

Determinants of Trade Credit in Emerging Markets: Firm Behavior in Focus

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Abstract

The aim of the study is to examine the determinants of trade credit by utilizing firm-level panel data from non-financial firms in emerging Asian markets over the period 2011–2022. The study explores how firm-specific factors affect trade credit decisions from the lens of agency and signalling theories. All variables are computed from Compustat database to ensure reliability and consistency. To overcome potential endogeneity issues, Generalized Method of Moments (GMM) econometric technique is used to identify the primary drivers of various forms of trade credit. Consistent with signaling and agency theories the study found significant association across all forms of trade credit. Profitability revealed a positive association with provision and net trade credit, while negative associated with trade credit acquisition. Assets tangibility revealed positive association with net trade credit while negatively with acquisition. Leverage was positively associated with both provision and acquisition while negatively with net trade credit. Similarly, operating growth showed a negative association with provision of trade credit. while, R&D was positively associated. Capital expenditures was negatively associated with both provision and acquisition, but positively with net trade credit. Finally, firm size showed a positive association with provision and acquisition, and negative with net trade credit. The findings offer practical insights for managers and policymakers in emerging Asian markets. By identifying the key determinants of trade credit, policymakers can devise strategies to improve financial infrastructures and reduce information asymmetry in emerging markets. By understanding the firm level drivers of trade credit, the managers can effectively formulate credit risk management and financial planning. Overall, the study contributes to literature by providing new empirical evidence from the context of emerging economies.

Key Words: Emerging Markets, Tangibility, R&D, Trade Credit, GMM

Introduction

Trade credit is an imperative form of short-term financing for businesses and their supply-chain partners. Its role and importance could be determined from the empirical statistics that trade credit volume is three times greater than bank loans and fifteen times more than commercial papers (Barrot, 2016). Compared to other forms of financing, trade credits offer many benefits, most notably, less complicated procedures and lower costs contribute to the liquidity and profitability of the firm. Moreover, the trade credit records assist in more informed financing and investment

decisions (Boubaker, Chebbi, & Grira, 2020). Further, due to an inefficient financial system, firms in developing economies usually rely on trade credit as a significant source of finance and place at top priority in their capital structures (Liu, Wang, & Shou, 2020). The role and importance of trade credit in the financial setting could be imagined from the statistics provided by the International Bank of Settlements (2014), which show that two-thirds of global trade is carried out on trade credit arrangements. Further studies also explained that trade credit is a major component of their financing strategies and occupies a larger space in the firm's liabilities, i.e., 35% of the total liabilities (Dong & Liu, 2022). Although the share and role are prominent, the unmet demand for trade credit still exists in advanced and emerging markets. Statistics show that the unmet demand for trade finance is around 1.1 trillion dollars only in Asia (Beck, Shinzaki, Ferino, Zhang, & Mangampat, 2013). The concept of trade credit could be employed in two ways, i.e., using trade credit (Accounts payable), acquiring goods or services on credit, and providing trade credit (Accounts receivable), selling goods or services on credit. However, some scholars reported that the provision of trade credit is contingent upon its availability (Shang, 2020). The argument complements suppliers' redistribution view of financial credit to trade credit. The concept holds that the availability of trade credit leads to more trade credit extension by the suppliers. The suppliers apply the credit maturity matching concept to offer trade credit to their customers. Due to its significance in company strategic decisions, trade credit has drawn the attention from academics, business professionals, and policymakers. Numerous studies have sought to uncover critical variables associated with trade credits and have reported variations in the extent and amount of usage and provision of trade credit in the different regions. For example audit quality (Saeed, Munir, & Zafar, 2024), liquidity instrument (Astvansh & Jindal, 2022), firm value (M. D. Hill, Kelly, & Venkiteshwaran, 2015), business strategy (Cao, Chen, & Lee, 2022), assets rediployability (Hasan & Alam, 2022), competitive forces (M. Hill, Hill, Preve, & Sarria-Allende, 2019), stock liquidity (Shang, 2020), return (Machokoto, Gyimah, & Ibrahim, 2022) and growth & cost (Tang & Moro, 2020). However, previous studies attempted to focus on one or two determinants of trade credit provision or acquisition. The present study attempts to fill the gap by identifying more determinants of all form of trade credit. Moreover, previous studies attempted to explore the determinants of trade credit in developed economies, while, this study adding evidences from emerging markets. Grounding on signaling and agency theories, the study found significant association of all variables across all forms of trade credits. Profitability measured as return on assets revealed a positive association with provision and net trade credit. The results affirmed signalling theory, denoting higher profit sends positive signals to all stakeholders, as a result, the managers enhance credit supply to their customers for profitability and sales sustainability. In contrast negative association with trade credit acquisition further affirmed that profitable firms rely lesser on supplier as a source of financing. Assets tangibility emerged as an important determinant and revealed positive association with net trade credit while negatively with acquisition. Similarly, leverage revealed a significant impact on both provision and acquisition, while negatively associated with net trade credit. Operating growth showed a negative association with provision of trade credit. The results holds that the firms reduce trade credit supply to their customers and divert their investment to finance growth requirements. Positive association of R&D with provision of trade credit was seen. Capital expenditures were negatively associated with both provision and acquisition, but positively with net trade credit. Finally, firm size showed a positive association with provision and acquisition, and negative with net trade credit. The findings offer practical insights for managers and policymakers in emerging Asian markets. The emerging markets are known for less developed financial markets and weak governance structures. By identifying the key determinants of trade credit, policymakers can device strategies to improve financial infrastructures and reduce information asymmetry in emerging markets. The

improvements in financial infrastructure will lead to development of formal credit channels and thus lead to business developments. By understanding the firm level drivers of trade credit, the managers can effectively formulate credit risk management and financial planning. Moreover, the results could be used for allocation funds to the firm specific determinants as per their association with provision, acquisition and net trade credits. The study contributes to literature by exploring more determinants of trade credit. Overall, the study contributes to literature by providing new empirical evidence from the context of emerging economies. The remaining paper is organised as follows. Literature reviews and hypothesis developments is discussed in section 2. Section 3 elaborates the methodology, sample, econometric techniques and variables description. The results and discussion are explained in section 4. The conclusion and contributions are given in section 5.

Literature Review

Considering the role and importance of trade credits in financial settings and business development various studies attempted to examine the determinants of trade credits in both developed and developing economies. Trade credit is used as a tool to gain a competitive edge and add value to the firm. The literature reveals various benefits of trade credit to both providers and acquirers. Through trade credit agreements, firms can establish good and enduring relationships with their customers, resulting in lower borrowing costs, higher discounts, and enhanced purchasing power. The enhanced purchasing power, due to deferred payments, enables the buyers to flourish their sales and add value to their firms (H.-Q. Li, Yang, Xue, & Liu, 2024). Credit sales arrangements also benefit suppliers. They enable firms to increase their customers' liquidity, create higher demand for their goods, and boost sales (Hoang, Xiao, & Akbar, 2019). Suppliers use enhanced demand to gain operational efficiency and smooth the market for their products. Suppliers alter the demand for a specific or overall offering through trade credit terms to gain the advantages of demand smoothing (Emery, 1987). Trust is an integral component in business contracts. Mutual trust between both parties, i.e., buyers and suppliers, is essential in credit agreements. Due to mistrust and information asymmetry in emerging markets, firms rely less on bank loans than trade credit (Atanasova & Wilson, 2003). Trade credit is a trust-building device that enhances the relationships between buyers and suppliers and is termed an implied contract (Wu, Firth, & Rui, 2014). Previous studies have shown trust to be an enabler and facilitator in executing trade credit transactions, specifically in light of signaling theory (Paruchuri, Han, & Prakash, 2021). Information asymmetry results in mistrust and adds to the worries of both parties, suppliers, and customers, when carrying out credit transactions. Buyers show concerns over the quality of the products offered on credit, while the suppliers hesitate to provide trade credit as they doubt the repayment of the credit amount due to moral hazard. Goodwill and trust serve as trust-building devices and fulfill the transaction in such situations. The customers trust the supplier's goodwill and associate it with their suppliers' product quality and competencies. Meanwhile, the supplier associates the customer's goodwill with the repayment abilities of the customer. So, the concerns of both are resolved through trust and goodwill and, which, emerged as an important determinant of trade credit (Kong, Pan, Tian, & Zhang, 2020; Y. Li & Zhu, 2021). Similarly, other scholars have attempted to test audit quality as a trust-building tool in modern business. An audit by Big-4 was used as a proxy for audit quality, and its impact was assessed on trade credits using a sample of nine emerging Asian economies. Grounded on the signaling theory, audit quality is regarded as a trust-building tool, and it is pleaded that if a Big-4 audit firm is auditing a firm, positive signals are sent to the stakeholders. Consequently, the vendors' trust is built, and they are willing to offer more trade credit (Saeed et al., 2024). Besides the trust builder, the suppliers use trade credit as a competitive strategy. The firms agreed to provide the goods and receive payments in the future under the stated terms of trade credit. The deferred payments enable the customers to develop

positive perceptions regarding the quality of the products. The goods are received before the payment, and the perception of superior quality and deferred payments give a competitive advantage to the suppliers over their rivals (Dass, Kale, & Nanda, 2015; Fabbri & Klapper, 2016). The competitive advantages are considered a value-creation tool in the research (Frennea, Han, & Mittal, 2019). The value creation tool is based on the notion that credit suppliers have a competitive advantage over cash suppliers. Exploiting the edge, they differentiate the price for cash and credit sales and thus enhance the firm's value by charging higher prices. On the other hand, by enjoying a comparative advantage over the formal channels of financing, trade credit is used as a liquidity instrument for inventory. The financially constrained firm prefers to obtain goods on credit from suppliers rather than formal channels of financing. Suppliers have easy and convenient access to customers' information. Access to information gave a comparative advantage to the suppliers over banks or any other financing agencies and enabled the firms to provide trade credit to their customers to support their illiquidity (Cunat, 2007; Love & Zaidi, 2010). The suppliers are notified of adding loyalty to the buyers and liquidating their inventory into sales (Astvansh & Jindal, 2022). Similarly, the buyers use the trade credit facility to manage their cashflows. Firms with financial obstacles use deferred payment facilities to adjust their cashflow deficiencies without affecting their sales operations. Trade credit safeguards against the negative consequences of cashflows or working capital deficiencies (Fisman & Love, 2003). Beyond extension of trade credit to financially constrained firms, the suppliers are also willing to provide trade credits to firms with good reputations to establish long-run relationships and gain more market share and enhanced value (Khoo & Cheung, 2022; Kim & Shin, 2012). Contrary to other scholars' viewpoint, which suggest that trade credit has a positive association with firm value, M. D. Hill et al. (2015) argued that Trade credit enhances the firm's value to a lower level, however after the optimal level, a decline in value is reported at a higher level. This diminishing return trend is not uniform in all economies across the globe. The trend is more pronounced in the US than in emerging markets (Machokoto et al., 2022). In line with the above studies, another research attempted to establish the link between business strategy and trade credits. The sample was divided into two groups based on their orientations: innovation focused (prospectors) and efficiency focused (defenders). It was reported that business strategy is an important intrinsic determinant of trade credit. The prospectors extended more trade credit than defenders. Furthermore, it was revealed that more extension of trade credit enabled the prospectors to reap the benefits of higher sales, enhanced performance, and obtain more trade credit from suppliers. However, in the presence of two moderators in the relationship, it was observed that the prospectors contracted the trade credit in response to high-skilled employees' reduction. The defenders expanded the trade credit supply in response to the increase and ease in bank credit (Cao et al., 2022). To add to the literature on trade credit, Hasan and Alam (2022) attempted to test the effect of Asset redeployability on trade credit. They took a sample of US firms from 1985 to 2015. An inverse relationship with a standard deviation rises in redeployability leads to a 7.09 to 21.21% reduction in trade credits relative to the mean sample. The moderators of financial constraints, fewer liquid assets, and information asymmetry were examined to further these findings. In financial constraints, the firms are compelled to rely more on asset redeployability, the negative association was strengthened. Similarly, in case of fewer liquid assets and information asymmetry, firms rely more on alternative usage of existing assets leaving fewer resources available for trade credit, thus strengthening the negative association. Other studies stated that the provision of trade credit depends on the availability of trade or any other credit to the firm. The accessibility of bank credit adds to firms' provision of trade credit (Shenoy & Williams, 2017). A study explained acquiring and providing trade credit as a risk reduction technique. The authors argued that the default risk associated with the extension of trade credit is reduced through maturity matching between receivables and payables of trade credits.

The resultant assets from a grant of trade credit, are adjusted against payable liabilities (Fabbri & Klapper, 2008). Similarly, through the analogy of the redistribution view of trade credit, the availability of a financing option enables firms to extend more trade credit. A study was conducted to empirically investigate relationships by taking samples of 66 countries. It was concluded that suppliers allowed more trade credit in countries with more access to finance. Further, significant differences were reported in different countries and geographic locations, and a strong correlation was observed with product market dynamics in trade credit usage (M. Hill et al., 2019). Another study attempted to investigate the determinants of trade credit provision using pooled samples from sixty-six countries. Financial constraints and competitive forces were revealed as significant forces shaping trade credit behavior. Additionally, dissimilarities in the pattern of trade credit across regions and country-level heterogeneity directly affect trade credit were reported (M. Hill et al., 2019). Likewise, another study determines the relationship between trade credit and stock liquidity measures, considering receivables, payables, and net trade credits. It was found that the provision of credit exceeds the usage of trade credits in typical firms. The firm's decisions to provide trade credit were highly correlated with the usage of trade credit. Stock liquidity measures were negatively associated with both the demand and supply side of trade credits, and it is evident that more liquid stock firms rely less on trade credits (Shang, 2020). Besides the benefits, importance, and role of trade credits in the modern business framework, the literature also elaborated on various worries and risks associated with providing and obtaining trade credit. For example, a study showed trade credit as a tool to finance customers' financial constraints and increase their liquidity. However, providing trade credit beyond a certain level may create problems for the suppliers; the buyers may not be able to repay the credit on time, and the suppliers encounter higher risk exposure. Additionally, over-provision of trade credit and blocking of investment, the supplier may lose financial flexibility and not grab investment opportunities (Cao et al., 2022; Hoang et al., 2019). Similarly, Tang and Moro (2020) explained trade credit from the suppliers' perspective and divided their findings into two broader categories: growth and cost. They elaborated on the growth aspect, where the trade credit provision enables the firm to enhance its sales and gain a larger market share. On the cost side, however, the trade credit provision is the most expensive investment for suppliers. Trade credit extension puts a break on growth, and liquidity may result in costly payment delays and threatening the firm's survival in the worst scenario. In emerging economies, the cost aspect is even more detrimental than in advanced economies. In line with the above, Barrot (2016) argues that extending trade credit is not always efficient and convenient for firms. Trade credit might be costly for the suppliers. Specifically, firms with financial constraints must borrow or infuse additional investment to finance the trade credit provision. The situation worsens when the firms must cater to the needs of more prominent firms in slower payment inflows (Murfin & Njoroge, 2015). Contrary, some studies explained the drawbacks of trade credit from a customer perspective, i.e. an acquirer of credit. Although suppliers may be willing to extend trade credit, the customers might not always be willing to benefit from the offer. The managers of the acquiring firms view trade credit through a control lens. They consider the trade credit arrangements as suppliers providing illiquid inputs instead of cash. In return, they may gain some control over the firm. So, the dual-class owners may refrain from relying on trade credit as a financing source, and managers may avoid such arrangements to avoid continuous monitoring (Sah & More, 2022).

In the light of the above literature the following hypotheses are made to be tested in the study:

- H₁: Firm size has a significant association with Trade Credit*
- H₂: Profitability has a significant association with Trade Credit*
- H₃: Tangibility has a significant association with Trade Credit*
- H₄: Leverage has a significant association with Trade Credit*

H₅: Operating growth has a significant association with Trade Credit

H₆: Research & Development has a significant association with Trade Credit

H₇: Capital expenditures has a significant association with Trade Credit

Methodology

Sample of the Study

The sample includes all publicly listed non-financial companies in emerging Asian countries from 2011 to 2022. The relevant financial data to compute the variables was obtained from Compustat database.

Econometric Techniques and Model

In line with previous studies and data structure the Generalized Method of Moments (GMM) is used to assess the key determinants of Trade Credit. Based on the theoretical and conceptual framework, the relationship between CSR and trade credit is examined through the following equations:

$$T_C_P = \beta_0 + \beta_1 \text{Size}_{i,t} + \beta_2 \text{ROA}_{i,t} + \beta_3 \text{Tang}_{i,t} + \beta_4 \text{Lev}_{i,t} + \beta_5 \text{C_Flow}_{i,t} + \beta_6 \text{O_Growth}_{i,t} + \beta_7 \text{R\&D}_{i,t} + \beta_8 \text{RC_Exp}_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$T_C_A = \beta_0 + \beta_1 \text{Size}_{i,t} + \beta_2 \text{ROA}_{i,t} + \beta_3 \text{Tang}_{i,t} + \beta_4 \text{Lev}_{i,t} + \beta_5 \text{C_Flow}_{i,t} + \beta_6 \text{O_Growth}_{i,t} + \beta_7 \text{R\&D}_{i,t} + \beta_8 \text{RC_Exp}_{i,t} + \varepsilon_{i,t} \quad (2)$$

$$T_C_N = \beta_0 + \beta_1 \text{Size}_{i,t} + \beta_2 \text{ROA}_{i,t} + \beta_3 \text{Tang}_{i,t} + \beta_4 \text{Lev}_{i,t} + \beta_5 \text{C_Flow}_{i,t} + \beta_6 \text{O_Growth}_{i,t} + \beta_7 \text{R\&D}_{i,t} + \beta_8 \text{RC_Exp}_{i,t} + \varepsilon_{i,t} \quad (3)$$

Variables Formulation

The extension of trade credit facilities by the firms to their customers is described as a trade credit provision and computed as accounts receivables to net sales (Luo, Wei, & He, 2023; Pattnaik & Baker, 2023; Xiu, Liu, Feng, & Yin, 2023; Zou, Xie, & Mei, 2023). Trade credit usage is measured by taking account payable, notes payable and customer advances to total assets (H.-Q. Li et al., 2024; Luo et al., 2023; Zhou & Li, 2023; Zou et al., 2023). While, net trade credit is calculated as the difference between receivable days and payable in days (Shang, 2020). Firm size was proxied by taking log of total assets. Profitability was measured by taking net income to total assets. Similarly, tangibility and leverage was computed by taking PPE and total liability to total assets respectively. cash flows, R&D and capital expenditures were proxied as net cashflows, R&D Exp and capital expenditures to total assets respectively.

Results and Discussion

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
TC Provision	7214	59.372	52.443	0	298.686
TC Acquisition	7214	49.82	49.535	0	299.774
TC Net	7214	9.35	52.707	-174.085	210.761
F Size	7510	11.682	2.634	2.628	19.921
Profitability	7360	.052	.14	-6.214	4.076
Tangibility	7240	.353	.215	0	.925
Leverage	7510	.526	.504	0	28.166
Cash flows	7191	.009	.067	-2.519	.832
Op Growth	6867	-2.242	193.487	-13263.504	179.814
R Development	3955	.026	.381	0	23.909
C Expenditures	7180	.053	.046	0	.561

Trade Credit provision comprising 7214 observations, with a means score of 59.37 and a standard deviation of 52.44. The results in Table 1 suggest that on average, firms in the sample provide 59.37 days of trade credit to their customers. Trade credit acquisition shows 7,214 observations, with a mean of 49.82 and a standard deviation of 49.53, suggest that, on average, firms take 49.82 days to pay their accounts payable. While, Net trade credit mean value is 9.35, with a standard deviation of 52.70. The above discussion and results indicate that the standard deviation is relatively high across all trade credit variables, suggesting significant variability in trade credit behavior among firms. Similarly, the large range between minimum and maximum values exhibits the diverse nature of trade credit practices, which aligns with previous studies showing that trade credit varies across firms and countries in terms of both duration and amount (Kong et al., 2020; Zhou & Li, 2023). Other variables of the study consist of firm size, profitability, tangibility, leverage, cash flows, operating growth, research and development, and capital expenditures. The firm size, determined as a logarithm of total assets, has an average of 11.68 with a range from 2.628 to 19.921. Return on assets represents profitability, has an average of 0.052 and a standard deviation of 0.14. Tangibility and leverage demonstrated mean scores of 0.35 and 0.52, respectively. The literature suggests that cash flow and operating growth may demonstrate positive and negative trends. The descriptive table indicates that the mean scores are 0.009 and -2.24, respectively. The negative signifies the unfavorable values present in the observed data. Finally, capital expenditure was controlled to check for the significance of the association. The capital expenditure represented a mean score of .053 from 0 to .561.

Table 2. Country-wise Sample Size

Country	Total Number of Firms		
	Observations	Percent	Cum.
China	124	19.38	19.38
Taiwan	98	15.31	34.69
Hongkong	75	11.72	46.41
Korea	72	11.25	57.66
India	55	8.59	66.25
Malaysia	33	5.16	71.41
Turkey	32	5.00	76.41
Singapore	30	4.69	81.09
Russia	26	4.06	85.16
Indonesia	25	3.91	89.06
Thailand	20	3.13	92.19
Saudi Arab	17	2.66	94.84
Philippines	16	2.50	97.34
Qatar	7	1.09	98.44
Bahrain	4	0.63	99.06
Oman	3	0.47	99.53
Kuwait	2	0.31	99.84
UAE	1	0.16	100.00
Pakistan	0	0.00	100.00
Total	640	100	

Table 2 presents the country-wise distribution of the final sample. As depicted, China contributed the highest number of firms, with 124 firms (19.8%), followed by Taiwan with 98 firms (15.31%), and Hong Kong with 75 firms (11.72%).

Table 3. Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) TC Provision	1.000									
(2) TC Acquisition	0.415 * (0.000)	1.000								
(3) TC Net	0.550 * (0.000)	- 0.509 *	1.000							
(4) F Size	- 0.112 * (0.000)	- 0.111 *	-0.007	1.000						
(5) Profitability	- 0.073 * (0.000)	- 0.141 *	0.072 *	0.008	1.000					
(6) Tangibility	- 0.192 * (0.000)	- 0.173 *	-0.023	0.092 *	- 0.061 *	1.000				
(7) Leverage	0.035 * (0.003)	0.175 * (0.000)	- 0.133 *	-0.018	- 0.247 *	0.030 *	1.000			
(8) Cashflows	-0.001 (0.932)	0.003 (0.817)	-0.005 (0.674)	-0.005 (0.678)	0.068 (0.000)	- 0.074 *	- 0.082 *	1.000		
(9) Operating Growth	0.001 (0.952)	0.013 (0.296)	-0.012 (0.351)	0.007 (0.535)	-0.010 (0.419)	0.009 (0.486)	-0.007 (0.568)	-0.016 (0.208)	1.000	
(10) C Expenditures	- 0.144 * (0.000)	- 0.105 * (0.000)	- 0.042 * (0.000)	0.035 * (0.003)	0.066 * (0.000)	0.485 * (0.000)	0.030 * (0.011)	- 0.040 * (0.001)	0.008 (0.513)	1.000

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

The correlation matrix represents the significant correlations among variables of the study and confirming the positive or negative associations. The matrix shows that firm size is negatively associated with both provision and acquisition of trade credit. Similarly, the profitability, leverage, and capital expenditures are significantly correlated with all forms of trade credits, providing justification to our hypothesis.

Table 4. Regression Results

VARIABLES	(1) TC Provision	(2) TC Acquisition	(3) TC Net
L.TC_P	0.492*** (0.0277)		
L.TC_A		0.131*** (0.00654)	
L.TC_Nt			0.164*** (0.00509)
Firm Size	3.758*** (0.555)	5.639*** (0.563)	-1.644*** (0.526)
ROA	9.092*** (2.790)	-140.1*** (14.83)	124.5*** (9.445)
Tangibility	-10.94 (7.340)	-124.0*** (14.17)	128.8*** (11.09)
Leverage	38.05*** (6.927)	210.7*** (6.509)	-192.6*** (5.562)
Operating Growth	-0.00197*** (0.000301)	-0.0810 (0.0516)	0.0712 (0.0435)
R & Development	0.383*** (0.0381)	-0.128 (0.408)	-0.165 (0.415)
Capital Expenditures	-47.96*** (12.41)	-96.77*** (18.43)	59.60*** (11.63)
Observations	3,596	896	896
Number of Firm	404	168	168

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4 depicts that firm size is positively associated with both provision and acquisition of trade credit, while denoting a significant negative association with net trade credit. The results imply that the volume of provision and acquisition of trade credit increases with firm size. The firms are more likely to provide trade credit to their customers and simultaneously acquire more trade credit from their suppliers as they grow. These findings support H₁, based on signaling theory, which suggests that firm size serves as a credibility signal. Customers, linking firm size with their financial soundness, in response expect them to facilitate their working capital requirements. Similarly, firms leverage their size as a strength, sending positive signals of financial soundness and credit worthiness to suppliers through trust channels. As a result, suppliers are more willing to extend more trade credit to larger firms. Similarly, profitability being the second important determinant of

trade credit reveals a positive association with both provision and net trade credit, while denoting a significant negative association with trade credit acquisition. The results imply that the volume of provision and net trade credit increases with firm profitability. The firms are more likely to provide trade credit to their customers as they earn more. Contrary, the profitability is inversely associated with trade credit supply from suppliers. These findings support H₂, grounded agency and signaling theories. The firms enhance trade credit supply to their customers to sustain their profitability and sales. Similarly, firms leverage their profitability as a strength, sending positive signals of financial soundness and credit worthiness to banks and alternate sources and thus reduce reliance on costly trade credits. Leverage being an important determinant of trade credit shows positive association with both provision and acquisition of trade credit, while denoting a significant negative association with net trade credit. The results imply that the volume of provision and acquisition of trade credit is contingent upon leverage. These findings support H₃, stating that leverage influence trade credit choices. Leverage ratios are used as a measuring rods to determine the volume of both provision and acquisition of trade credit. moreover, the results in column shows operating growth is a determinant of trade credit provision by denoting a significant negative association and affirmed H₄. The firm divert their investment to support their growth activities and consequently reduce trade credit supply to customers. Likewise, R&D being an integral component of the business revealed a significant positive association with provision of trade credit. while, capital expenditures denoted negative association with both provision and acquisition of trade credit. Capital expenditures being long run in nature, calls for long run commitment of investment, thus reduce both provision and acquisition of trade credit. the results provided empirical and theoretical bases for acceptance of H₅, H₆ and H₇ of the study.

Conclusion

The paper attempted to explore the determinants of trade credit in the context of emerging Asian markets. The study revealed firm size, profitability, leverage, tangibility, R&D, operating growth and capital expenditures as critical determinants of all forms of trade credits. Signalling and agency theories provided theoretical foundations to determine the association among the variables and empirical testing. Using sample of Asian emerging markets and data from Compustat database panel data models were used to ascertain the association. Due to potential endogeneity concerns, GMM techniques were applied in analysis. The finding confirmed all hypothesis and showed a significant relationship. The study contributes to signalling and agency theories by adding empirical evidence from emerging markets. Besides its theoretical, the study also made contextual contribution in the research area of trade credit. As illustrated in the literature, previous studies primarily focused on investigating determinants of trade credit in developed countries. Keeping in view the differences in the patterns and structures of developed and developing economies, this study is unique in adding empirical findings from the Asian emerging markets.

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