Economics Letters 253 (2025) 112400

Contents lists available at ScienceDirect

Economics Letters

journal homepage: www.elsevier.com/locate/ecolet

# Organization capital and trade credit access

Siqi Zou [a], Shan Li [b], Joseph Sowahfio Sowah [c,*]

[a] Economics and Management School, Wuhan University, PR China
[b] Institute for Financial and Accounting Studies, Xiamen University, PR China
[c] School of Business Administration, Jimei University, PR China

ARTICLE INFO

*JEL Classification:*
G32

*Keywords:*
Organization capital
Trade credit
Liquidity needs

ABSTRACT

We present evidence of a positive link between organization capital and access to trade credit and offer an alternative perspective to the agency view. We show that firms with high organizational capital that secures greater trade credit are also more likely to grant credit to their customers, facilitating the flow of trade credit along the supply chain.

## 1. Introduction

Does a customer's organization capital (OC), defined as accumulated knowledge, processes, skills, systems, and designs that integrate human skills and physical capital to enhance firm performance (Evenson and Westphal, 1995; Lev et al., 2009), affect its trade credit access? Khoo and Cheung (2023) report a negative effect, drawing on the agency view of OC (Eisfeldt and Papanikolaou, 2013) that emphasizes its dependence on key talent. According to this view, OC increases cash flow uncertainty and default risk if key employees leave, which may discourage suppliers from extending trade credit to such customers.

Our findings offer an alternative perspective. Building on earlier research that conceptualizes OC as firm-specific and embedded in structures, databases and routines rather than individual employees (e.g., Prescott and Visscher, 1980; Lev et al., 2009), we highlight that OC can serve as a stable repository of skills and information that remains in the firm even when key employees depart (Daft and Weick, 1984; Youndt et al., 2004).

Against this backdrop, we contend that the codified nature of OC allows suppliers to access and verify relevant information more easily, potentially alleviating concerns about firms' information opacity and moral hazard. This increased transparency may motivate suppliers to extend more trade credit to OC-intensive customers. Additionally, high OC firms often leverage advanced technology and business intelligence, boosting profitability and lowering default risk (Lev et al., 2009). These characteristics provide further incentives for suppliers to offer more trade credit, rather than less, to such firms.

We investigate this prediction using 83,215 firms-year observations from U.S. publicly listed firms from 1981 to 2020. Whereas Khoo and Cheung (2023) focus on trade credit in marginal terms,[1] we measure trade credit as accounts payable and net accounts payable scaled by total assets. Following prior studies (Eisfeldt and Papanikolaou, 2013; Gao et al., 2021), we measure organization capital as capitalized SG&A expenses. Our analysis reveals a statistically strong, positive relationship between organization capital and trade credit access, supporting the argument that OC-intensive customers are better positioned to obtain more trade credit. Economically, this corresponds to an estimated 36.61 % rise in trade credit access for OC-intensive firms.

Our research complements Khoo and Cheung's (2023) agency-based view that emphasizes the potential risks associated with OC's talent-dependence. Whereas Khoo and Cheung highlight circumstances in which OC-intensive customers could face reduced trade credit access, we offer compelling evidence that OC's codified processes and profit-enhancing abilities can incentivize suppliers to grant greater trade credit to OC-intensive firms. By focusing on the level of trade credit use rather than on marginal changes, we offer a more stable, comprehensive perspective.

Our study also contributes to the literature examining firm-level determinants of trade credit demand (Kong et al., 2020; Li et al., 2024; Dak-Adzaklo, 2025). In addition, we expand the growing body of

* Corresponding author at: 185 Yinjiang Road, Jimei University, Jimei District, Xiamen, Fujian Province, PR China.
*E-mail address:* sowahfiosowah@jmu.edu.cn (J.S. Sowah).

[1] Khoo and Cheung (2023) measure trade credit using change in trade credit extended by suppliers. Specifically, they focus on a customer's incremental use of trade credit, defined as the difference in accounts payable between time *t* and *t-1*, scaled by total purchases and multiplied by 100.

https://doi.org/10.1016/j.econlet.2025.112400
Received 12 March 2025; Received in revised form 2 May 2025; Accepted 17 May 2025
Available online 18 May 2025

research on OC's corporate implications. Prior studies link OC to corporate innovation (Francis et al., 2021), acquisitions (Li et al., 2018), cost reductions (Attig and Ghoul, 2018) and tax avoidance (Hasan et al., 2021). Our study builds on this literature by highlighting OC's role in facilitating trade credit access.

## 2. Empirical design

### 2.1. Data and sample

Our sample includes all Compustat corporations from 1981 to 2020. We focus on manufacturing firms (SIC 2000–3999), where trade credit is most relevant (Bougheas et al., 2009; Levine et al., 2018).[2] To calculate trade credit access (*AP/TA* or *AP_Net*) and organization capital, firms must have non-missing total assets, SG&A expenses, and accounts payable, with non-negative total assets. Following these filters, our final sample comprises 83,215 U.S. firm-years. We winsorize all continuous variables at the 1 % level at both ends to mitigate outliers.

### 2.2. Organization capital

Following previous studies (Eisfeldt and Papanikolaou, 2013; Gao et al., 2021), we measure a customer's organization capital as a proportion of its selling, general and administrative expenses (SG&A), applying the perpetual inventory method:

$$OC_{i,t} = (1-\delta_0)OC_{i,t-1} + \left(SG\&A_{i,t}\right)/CPI_t \quad (1)$$

where: $OC_{i,t}$ indexes firm $i$'s stock of organization capital at time $t$; $\delta_0$ indexes the depreciation rate of organization capital;, $SG\&A_{i,t}$ proxies for the firms' selling, general and administrative expenses at time $t$; and *CPI* is the consumer price index. The following equation estimates the initial stock of organization capital:

$$OC_{i,t_0} = \frac{\left(SG\&A_{i,t_1}\right)}{g+\delta_0}, \quad (2)$$

where: g indexes the growth in the flow of organization capital, calculated as the mean growth of firm-level SG&A expenditure. We follow Eisfeldt and Papanikolaou (2013) and Gao et al. (2021), and use a depreciation rate ($\delta o$) of 15 % for the initial stock of organization capital. In a sensitivity test (see Online Appendix (OA) 6, Panels A and B)), we use alternative rates and measures of organization capital.

### 2.3. Trade credit

Motivated by prior research, we measure trade credit usage as accounts payable (*AP/TA*) or net payables (*AP_Net/TA*), each scaled by total assets (Petersen and Rajan 1997; Giannetti et al., 2011; Kong et al., 2020). We also employ two other measures for trade credit access in robustness tests as shown in OA6 Panel C, Columns (3)–(4).

### 2.4. Empirical model

We use the following model to examine the link between organization capital and trade credit access:

$$TCA_t = \alpha_0 + \beta_1 OC_t + \sum_j \beta_j Controls_t + \sum_k \beta_k Fixed\ Effects\ s + \varepsilon_t, \quad (3)$$

where: $TCA_t$ represents *AP/TA* or *AP_Net/TA*, our proxies for trade credit access; $OC_t$ indexes organization capital; *Controls* comprises an array of firm-level characteristics that have been shown to influence trade credit (Petersen and Rajan 1997; Li e t al., 2020). These include *Size, Profitability, Leverage, Cash, Sales Growth, Firm Age, Tangibility*, and *R&D*. We define all these variables in OA1. We present the summary statistics in Table 1, which shows that the average firm has an organization capital of 2.342. If the non-agency argument holds, we expect $\beta_1$ to be significantly positive. We find that a univariate analysis presented in OA3 supports this, signaling a positive relationship between OC and trade credit. The regressions include year and industry fixed effects, adjusting the standard errors in all regressions clustered at the firm level.

## 3. Empirical results

Table 2 presents the main results on the relationship between organization capital and trade credit access (Columns (1)–(2)), and its underlying channels (Columns (3)–(10)). We find a significantly positive link between organization capital and trade credit access across Columns (1)–(10). Consistent with our prediction, OC improves trade credit access through enhanced information transparency and profitability (Columns (3)–(10)). The main results survives a battery of endogeneity-mitigating and robustness tests that are presented in OA4 and OA6, respectively. Economically, this finding corresponds to about a 36.61 % increase in trade credit receipts for OC-intensive firms.[3]

Table 3 shows the role of liquidity needs in supplier-customer relationships. We conjecture that high OC firms, securing significant trade credit from suppliers, will extend more credit to their customers. Research suggests that customers with greater liquidity needs rely more on trade credit (Raddatz, 2006). Therefore, given OC's value-enhancing traits that enable firms to obtain more trade credit from suppliers, we expect this effect to be stronger for firms with higher liquidity needs. Furthermore, if OC-intensive firms secure more trade credit, the resulting increase in liquidity should, all else being equal, enable them to extend more credit to their customers. Therefore, we expect that OC also increases accounts receivable.

We proxy the liquidity need with total inventories over cost of goods sold (Levine et al., 2018) and gauge trade credit provision as accounts receivable over total assets (Li et al., 2020). Our findings confirm that the positive OC-trade credit link is stronger for high-liquidity firms, allowing them to offer more trade credit downstream. Overall, OC facilitates trade credit flow along the supply chain.

## 4. Conclusion

We examine the link between organization capital and trade credit

**Table 1**
Summary statistics.

| Variable | *N* | *Mean* | *Std. Dev.* | *p25* | *Median* | *p75* |
|---|---|---|---|---|---|---|
| *AP/TA* | 83,215 | 0.112 | 0.151 | 0.048 | 0.079 | 0.126 |
| *AP_Net/TA* | 83,215 | −0.065 | 0.172 | −0.136 | −0.075 | −0.020 |
| *OC/TA* | 83,215 | 2.342 | 3.134 | 0.829 | 1.464 | 2.517 |
| *Size* | 83,215 | 4.645 | 2.405 | 2.943 | 4.575 | 6.334 |
| *Profitability* | 83,215 | −0.114 | 0.787 | −0.072 | 0.044 | 0.114 |
| *Leverage* | 83,215 | 0.289 | 0.429 | 0.050 | 0.207 | 0.375 |
| *Cash* | 83,215 | 0.167 | 0.196 | 0.024 | 0.086 | 0.240 |
| *Sales Growth* | 83,215 | −1.259 | 1.409 | −2.215 | −1.077 | 1.711 |
| *Firm Age* | 83,215 | 11.818 | 9.083 | 5.000 | 9.000 | 17.000 |
| *Tangibility* | 83,215 | 0.242 | 0.172 | 0.106 | 0.207 | 0.342 |
| *R&D* | 83,215 | 0.063 | 0.131 | 0.000 | 0.018 | 0.074 |

[2] In a sensitivity test, we expanded the sample to include both manufacturing and non-manufacturing firms (except those in the financial sector, i.e., SIC code 6000-6999). See Columns (7)-(8), Panel C, OA6.

[3] We conducted several cross-sectional analyses, investigating the moderating role of agency problems, financial constraints, customer market power and growth potential in the relationship between OC and trade credit. The results are reported in OA5.

**Table 2**
Organization capital and trade credit access and the underlying channels.

| Analysis type = | Baseline results | | Channel test | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Dependent var. = | *AP/TA* | *AP_Net/TA* | *AP/TA* | | *AP_Net/TA* | *AP/TA* | | | *AP_Net/TA* | |
| Channel = | | | Info-Opacity | | | Profitability | | | | |
| | | | \|DACC\| | E-Smooth | \|DACC\| | E-Smooth | ROE | ATR | ROE | ATR |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| *OC/TA* | 0.013*** | 0.010*** | 0.010*** | 0.009*** | 0.007*** | 0.003** | 0.009*** | 0.010*** | 0.006*** | 0.011*** |
| | (15.591) | (10.961) | (10.886) | (7.327) | (6.364) | (2.477) | (9.698) | (7.934) | (5.592) | (7.943) |
| *Info-Opacity* | | | −0.007*** | −0.014*** | −0.014*** | −0.010*** | | | | |
| | | | (−2.980) | (−5.568) | (−5.597) | (−3.328) | | | | |
| *OC/TA × Info-Opacity* | | | 0.005*** | 0.006*** | 0.006*** | 0.008*** | | | | |
| | | | (4.574) | (4.378) | (4.721) | (5.234) | | | | |
| *Profitability* | | | | | | | 0.005** | 0.040*** | −0.017*** | −0.027*** |
| | | | | | | | (2.082) | (16.632) | (−6.384) | (−9.581) |
| *OC/TA × Profitability* | | | | | | | 0.008*** | 0.002* | 0.009*** | 0.001 |
| | | | | | | | (7.298) | (1.721) | (7.708) | (0.625) |
| Controls earlier named | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year & Industry FEs | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| #Observations | 83,215 | 83,215 | 83,215 | 79,931 | 83,215 | 79,931 | 83,199 | 83,194 | 83,199 | 83,194 |
| Adj. R-squared | 0.526 | 0.504 | 0.528 | 0.522 | 0.505 | 0.500 | 0.538 | 0.543 | 0.510 | 0.508 |

This table reports the results for the baseline model and channel tests. T-statistics reported in parentheses are calculated using robust standard errors clustered at the firm level. ***, ** and * indicate significance at the 1 %, 5 %, and 10 % levels, respectively. See Online Appendix for detailed definition of all variables. FE = Fixed effects.

**Table 3**
Liquidity needs and supply chain analysis.

| Dependent var. = | *AP/TA* | *AP_Net/TA* | *AR/TA* |
|---|---|---|---|
| | (1) | (2) | (3) |
| *OC/TA* | 0.010*** | 0.009*** | 0.003*** |
| | (9.702) | (8.135) | (7.200) |
| *High Liquidity* | 0.017*** | −0.015*** | |
| | (7.215) | (−5.447) | |
| *OC/TA × High Liquidity* | 0.004*** | 0.002 | |
| | (3.696) | (1.239) | |
| *Size* | −0.005*** | 0.002*** | −0.006*** |
| | (−10.100) | (2.893) | (−11.365) |
| *Profitability* | −0.072*** | −0.098*** | 0.023*** |
| | (−19.152) | (−23.549) | (14.030) |
| *Leverage* | 0.052*** | 0.069*** | −0.013*** |
| | (9.112) | (11.322) | (−6.052) |
| *Cash* | −0.131*** | 0.111*** | −0.233*** |
| | (−25.247) | (19.029) | (−56.456) |
| *Sales Growth* | −0.000 | 0.004*** | −0.005*** |
| | (−1.455) | (12.141) | (−17.020) |
| *Firm Age* | −0.002*** | −0.003*** | 0.001*** |
| | (−7.354) | (−9.915) | (3.983) |
| *Tangibility* | −0.072*** | 0.141*** | −0.195*** |
| | (−11.740) | (19.821) | (−32.129) |
| *R&D* | −0.058*** | −0.108*** | 0.033*** |
| | (−3.748) | (−6.490) | (4.640) |
| Year FE | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes |
| #Observations | 83,215 | 83,215 | 83,215 |
| Adj. R-squared | 0.535 | 0.505 | 0.327 |

using a sample of publicly traded U.S. firms from 1981 to 2021. Our findings reveal that high-OC firms secure greater trade credit, supporting a non-agency perspective and strengthening the literature on the topic. The results hold across multiple robustness tests. Additionally, we observe that OC enhances the trade credit flow along the supply chain by improving firms' liquidity, which enables them to extend more credit to their buyers. In sum, we offer a comprehensive understanding of organization capital's role in suppliers' trade credit policies.

This table reports the summary statistics of the variables used in our main analysis.

This table presents the regression results for the relationship between organization capital and trade credit access conditional on customer liquidity needs and their trade credit provision to their buyers. T-statistics reported in parentheses are calculated using robust standard errors clustered at the firm level. ***, **, and * indicate significance at the 1 %, 5 %, and 10 % levels, respectively. See Online Appendix for detailed definitions of all variables. FE = Fixed effects.

## Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.econlet.2025.112400.

## Data availability

Data will be made available on request.

## References


Attig, A., El Ghoul, S., 2018. Organization capital and the cost of equity financing in medium-sized manufacturing firms. Contemp. Account. Res. 35, 1616–1644.

Bougheas, S., Mateut, S., Mizen, P., 2009. Corporate trade credit and inventories: new evidence of a trade-off from accounts payable and receivable. J. Bank. Finance 33, 300–307.

Daft, R.L., Weick, K.E., 1984. Toward a model of organizations as interpretation systems. Acad. Manag. Rev. 9, 284–295.

Dak-Adzaklo, A., 2025. International competition laws and trade credit financing. Econ. Lett. 247, 112097.

Eisfeldt, A.L., Papanikolaou, D., 2013. Organization capital and the cross-section of expected returns. J. Finance 68, 1365–1406.

Evenson, R.E., Westphal, L.E., 1995. Technological change and technology strategy. Handb. Dev. Econ. 3, 2209–2299.

Francis, B., Mani, S.B., Sharma, Z., Wu, Q., 2021. The impact of organization capital on firm innovation. J. Financ. Stab. 53, 100829.

Gao, M., Leung, H., Qui, B., 2021. Organization capital and executive performance incentives. J. Bank. Finance 123, 106017.

Giannetti, M., Burkart, M., Ellingsen, T., 2011. What you sell is what you lend? Explaining trade credit contracts. Rev. Financ. Stud. 24, 1261–1298.

Hasan, M.M., Lobo, G.J., Qiu, B., 2021. Organizational capital, corporate tax avoidance, and firm value. J. Corp. Finance 70, 102050.

Khoo, J., Cheung, A., 2023. The hidden cost of organization capital: evidence from trade credit. Br. Account. Rev., 101238

Kong, D., Pan, Y., Tian, G.G., Zhang, P., 2020. CEOs' hometown connections and access to trade credit: evidence from China. J. Corp. Finance 62, 101574.

Lev, B., Radhakrishnan, S., Zhang, W., 2009. Organizational capital. Abacus 45, 275–298.

Levine, R., Lin, C., Xie, W., 2018. Corporate resilience to banking crises: the roles of trust and trade credit. J. Financ. Quant. Anal. 53, 1441–1477.

Li, K., Qiu, B., Shen, R., 2018. Organization capital and mergers and acquisitions. J. Financ. Quant. Anal. 53, 1871–1909.

Li, P., Yao, S., Fan, L., Yin, S., Du, H., 2024. Government certified environmental labels and trade credit: evidence from green factories. Econ. Lett. 244, 112008.

Li, X., Ng, J., Saffar, W., 2020. Financial reporting and trade credit: evidence from mandatory IFRS adoption. Contemp. Account. Res. 38, 96–128.
Petersen, M.A., Rajan, R.G., 1997. Trade credit: theories and evidence. Rev. Financ. Stud. 10, 610–691.
Prescott, E.C., Visscher, M., 1980. Organization capital. J. Political Econ. 88, 446–461.
Raddatz, C., 2006. Liquidity needs and vulnerability to financial underdevelopment. J. Financ. Econ. 80, 677–722.
Youndt, M.A., Subramaniam, M., Snell, S.A., 2004. Intellectual capital profiles: an examination of investments and returns. J. Manag. Stud. 41, 335–361.