SALE_{it}$ is negative and significant, indicating that firms adjust their inventory asymmetrically in response to sales increases and decreases.

To test our expectation related to stickiness, we extend the baseline model by including the interaction of organisation capital with $\Delta SALE$ and $DEC \times \Delta SALE$. As reported in columns (2) and (4), the coefficients of the three-way interaction term are positive and significant, suggesting that higher organisation capital is associated with lower of asymmetric inventory investment. Furthermore, the negative and significant coefficients of the two-way interaction between organisation capital and sales change suggest that high organisation capital leads to a smaller increase in inventory investment during sales growth, thus reducing the extent of inventory stickiness. These results remain robust after controlling for additional variables, as seen in columns (3) and (5).

In conclusion, the negative relationship between organisation capital and asymmetric inventory investment supports our 'innovation' hypothesis. This analysis also confirms that the association between organisation capital and inventory investment is not driven by specific measurements of inventory investment.

4.6.2 | Organisation capital, inventory efficiency and firm performance

Inventories play a crucial role in enabling sales and providing customer service (Barker et al., 2022; Cachon et al., 2019; Dubelaar et al., 2001). Lack of sufficient inventory can result in significant stockout costs and harm firm performance, while excessive inventory investment also incurs costs and can harm the firm. Efficient inventory management, which balances the costs of having too much or too little inventory, is crucial for superior firm performance (Barker et al., 2022; Capkun et al., 2009; Eroglu & Hofer, 2011; Mishra et al., 2013).

In this section, we explore the relationship between organisation capital, inventory efficiency and firm performance. To do so, we estimate the following model:

$$\begin{aligned} ROA_{i,t} = {} & \alpha_0 + \alpha_1 INVT\_EFF_{i,t-1} + \alpha_2 Organization\ Capital_{i,t-1} + \alpha_3 INVT\_EFF_{i,t-1} \\ & \times Organization\ Capital_{i,t-1} + X_{i,t-1}\gamma + \nu_i + \omega_t + \varepsilon_{i,t} \end{aligned} \quad (6)$$

where ROA_{it} represents firm performance for firm i in year t, and all the control variables used in the baseline Equation (4) are included. If increased inventory efficiency resulting from higher organisation capital positively (negatively) affects firm performance, then the coefficient α_3 is expected to be significantly positive (negative).

TABLE 8 Organisation capital and asymmetric inventory management.

	(1)	(2)	(3)	(4)	(5)
$1/A$	0.037***	0.099***	0.097***	0.047***	0.063***
	(0.011)	(0.011)	(0.012)	(0.011)	(0.012)
$SALE$	0.020***	0.033***	0.034***	0.021***	0.026***
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)
$L1\Delta SALE$	0.002	−0.010***	−0.011***	0.001	−0.004**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
$L1DEC$	−0.003***	−0.003***	−0.003***	−0.003***	−0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$L1DEC \times L1\Delta SALE$	0.008*	−0.001	−0.001	0.006	0.004
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
$\Delta SALE$	0.102***	0.076***	0.070***	0.097***	0.082***
	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)
DEC	−0.005***	−0.004***	−0.003***	−0.005***	−0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$DEC \times \Delta SALE$	−0.039***	−0.031***	−0.030***	−0.039***	−0.038***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
$OCTA$		−0.083***	−0.078***		
		(0.003)	(0.003)		
$OCTA \times \Delta SALE$		−0.070***	−0.067***		
		(0.006)	(0.006)		
$OCTA \times DEC \times \Delta SALE$		0.073***	0.076***		
		(0.010)	(0.010)		
$OCTC$				−0.004***	−0.002***
				(0.001)	(0.001)
$OCTC \times \Delta SALE$				−0.003***	−0.004***
				(0.001)	(0.001)
$OCTC \times DEC \times \Delta SALE$				0.006**	0.007***
				(0.002)	(0.002)
$SIZE$			0.002***		0.012***
			(0.001)		(0.001)
$BLVE$			0.020***		0.020***
			(0.003)		(0.003)
ROA			−0.018***		0.004
			(0.003)		(0.003)
MTB			0.001		0.001
			(0.000)		(0.000)
$CAPEX$			0.060***		0.067***
			(0.009)		(0.009)
$TANGIBLE$			−0.029***		−0.037***
			(0.004)		(0.004)

(Continues)

TABLE 8 (Continued)

	(1)	(2)	(3)	(4)	(5)
SALEGROW			0.004**		0.006***
			(0.002)		(0.002)
STDSALE			−0.002		−0.000
			(0.003)		(0.003)
GMARGIN			−0.000		−0.001***
			(0.000)		(0.000)
LOSS			−0.008***		−0.007***
			(0.001)		(0.001)
FIRMAGE			−0.003*		−0.014***
			(0.001)		(0.001)
Constant	−0.008***	−0.029	−0.035***	−0.012***	−0.042***
	(0.002)	(0.002)	(0.006)	(0.002)	(0.006)
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.345	0.376	0.379	0.347	0.360
Obs.	72,617	72,617	72,617	65,234	65,234

Note: This table reports the results of the impact of organisation capital on asymmetric inventory management. Standard errors are clustered at the firm level and reported in parentheses. All continuous variables are winsorised at the top and bottom 1%. Statistical significance is denoted by asterisks (*, **, ***) at the 10%, 5% and 1% levels, respectively. Variable definitions are provided in Table A1 in Appendix S1.

Table 9 presents the results of our analysis. In both columns (1) and (2), the coefficients of *INVT_EFF* are positive and significant, indicating that efficient inventory management leads to better firm performance, which aligns with prior research. More importantly, the interaction between organisation capital and inventory efficiency is positive and significant, providing evidence for our hypothesis that organisation capital reinforces the positive association between inventory efficiency and firm performance.

5 | CONCLUSION

This study examines the impact of organisation capital on inventory efficiency for a sample of US manufacturers from 1970 to 2021. The results indicate that firms with greater organisation capital have higher levels of inventory efficiency. This finding holds across various measures of both organisation capital and inventory efficiency, as well as for different model specifications. Further cross-sectional analysis is conducted to identify the mechanisms behind the relationship between organisation capital and inventory efficiency. The study finds that the positive relationship is stronger for industries with more complex innovation processes, for firms with higher employee intensity, employee turnover, and unionisation, and for financially constrained firms. Additionally, the study finds that a higher level of organisation capital has a mitigating effect on a firm's asymmetric inventory investment, and reinforces the positive relationship between inventory efficiency and firm performance. Taken together, our evidence suggests that manufacturers can achieve inventory efficiencies and, consequently, better firm performance by increasing organisation capital.

Our paper is subject to a limitation in that we do not examine the effects of specific elements of organisation capital on inventory efficiency due to limited available data, such as

TABLE 9 Organisation capital and subsequent firm performance.

	(1)	(2)
OCTA	−0.020**	
	(0.010)	
OCTC		−0.001
		(0.002)
OCTA×INVT_EFF	0.010*	
	(0.005)	
OCTC×INVT_EFF		0.003**
		(0.001)
INVT_EFF	0.013***	0.014***
	(0.001)	(0.002)
SIZE	−0.015***	−0.012***
	(0.002)	(0.002)
BLVE	−0.014*	−0.009
	(0.007)	(0.008)
MTB	0.011***	0.011***
	(0.002)	(0.002)
CAPEX	−0.002	0.006
	(0.018)	(0.020)
TANGIBLE	−0.027**	−0.022
	(0.013)	(0.014)
SALEGROW	0.005*	0.005
	(0.003)	(0.003)
STDSALE	0.006	0.003
	(0.008)	(0.009)
GMARGIN	0.009***	0.008***
	(0.002)	(0.002)
LOSS	−0.058***	−0.060***
	(0.002)	(0.002)
FIRMAGE	−0.002	−0.004
	(0.004)	(0.004)
Constant	0.088***	0.079***
	(0.013)	(0.014)
Year fixed effects	Yes	Yes
Firm fixed effects	Yes	Yes
Adj. R^2	0.580	0.590
Obs.	68,535	61,505

Note: This table reports the results of the impact of organisation capital on relation between inventory efficiency and operating performance. Standard errors are clustered at the firm level and reported in parentheses. All continuous variables are winsorised at the top and bottom 1%. Statistical significance is denoted by asterisks (*, **, ***) at the 10%, 5% and 1% levels, respectively. Variable definitions are provided in Table A1 in Appendix S1.

organisational culture, leadership styles and communication structures. This limitation identifies an interesting direction for future research, which is to examine the above-mentioned specific components of organisation capital.

Another direction for future research is to explore the impact of management team incentives, specifically whether firms incorporate synergistic interrelationships among executives. Organisation capital often involves effective leadership practices (e.g., Dessein & Prat, 2022). When executives work cohesively and collaboratively, it may enhance the overall leadership capital of the organisation. This, in turn, should contribute to a positive organisational culture, knowledge sharing and effective decision-making. For example, Bushman et al. (2016) focus on pay for performance sensitivities (PPS) and use dispersion in PPS across top executives as a proxy for the incentive design component shaped by an executive team's synergy profile. They find that firm performance is increasing (decreasing) in the residual when PPS dispersion is too low (too high). However, it remains unclear whether executive team's synergy can increase inventory efficiency, and thus firm performance.

Moreover, it is crucial to acknowledge that our study, like a significant portion of the existing corporate finance and accounting literature on organisation capital, predominantly focuses on US firms. While our findings provide valuable insights into the relationship between organisation capital and inventory efficiency within the US context, the generalisability of these findings to firms in other countries remains an open question. It is essential to recognise that legal and regulatory environment, institutional, structural and cultural attributes differ across borders, impacting how organisations accumulate and utilise their organisation capital. Future research could explore these cross-country variations more comprehensively, providing a nuanced understanding of how organisation capital operates in diverse international settings and contributing to a more robust and globally applicable body of knowledge in corporate finance and accounting.[9]

This research contributes to the growing body of knowledge concerning the significance of organisation capital in influencing corporate decisions and outcomes. It provides valuable insights for operations management by demonstrating the positive impact of organisation capital on inventory management. The findings highlight the pivotal role of organisation capital in optimising inventory management practices, which has implications for policymakers and investors. For example, from a public policy standpoint, the study suggests that implementing policies aimed at fostering the development of organisation capital within firms can promote economic growth. In addition, for investors, the research highlights that organisation capital is relevant to decision-making processes that determine future performance.

ACKNOWLEDGEMENTS

We sincerely appreciate Larelle Chapple (the handling Editor), the anonymous deputy editor, and the anonymous referee for their helpful comments and suggestions. We are also grateful to James Routledge at Hitotsubashi University, who provides highly valuable comments and professional editing during the revision of the manuscript. In the meantime, all possible errors are the responsibility of the authors. Open access publishing facilitated by University of South Australia, as part of the Wiley - University of South Australia agreement via the Council of Australian University Librarians.

DATA AVAILABILITY STATEMENT

Author elects to not share data.

[9]Several prior studies, such as Benson et al. (2014, 2015), Linnenluecke et al. (2017a, 2017b) and Linnenluecke et al. (2020), have conducted comprehensive reviews of accounting and finance publications over the last 50 years in the Asia Pacific region. They document that these works, concentrating on regional studies, have significantly influenced financial practices.

ORCID

Lei Xu https://orcid.org/0000-0001-5521-0185

REFERENCES

Ak, B.K. & Patatoukas, P.N. (2016) Customer-base concentration and inventory efficiencies: evidence from the manufacturing sector. *Production and Operations Management*, 25(2), 258–272.

Anderson, M.C., Banker, R.D. & Janakiraman, S.N. (2003) Are selling, general, and administrative costs 'sticky'? *Journal of Accounting Research*, 41(1), 47–63.

Atkeson, A. & Kehoe, P.J. (2005) Modeling and measuring organization capital. *Journal of Political Economy*, 113(5), 1026–1053.

Attig, N. & Cleary, S. (2014) Organizational capital and investment-cash flow sensitivity: the effect of management quality practices. *Financial Management*, 43(3), 473–504.

Axsäter, S. (2006) *Inventory control*, 2nd edition. New York: Springer.

Balakrishnan, R., Linsmeier, T.J. & Venkatachalam, M. (1996) Financial benefits from JIT adoption: effects of customer concentration and cost structure. *The Accounting Review*, 71, 183–205.

Barcos, L., Barroso, A., Surroca, J. & Tribó, J.A. (2013) Corporate social responsibility and inventory policy. *International Journal of Production Economics*, 143(2), 580–588.

Barker, J.M., Hofer, C., Hoberg, K. & Eroglu, C. (2022) Supplier inventory leanness and financial performance. *Journal of Operations Management*, 68(4), 385–407.

Belo, F., Gala, V.D., Salomao, J. & Vitorino, M.A. (2022) Decomposing firm value. *Journal of Financial Economics*, 143(2), 619–639.

Belo, F., Lin, X. & Vitorino, M.A. (2014) Brand capital and firm value. *Review of Economic Dynamics*, 17(1), 150–169.

Ben-Nasr, H. & Ghouma, H. (2018) Employee welfare and stock price crash risk. *Journal of Corporate Finance*, 48, 700–725.

Benson, K., Clarkson, P.M., Smith, T. & Tutticci, I. (2015) A review of accounting research in the Asia Pacific region. *Australian Journal of Management*, 40(1), 36–88.

Benson, K., Faff, R. & Smith, T. (2014) Fifty years of finance research in the Asia Pacific Basin. *Accounting and Finance*, 54(2), 335–363.

Bernstein, S. (2015) Does going public affect innovation? *The Journal of Finance*, 70(4), 1365–1403.

Blinder, A.S. & Maccini, L.J. (1991) Taking stock: a critical assessment of recent research on inventories. *Journal of Economic Perspectives*, 5(1), 73–96.

Bushman, R.M., Dai, Z. & Zhang, W. (2016) Management team incentive: dispersion and firm performance. *The Accounting Review*, 91(1), 21–45.

Cachon, G.P., Gallino, S. & Olivares, M. (2019) Does adding inventory increase sales? Evidence of a scarcity effect in US automobile dealerships. *Management Science*, 65(4), 1469–1485.

Capkun, V., Hameri, A.P. & Weiss, L.A. (2009) On the relationship between inventory and financial performance in manufacturing companies. *International Journal of Operations & Production Management*, 29(8), 789–806.

Carpenter, R.E., Fazzari, S.M., Petersen, B.C., Kashyap, A.K. & Friedman, B.M. (1994) Inventory investment, internal-finance fluctuations, and the business cycle. *Brookings Papers on Economic Activity*, 1994(2), 75–138.

Chen, H., Frank, M.Z. & Wu, O.Q. (2005) What actually happened to the inventories of American companies between 1981 and 2000? *Management Science*, 51(7), 1015–1031.

Chen, H.J., Kacperczyk, M. & Ortiz-Molina, H. (2011) Labor unions, operating flexibility, and the cost of equity. *Journal of Financial and Quantitative Analysis*, 46(1), 25–58.

Chen, Y., Podolski, E.J. & Veeraraghavan, M. (2015) Does managerial ability facilitate corporate innovative success? *Journal of Empirical Finance*, 34, 313–326.

Chyz, J.A., Leung, W.S.C., Li, O.Z. & Rui, O.M. (2013) Labor unions and tax aggressiveness. *Journal of Financial Economics*, 108(3), 675–698.

Corrado, C., Hulten, C. & Sichel, D. (2009) Intangible capital and US economic growth. *Review of Income and Wealth*, 55(3), 661–685.

Danielova, A., Francis, B.B., Teng, H. & Wu, Q. (2023) The effect of organization capital on the cost of bank loans. *Journal of Financial and Quantitative Analysis*, 58(6), 2579–2616.

Dasgupta, S., Li, E.X. & Yan, D. (2019) Inventory behavior and financial constraints: theory and evidence. *The Review of Financial Studies*, 32(3), 1188–1233.

Demerjian, P., Lev, B. & McVay, S. (2012) Quantifying managerial ability: a new measure and validity tests. *Management Science*, 58(7), 1229–1248.

Dess, G.G. & Shaw, J.D. (2001) Voluntary turnover, social capital, and organizational performance. *Academy of Management Review*, 26(3), 446–456.

Dessein, W. & Prat, A. (2022) Organizational capital, corporate leadership, and firm dynamics. *Journal of Political Economy*, 130(6), 1477–1536.
Dubelaar, C., Chow, G. & Larson, P.D. (2001) Relationships between inventory, sales, and service in a retail chain store operation. *International Journal of Physical Distribution and Logistics Management*, 31(2), 96–108.
Eisfeldt, A.L. & Papanikolaou, D. (2013) Organization capital and the cross-section of expected returns. *The Journal of Finance*, 68(4), 1365–1406.
Eisfeldt, A.L. & Papanikolaou, D. (2014) The value and ownership of intangible capital. *The American Economic Review*, 104(5), 189–194.
Eroglu, C. & Hofer, C. (2011) Lean, leaner, too lean? The inventory-performance link revisited. *Journal of Operations Management*, 29(4), 356–369.
Fama, E.F. & French, K.R. (1997) Industry costs of equity. *Journal of Financial Economics*, 43(2), 153–193.
Feng, M., Li, C., McVay, S.E. & Skaife, H. (2015) Does ineffective internal control over financial reporting affect a firm's operations? Evidence from firms' inventory management. *The Accounting Review*, 90(2), 529–557.
Francis, B., Mani, S.B., Sharma, Z. & Wu, Q. (2021) The impact of organization capital on firm innovation. *Journal of Financial Stability*, 53, 100829.
Ghaly, M., Dang, V.A. & Stathopoulos, K. (2015) Cash holdings and employee welfare. *Journal of Corporate Finance*, 33, 53–70.
Hall, R. (1983) *Zero inventories*. Homewood, IL: Dow Jones-Irwin.
Hamm, S.J., Jung, B., Lee, W.J. & Yang, D.G. (2022) Organized labor and inventory stockpiling. *The Accounting Review*, 97(2), 241–266.
Hasan, M. & Cheung, A. (2018) Organization capital and firm life cycle. *Journal of Corporate Finance*, 48, 556–578.
Hasan, M.M. & Uddin, M.R. (2022) Do intangibles matter for corporate policies? Evidence from organization capital and corporate payout choices. *Journal of Banking & Finance*, 135, 106395.
Hassan, M.K. & Karim, M.S. (2022) *Corporate culture and inventory behavior*. Available from: https://ssrn.com/abstract=4110229
Huson, M. & Nanda, D. (1995) The impact of just-in-time manufacturing on firm performance in the US. *Journal of Operations Management*, 12, 297–310.
Hwang, I., Jung, T., Lee, W.J. & Yang, D.G. (2021) Asymmetric inventory management and the direction of sales changes. *Contemporary Accounting Research*, 38(1), 676–706.
Klasa, S., Maxwell, W.F. & Ortiz-Molina, H. (2009) The strategic use of corporate cash holdings in collective bargaining with labor unions. *Journal of Financial Economics*, 92(3), 421–442.
Klasa, S., Ortiz-Molina, H., Serfling, M. & Srinivasan, S. (2018) Protection of trade secrets and capital structure decisions. *Journal of Financial Economics*, 128(2), 266–286.
Kroes, J.R. & Manikas, A.S. (2018) An exploration of 'sticky' inventory management in the manufacturing industry. *Production Planning & Control*, 29(2), 131–142.
Lee, H.H., Zhou, J. & Hsu, P.H. (2015) The role of innovation in inventory turnover performance. *Decision Support Systems*, 76, 35–44.
Leung, W.S., Mazouz, K., Chen, J. & Wood, G. (2018) Organization capital, labor market flexibility, and stock returns around the world. *Journal of Banking & Finance*, 89, 150–168.
Lev, B. & Radhakrishnan, S. (2005) The valuation of organization capital. In: Corrado, C., Haltiwanger, J. & Sichel, D. (Eds.) *Measuring capital in the new economy*. Chicago, IL: University of Chicago Press, pp. 73–110.
Lev, B., Radhakrishnan, S. & Zhang, W. (2009) Organization capital. *Abacus*, 45(3), 275–298.
Li, K., Qiu, B. & Shen, R. (2018) Organization capital and mergers and acquisitions. *Journal of Financial and Quantitative Analysis*, 53(4), 1871–1909.
Lieberman, M.B., Helper, S. & Demeester, L. (1999) The empirical determinants of inventory levels in high-volume manufacturing. *Production and Operations Management*, 8(1), 44–55.
Linnenluecke, M.K., Birt, J., Chen, X., Ling, X. & Smith, T. (2017a) Accounting research in Abacus, A&F, AAR, and AJM from 2008–2015: a review and research agenda. *Abacus*, 53(2), 159–179.
Linnenluecke, M.K., Chen, X., Ling, X., Smith, T. & Zhu, Y. (2017b) Research in finance: a review of influential publications and a research agenda. *Pacific-Basin Finance Journal*, 43, 188–199.
Linnenluecke, M.K., Marrone, M. & Singh, A.K. (2020) Sixty years of *Accounting & Finance*: a bibliometric analysis of major research themes and contributions. *Accounting and Finance*, 60(4), 3217–3251.
Liu, Y. & Kim, W. (2020) *Can stakeholder orientation improve inventory efficiency? Evidence from a quasi-natural experiment*. European Corporate Governance Institute – finance working paper no. 664/2020. Available from: https://ssrn.com/abstract=3547940
Lu, C., Routledge, J., Chan, K.C. & Li, T. (2023) Policy uncertainty and inventory behavior: evidence from the US manufacturing sector. *Economics and Politics*, 35(3), 919–948.
Lustig, H., Syverson, C. & Van Nieuwerburgh, S. (2011) Technological change and the growing inequality in managerial compensation. *Journal of Financial Economics*, 99(3), 601–627.

Matsa, D.A. (2010) Capital structure as a strategic variable: evidence from collective bargaining. *The Journal of Finance*, 65(3), 1197–1232.
Mishra, S., Modi, S.B. & Animesh, A. (2013) The relationship between information technology capability, inventory efficiency, and shareholder wealth: a firm-level empirical analysis. *Journal of Operations Management*, 31(6), 298–312.
Modi, S.B. & Mishra, S. (2011) What drives financial performance–resource efficiency or resource slack?: Evidence from US based manufacturing firms from 1991 to 2006. *Journal of Operations Management*, 29(3), 254–273.
Monden, Y. (1981a) What makes the Toyota production system really tick. *Industrial Engineering*, 13(1), 36–45.
Monden, Y. (1981b) Toyota production smoothing. 2. How Toyota shortened supply lot production time, waiting time and conveyance time. *Industrial Engineering*, 13(9), 22–30.
Peters, R.H. & Taylor, L.A. (2017) Intangible capital and the investment-q relation. *Journal of Financial Economics*, 123(2), 251–272.
Prescott, E.C. & Visscher, M. (1980) Organization capital. *Journal of Political Economy*, 88(3), 446–461.
Reid, R.D. & Sanders, N.R. (2005) *Operations Management: An Integrated Approach*, 2nd edition. Hoboken, NJ: John Wiley & Sons.
Rotemberg, J.J. & Saloner, G. (1989) The cyclical behavior of strategic inventories. *Quarterly Journal of Economics*, 104(1), 73–97.
Roychowdhury, S. (2006) Earnings management through real activities manipulation. *Journal of Accounting and Economics*, 42(3), 335–370.
Schonberger, R.J. (2007) Japanese production management: an evolution—with mixed success. *Journal of Operations Management*, 25(2), 403–419.
Suzaki, K. (1987) *New manufacturing challenge: techniques for continuous improvement*. New York: Simon and Schuster.
Swafford, P.M., Ghosh, S. & Murthy, N.N. (2006) A framework for assessing value chain agility. *International Journal of Operations & Production Management*, 26(2), 118–140.
Venieris, G., Naoum, V.C. & Vlismas, O. (2015) Organisation capital and sticky behaviour of selling, general and administrative expenses. *Management Accounting Research*, 26, 54–82.
Vitorino, M.A. (2014) Understanding the effect of advertising on stock returns and firm value: theory and evidence from a structural model. *Management Science*, 60(1), 227–245.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Li, T., Lu, C. & Xu, L. (2024) The impact of organisation capital on inventory efficiency. *Accounting & Finance*, 64, 3751–3779. Available from: https://doi.org/10.1111/acfi.13272