



RESEARCH PAPER

Accounts Receivable and Firm Value: Evidence from South Asian Emerging Economies

Muhammad Usman Qureshi ¹ Zeeshan Mahmood ²

1. Ph.D. Scholar, Department of Commerce, Bahauddin Zakariya University, Multan, Punjab, Pakistan
2. Assistant Professor, Department of Commerce, Bahauddin Zakariya University, Multan, Punjab, Pakistan

PAPER INFO

Received:
April 27, 2020
Accepted:
June 15, 2020
Online:
June 30, 2020

Keywords:

Accounts Receivable,
Developing Countries
Firm Value

Corresponding Author:

zeeshanmahmood@bzu.edu.pk

ABSTRACT

This paper examines the impact of investments in accounts receivable on firm value. The paper used panel data for all the non-financial firms listed in Pakistan, India and Bangladesh stock exchanges for the period of 2011 to 2018. Considering twofold effects of costs and benefits of investment in receivables, paper estimate and confirmed a nonlinear (U-shaped) relationship between level of account receivables and firm value. Investments in accounts receivable is positively associated with firm value up to certain level and beyond that higher investments in accounts receivable is negatively associated with firm value. For robustness, this paper used alternative proxies to calculate firm value and found consistent results. This paper contributes to the scarce literature on the impacts of accounts receivable investment in south Asian emerging economies. Managers must consider the target level of receivables in order to achieve wealth maximization objective while working on receivable management policy, because under or over investment in receivables will not capitalize its full benefits rather incurs associated costs.

Introduction

This paper seeks to understand the impact of investments in accounts receivable on firm value. Existing research has largely focused on the determinants of receivables with limited attention on its outcomes especially in the context of developing countries (Andrieu et al, 2018; Cole, 2018; Cheng and Pike, 2003; Petersen and Rajan, 1997; Long et al., 1993; Niskanen and Niskanen, 2006; Garcia-Teruel & Martinez-Solano, 2010; Ahmed, Xiaofeng, & Khalid, 2014). Accounts receivable results from the credit sale that provide buyers with some time to pay after delivery of goods and services. Accounts receivable represents an investment from the seller perspective whereas from

buyer perspective it is an important source of funds. Investments in accounts receivable represented significant proportion for firms in both developed and developing economies yet receivables research is ignored as part of trade credit, especially in developing economies. For example, Barrot (2016) reported trade credit to bank loan ratio as three to one for all U.S non-financial firms. Jory et al. (2019) took data from the year 2003 to 2018 for all U.S firms and reported mean value of 61% for receivables to total assets ratio. McGuinness et al. (2018) reported accounts receivables as 30% of total assets for 202,696 SMEs across 13 European countries and receivables are 45% in our full sample of South Asian emerging economies. This makes investment in accounts receivable as important factor that may have a significant impact on firm value.

Theoretically, impact of investments in accounts receivable can be explained through its influence on costs and benefits to the firm. There are certain benefits associated with the increased investments in account receivable. Most importantly investments in account receivable enhances the seller and buyer relationship. Emery (1984) argued it as a mechanism to stem falling sales in low period of demand by offering relaxed credit standards. Offering sale on credit lessens the information asymmetry between supplier and customer (Long et al., 1993 and Smith, 1987) because it provides customer with time to ensure the product quality (Lee and Stowe, 1993). It also showed ability to discriminate price between customers, one who pay at delivery and others who pay later (Brennan et al., 1988; Petersen and Rajan, 1997). On the contrary, Nadiri (1969) argued that too much investment in receivables involve opportunity costs and may become the cause of profitability and liquidity issues. It also causes increased administrative costs to supplier (Mian and Smith, 1992). Thus, level of receivables in a firm is determined by the tradeoff between its cost and benefits.

Nadiri (1969) build up a model to enhance net profit by choosing optimal level of receivables. After him Emery (1984) proposed that optimal level of receivables exists where marginal revenue of extending credit equals its marginal cost. Chod et al. (2019) in this regard pointed out a free rider problem when supplier grant trade credit to retailer but they purchase on cash with other suppliers who offers less trade credit therefore supplier only internalize a part of benefits. Allen et al. (2019) termed trade credit as constructive informal financing because it helps in growth of SME's. Whereas Chen et al. (2019) provided support for substitution effect between bank credit and trade credit and reported that small firms in china with greater credit risk increased bank credit usage and decreased trade credit usage after 2004 bank interest rate ceiling deregulation. On the other hand after 2013 bank interest rate floor deregulation firms with little credit risk augmented bank credit usage and condensed trade credit usage. McGuinness et al. (2018) argued that trade credit played a big role in survival of European SMEs during financial crisis.

The main objective of this paper is to examine the effect of receivables policy on firm value. Following Martinez-Sola, Garcia-Teruel & Martinez-Solano (2013) this study hypothesizes that firm benefits with receivables granted at lower levels due to financial, operational and commercial advantages but suffers with opportunity and

financial costs at higher levels of receivables. Therefore, we expect non-monotonic relationship between levels of receivables and firm value which implies a positive relationship when receivables are in lesser amount and negative relation when receivables are greater in amount. To do this we selected non-financial firms listed at stock exchanges of South Asian emerging economies i.e. Pakistan, India and Bangladesh. Studying South Asian emerging economies is interesting because there is no study available in literature which shed light on this phenomenon. Very few studies which examined this relationship (i.e. Martinez-Sola, Garcia-Teruel & Martinez-Solano, 2013) used European data set findings of which may not explain this phenomenon for developing economies due to different economic, political, legal and financial settings there.

Findings confirmed our hypothesis that firm value increase to a certain level of receivables after that it decreases with too much investment in receivables. One of the key implications for managers and researchers is that receivables management policy has an impact on firm value. The remainder of this study is structured that in section two it provides a literature review and hypothesis the relationships. Methods are given in section three and findings and discussions are presented in section four. Finally, section five concludes the study.

Literature Review

Lewellen et al. (1980) build up a model in which, under certainty and competition, policy of receivables doesn't impact firms' value. Loosening up these assumptions and considering the presence of uncertainty, they hypothesize that in an uncertain environment, where the probability of nonpayment exist, and also when costs are associated with the credit assessment procedure, there can be an impact of receivables policy on value of a firm, suggesting an optimal policy of accounts receivable.

Organizations might have motives to grantsale at credit, primarily because this can boost sales thus cause more profitability. Likewise, incremental cash flows emerging from relaxed credit policy can provide valuable assets to the company (Schwartz, 1974). The advantages of offering credit sale stems from numerous incentives, namely commercial motive, pricing policy, operating motive and financial motive. Firstly, granting receivables lessens information asymmetry and helps in mitigating moral hazard problems between supplier and customer (Smith, 1987; Long et al., 1993; Pike et al., 2005) because it let customer to confirm the quality of merchandise before payment. Smith (1987) in this regard argued that it is more relevant in cases where goods and services demand longer time period to verify product quality. Lee and Stowe (1993) also claimed that credit sales from the seller is a signal for product quality. Offer of credit sale can also be an implicit quality guarantee (Long et al., 1993). Thus, for a customer it is a tool to manage and control product quality which is being purchased (Smith 1987). Therefore, it is used to strengthen the relationship between seller and buyer (Ng et al., 1999).

Offering credit sale is also used to design product price to stimulate sales. Pike et al. (2005) contended that extending credit period or offering more cash discount is actually the price reduction to uplift sales, which show the firm's ability to discriminate prices among its customers. Receivables grant enables firms to discriminate in prices for credit and cash buyers (Brennan et al., 1988). They further claimed that competition can be reduced in a way that some sellers may focus on credit customers and others may pay attention to cash customers. Transaction Theory put forward by Ferris (1981) proposes that receivables investment reduces transaction cost by separating the delivery of goods with its payment. Trade credit can also permit a decrease in cash holdings because the seller can foresee cash outflow from its buyer and can manage net money accumulations more efficiently.

Cunat (2007) argued that offering credit sale to buyers, particularly when they face liquidity problems temporally, which might threaten their survival, could strengthen the relationship between seller and buyer. Kestens et al. (2012) found that the adverse impact of the financial crisis of profitability of firms is decreased for those firms which have augmented their accounts receivables during period of crisis. Meltzer (1960) claimed that it supports the notion that granting receivables reduces financial frictions of customers. Moreover, offering receivables can be seen as a strategic investment in a try to hold buyers; in this sense, offer of accounts receivable goes about as a sign to the buyer that the seller looks for a commonly gainful longer trading relationship (Cheng and Pike, 2003).

From the perspective of investment, offering receivables may produce an implicit income of interest for late payments if the supplier is able to claim a greater price by granting some period of credit. Ferris (1981) in this regard argued that firms should invest in accounts receivable when NPV of receivables with trade credit is bigger than the NPV without it. Because of these advantages, positive relationship can be expected between receivables and firm value. Nevertheless, putting resources into receivables has costs too. On the one hand offering accounts receivable bring firm close to financial risks. This function of the firm as liquidity suppliers entails a danger of late payment as well as renegotiation in default cases and, in a worst case scenario, an increase in bad debts. It generates likely costs of financial distress. As indicated by the European Payment Index Report (2016), 25 percent of all bankruptcies are a direct result of late as well as non-payment of outstanding balances. These delayed payments restricts growth, it also exposes the firm to liquidity issues and sometimes it results in bankruptcy. Then again, granting credit sale lets firm face opportunity cost of funds which are now stuck in the hands of the customer. Nadiri (1969) argued that one disadvantage of receivables is the holding cost. This is real income which could have been earned if cash was received at the time sale instead of credit sale. Offering credit also forces firms to acquire extra resources to support increased levels of receivables, in this manner expanding their dependence on outside financing. As a matter of fact, credit sale granted will rely upon the credit worthiness of the seller and its access to funds (Petersen and Rajan, 1997; Emery, 1984; Schwartz, 1974).

In addition, granting trade credit supply leads the supplier to suffer with costs of credit management. Specifically, the supplier must give some energy and time to evaluating the credit risk of the customer and to organizing the contract of delayed payments. Also the supplier has to incur some more costs in order to collect payment from customer. As indicated by Ng et al. (1999), the transaction costs related to receivables monitoring and acquisition of information are incurred when reputations are difficult to establish, when informational asymmetries are present between supplier and customer and when a greater level specialized investment is involved.

Consequently, it may be contended that the early relationship between the value of the firm and receivables will turn negative at greater levels of accounts receivable on the grounds that the costs of accounts receivable will exceed the advantages as the amount stuck in accounts receivable rises. Therefore, this study tests for twofold impacts of accounts receivable on value of the firm. At lower levels of receivables, firms would be benefiting from benefits of offering receivables, for example, increases in sales and increase in revenue through interest income and decrease in transaction costs. On the other hand, the presence of financial and opportunity costs as well as non-payment or late payment would surpass the advantages of granting trade credit supply and decrease firm value at higher levels of receivables. If a firm is experiencing recovery issues of its current receivables, then offering more credit to its buyers may decrease firm value.

Thus, receivable literature guided us in developing our hypothesis that there is a presence of an optimal level of receivables (Nadiri, 1969; Lewellen et al., 1980; Emery, 1984). In this sense, Emery (1984) builds up that there is an optimal level of receivables when the incremental sales revenue of granting accounts receivable is equal to incremental cost, and this situation also creates an optimal period of credit. Therefore, management must attempt to establish receivables at their desired level to keep away firm from a reduction in firm value due to bad debts or lost sales (Pike and Cheng, 2001). Therefore, we suppose a non-linear relation between accounts receivable and value of the firm based upon a trade-off between benefits and costs of granting receivables, where there is level of accounts receivable which maximize the value of the firm. This discussion led us to test following hypothesis:

H1: There is non-monotonic relationship between the firm Value and investment in accounts receivable; positive for lower levels of receivables and negative for higher levels.

Material and Methods

Data

The study used panel data for all the non-financial firms listed in Pakistan, India and Bangladesh stock exchanges available at DataStream data base for eleven years starting from 2011 to 2018. It represented 4,126 firm's year observation after excluding extreme values, errors and missing values in order to avoid their influence on final analysis.

Variables

Firm value is the dependent variable in this study, which in literature usually measured by Tobin's Q (McConnell and Servaes, 1990). Following Chung & Pruitt (1994) and Martinez-Sola, Garcia Teruel and Martinez-Solano (2013) Tobin's Q is calculated as the market value of equity plus the book value of total liabilities divided by book value of total debt. Study takes this simple measure of Tobin's Q to keep away from a potential distortion which can happen due to the assumptions about inflation rates and depreciation to estimate the firm's replacement value (Perfect and Wiles, 1994). Furthermore, Chung and Pruitt (1994) showed that about ninety six percent of the variation of Tobin's q is enlightened with formula in which total debt (at book value and equity (at market value) are divided by total assets (at book value). To check robustness, we also employed second proxy as market to book (M/B) ratio. M/B ratio is calculated as the market value of equity divided by book value of equity (Lins, 2003). The coefficient for Correlation between these two alternative measures of value (Tobin's Q and market to book ratio) is 0.898.

Following Martinez-Sola, Garcia Teruel and Martinez-Solano (2013) main independent variables in this model are accounts receivable and its square with some control variables. REC is calculated as accounts receivable divided by sales. The insertion of REC and REC² in the model allowed study to examine together the advantages of accounts receivable and disadvantages of an unnecessary over investment in receivable. Therefore, firm value is expected to have a positive relationship with the REC and negative with REC², thus a positive sign for REC and a negative sign for REC² is expected.

Table 1
Descriptive Statistics

	Obs.	Mean	SD	Min.	Max.
<i>REC</i>	4,808	0.445	0.966	0.008	7.147
<i>CFLOW</i>	4,808	0.042	0.274	-1.487	1.156
<i>GPROF</i>	4,808	0.227	0.226	-0.501	1
<i>SIZE</i>	4,808	6.464	0.786	4.793	8.384
<i>GROWTH</i>	4,808	0.676	0.468	0	1
<i>TOBINSQ</i>	4,395	1.254	1.515	0.133	10.851
<i>MB</i>	4,395	1.288	2.162	-0.559	15.909

Note: Mean represents the arithmetic average. SD stands for standard deviation. Min is minimum and Max in maximum value.

We included some control variables in the model in order to control for potential effects on firm value, namely firm size, sales growth, gross profit and cash flow. Size is measured as the natural logarithm of total assets. Literature posits mixed results between size and firm value. Lang and Stulz (1994) reported negative, whereas Berger

and Ofek (1995) shown positive and Demsetz and Villalonga (2001) provided evidence showing non-significant relationship between them. Thus, the study proposes no clear prediction. Growth is calculated as a rate of annual sales growth. Scherr and Hulburt(2001) claimed that firms proving better growth are expected to grow in future as well thus adding value to the firm. In this regard Niskanen&Niskanen (2006) also expected a positive relationship between sales growth and value of the firm because of having better investment opportunities. The study also therefore expect it positively related with firm value. GPROF is gross margin (a profitability measure) and literature’s evident positive relationship between firm value and profitability. Finally CFLOW measured as operating cash flow to sales ratio and shows ability to generate internal resources, thus expected positively related to firm value.

Table 2
Correlation Matrix

		1	2	3	4	5	6	7
1	TOBINQ	1						
2	MB	0.898**	1					
3	REC	0.107**	0.12**	1				
4	CFLOW	0.069**	0.006**	-0.12**	1			
5	GPROF	0.180**	0.167**	-0.004	0.260**	1		
6	SIZE	-0.07**	-0.05**	-0.13**	0.164**	0.096**	1	
7	Growth	0.092**	0.092**	-0.17**	0.093**	0.117**	0.088**	1

** denote significance at 1%.

Table 1 provides descriptive statistics. Mean value of 44.5% shows that sample firm’s sale almost half on credit which is a significant amount. Table 2 provides correlation coefficients which shows no high correlation among independent variables which could create problem of multicollinearity and resultantly inconsistent estimations.

Accounts Receivable and Firm Value

We estimated model given below to explain the impact of receivable on value of the firm in which firm value is regressed against our main independent variables REC and REC² and some control variables discussed in the previous section. The inclusion of the REC and REC² in below model allowed study to examine together the advantages of accounts receivable and drawbacks of an unnecessary over investment in accounts receivable.

Model:

$$V_{it} = B_0 + B_1REC_{it} + B_2REC^2_{it} + B_3CFLOW_{it} + B_4GPROF_{it} + B_5SIZE_{it} + B_6PGROWTH_{it} + \epsilon_{it}$$

Where V_{it} is Tobin’s Q in one regression and market to book ratio in second for same model calculated as equity (at market values) added with total debt (at book values) is divided by total debt (at book values) and equity (at market values) divided by book value of equity respectively. REC_{it} is accounts receivable granted by calculated as accounts receivable over sales by a firm i at time t. REC^2_{it} is square of accounts

receivable. $CFLOW_{it}$ is calculated as operating cash flow to sales ratio. $GPROF_{it}$ is the gross margin. $SIZE_{it}$ is the logarithm of the total assets. $GROWTH_{it}$ is the positive growth of sales measured as existing sales less sales of last year and then divided by sales of last year.

Table 3
Accounts receivable and firm value

	I	II
<i>REC</i>	0.203*** (4.08)	0.218*** (4.32)
<i>REC</i> ²	-0.091** (-1.95)	-0.099** (-2.09)
<i>CFLOW</i>	(0.20) 0.047***	(-0.85) 0.043***
<i>GPROF</i>	(6.21) 0.141***	(4.00) 0.133***
<i>SIZE</i>	(8.42) -0.267***	(7.82) -0.259***
<i>GROWTH</i>	(-4.06) 0.05***	(-3.61) 0.062***
<i>Adjusted R</i> ²	(3.30) 0.167	(3.98) 0.144
<i>Observations</i>	4,126	4,126

Note: ***, **, * indicates coefficient is significant at 0.01, 0.05 and 0.1 level respectively. t-statistics are reported in parentheses. Coefficients of industry and time dummies are not reported. *REC* is accounts receivable to sale ratio; *REC*² is square of accounts receivable; *GROWTH* is the positive sales growth; *CFLOW* is cash flow generated by a firm; *GPROF* is the gross margin; *SIZE* log of total assets.

The data in this study is balanced panel, estimation of regression used pooled ordinary least square (OLS) technique. This allows study for all observations combinations and undertakes that there exist no unobserved heterogeneity effect among time series and cross section units. We estimate results on the basis of OLS. Reason behind this is theoretical. Fixed effect fixes the three types of effects the time effect, industry effect and the firm specific effects. In regression equation time and industry dummies will be put to control these two effects, but subject studied here (accounts receivable) does not vary significantly firm to firm but vary industry to industry.

Table 3 depicts regression results for value model, column I contain results where Tobin's Q is used as a proxy for the dependent variable. Column II, whereas contain results for market to book ratio as a proxy for the dependent variable. These two proxies for firm value are used to give robustness in results. Table 3 shows that *REC* has standardized coefficient of ($\beta = 0.203$, $t = 4.08$, $P = 0.000$) and *REC*² has standardized coefficient of ($\beta = -0.091$, $t = -1.951$, $P = 0.051$) in column I. These results

are as per expectation. REC is positively and significantly related with firm value depicting that at lower levels of investment in accounts receivable firm value increases. Whereas REC² has a negative and significant relationship with firm value depicting that at a higher level of investment in accounts receivable firm value decreases. The results are confirmed in column II as well when a different proxy of firm performance (dependent variable) is used as market to book ratio and depicts positive standardized coefficient of ($\beta = 0.218$, $t = 4.327$, $P = 0.000$) for lower levels for receivables and negative relationship between REC² and market to book ratio with standardized coefficient of ($\beta = -0.099$, $t = -2.096$, $P = 0.036$) for higher levels. Results are consistent with Martinez-Sola, Garcia Teruel and Martinez-Solano (2013).

These findings indicate noteworthy non-monotonic relationship between firm value and receivables level. Especially this relationship is concave in shape. The study found two opposing effects related to the cost and the advantages of investing in receivables. This means that investment in receivable increases the firm value up to a break point. But if this level of investment in accounts receivable further increase then it decreases the value of the firm. Positive relationship between the value of the firm and receivables at low level is in line with the financial motive theory, operational motive theory and commercial motive theory of trade credit. Conversely negative relation between firm value and receivables at high level is consistent with arguments of opportunity cost, financing cost and financial risks discussed earlier.

These two proxies of firm performance and value (Tobin's Q and Market to Book ratio) are not unambiguous measures. They are also used in the literature for measurement of growth opportunities which gives me an opportunity to explain it alternatively as well. Motive to capture customers by offering longer trade credit terms may increase growth of firm by maintaining and establishing new commercial relationship and increased market share. But this motive has limited benefits as longer trade credit terms imply a higher investment in accounts receivable thus a point will come where funds to invest in profitable opportunities will disappear therefore extending additional credit to customers will limit the growth opportunities.

As long as advantages of investment in receivables exceeds its costs, suppliers would be willing to offer credit to their customers. To the level that firms can gain the advantages of investing in receivables (for example lower exchange costs, improved relations with clients, decreasing imbalances in item quality, lower money inventories, and expanded interest and deals) and that these advantages exceed costs of credit management, opportunity costs and financial risk, suppliers should keep on offering credit to customers. Conversely, suppliers must not fund their buyers in situations when offering credit sales negatively impact the liquidity and profitability of the company. These two impacts infer a 'converse U-shaped' distribution of the level of receivables regarding firm value.

Conclusion

Policy for accounts receivable implies vital implications for firm value because of the huge investment in receivables (as indicated in descriptive statistics). Under

condition of market imperfection Lewellen et al. (1980) claimed that receivables policy may have an impact on firm value which in turn may lead us to an optimal policy for receivables. Consistent with this argument this study examined the impact of accounts receivable on firm value, assuming a non-linear relationship between them, which expect a level of receivables which increases firm value.

This study encompasses both benefits and costs of investing capital in receivables. Thus, we argued that this investment is not free from the costs and investors are expected to pressurize firms to reduce it in order to avoid financial risk, opportunity cost and reduction in both liquidity and profitability. On the other hand, managers are encouraged to maintain an optimal level of receivables in order to benefit from commercial, financial and operational benefits. Thus, we expect that value of the firm increases with receivables up to a certain point after that this value decreases with over emphasis on it. A U-shaped relationship between firm value and receivables level exist where its level maximizes shareholder's wealth. These two are positively related at lower levels of receivables and negatively related at higher levels.

This is among the very few studied that test relationship between accounts receivables and firm value for developing economies. Very few studies examined this relationship which took the data for developed economies for example Martinez-Sola, Garcia Teruel and Martinez-Solano (2013) tested this non monotonic relation for a sample of Spanish firms. This study also confirms this relationship for South Asian emerging economies.

Results are also consistent with Jory et al. (2019). They examined the relationship between government economic policy uncertainty (EPU) and trade credit and its impact on firm value of all public U.S firms. They also reported that impact of trade credit supply on firm value is nonlinear. They argued that suppliers who tightens the credit policy in greater EPU periods enhance their firm value to a certain point. Beyond this point this tight credit policy results in losing customers to competitors and value destruction.

Implications for researchers and managers are important to note that managing receivables level has implications for shareholder's wealth maximization. It is interesting to note that if the average level of receivables for a firm is less than a target level, it can augment the value of firm by increasing the amount of receivables to a certain point which is an optimal level of receivables. But estimations of this study could not incorporate firm specific advantages and costs. Possibly firms which are below from their desired level of receivables may end up with incurring higher costs for increasing receivables further. The target value found may be not necessarily right for an individual firm. Though the study argues that level of accounts receivable can impact the value of the firm and also on average there is a target value.

References

- Ahmed, J., Xiaofeng, H., & Khalid, J. (2014). Determinants of trade credit: The case of a developing economy. *European Researcher*, (9-2), 1694-1706.
- Allen, F., Qian, M., & Xie, J. (2019). Understanding informal financing. *Journal of Financial Intermediation*, 39, 19-33.
- Andrieu, G., Staglianò, R., & Van Der Zwan, P. (2018). Bank debt and trade credit for SMEs in Europe: firm-, industry-, and country-level determinants. *Small Business Economics*, 51(1), 245-264.
- Barrot, J. N. (2016). Trade credit and industry dynamics: Evidence from trucking firms. *The Journal of Finance*, 71(5), 1975-2016.
- Berger, P. G., & Ofek, E. (1995). Diversification's effect on firm value. *Journal of Financial Economics*, 37(1), 39-65.
- Brennan, M. J., Maksimovics, V., & Zechner, J. (1988). Vendor financing. *The Journal of Finance*, 43(5), 1127-1141.
- Chen, S., Ma, H., & Wu, Q. (2019). Bank credit and trade credit: Evidence from natural experiments. *Journal of Banking & Finance*, 108, 105616.
- Cheng, N. S., & Pike, R. (2003). The trade credit decision: evidence of UK firms. *Managerial and Decision Economics*, 24(6-7), 419-438.
- Chod, J., Lyandres, E., & Yang, S. A. (2019). Trade credit and supplier competition. *Journal of Financial Economics*, 131(2), 484-505.
- Chung, K. H., & Pruitt, S. W. (1994). A simple approximation of Tobin's q. *Financial Management*, 70-74.
- Cole, R. A. (2018). Bank credit, trade credit or no credit: Evidence from the Surveys of Small Business Finances. *Trade Credit or No Credit: Evidence from the Surveys of Small Business Finances (July 31, 2018)*.
- Cunat, V. (2007). Trade credit: suppliers as debt collectors and insurance providers. *The Review of Financial Studies*, 20(2), 491-527.
- Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, 7(3), 209-233.
- Emery, G. W. (1984). A pure financial explanation for trade credit. *Journal of Financial and Quantitative Analysis*, 271-285.
- Ferris, J. S. (1981). A transactions theory of trade credit use. *The Quarterly Journal of Economics*, 96(2), 243-270.

- Jory, S. R., Khieu, H. D., Ngo, T. N., & Phan, H. V. (2019). The Influence of Economic Policy Uncertainty on Corporate Trade Credit and Firm Value.
- Kestens, K., Van Cauwenberge, P., & Bauwhede, H. V. (2012). Trade credit and company performance during the 2008 financial crisis. *Accounting & Finance*, 52(4), 1125-1151.
- Lang, L. H., & Stulz, R. M. (1994). Tobin's q, corporate diversification, and firm performance. *Journal of Political Economy*, 102(6), 1248-1280.
- Lee, Y. W., & Stowe, J. D. (1993). Product risk, asymmetric information, and trade credit. *Journal of Financial and Quantitative Analysis*, 285-300.
- Lewellen, W. G., McConnell, J. J., & Scott, J. A. (1980). Capital market influences on trade credit policies. *Journal of Financial Research*, 3(2), 105-113.
- Lins, K. V. (2003). Equity ownership and firm value in emerging markets. *Journal Of Financial and Quantitative Analysis*, 159-184.
- Long, M. S., Malitz, I. B., & Ravid, S. A. (1993). Trade credit, quality guarantees, and product marketability. *Financial Management*, 117-127.
- Martínez-Sola, C., García-Teruel, P. J., & Martínez-Solano, P. (2013). Trade credit policy and firm value. *Accounting & Finance*, 53(3), 791-808.
- Masiukiewicz, P. (2016). Payments in Business, European Payment Index. *Journal of applied management and investments*, 5(3), 166-173.
- McConnell, J. J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial economics*, 27(2), 595-612.
- McGuinness, G., Hogan, T., & Powell, R. (2018). European trade credit use and SME survival. *Journal of Corporate Finance*, 49, 81-103.
- Meltzer, A. H. (1960). Mercantile credit, monetary policy, and size of firms. *The Review of Economics and Statistics*, 429-437.
- Mian, S. L., & Smith Jr, C. W. (1992). Accounts receivable management policy: theory and evidence. *The Journal of Finance*, 47(1), 169-200.
- Nadiri, M. I. (1969). The determinants of trade credit in the US total manufacturing sector. *Econometrica: Journal of the Econometric Society*, 408-423.
- Ng, C. K., Smith, J. K., & Smith, R. L. (1999). Evidence on the determinants of credit terms used in interfirm trade. *The journal of finance*, 54(3), 1109-1129.
- Niskanen, J., & Niskanen, M. (2006). The determinants of corporate trade credit policies in a bank-dominated financial environment: The case of Finnish small firms. *European Financial Management*, 12(1), 81-102.

- Perfect, S. B., & Wiles, K. W. (1994). Alternative constructions of Tobin's q: An empirical comparison. *Journal of Empirical Finance*, 1(3-4), 313-341.
- Petersen, M. A., & Rajan, R. G. (1997). Trade credit: theories and evidence. *The Review of Financial Studies*, 10(3), 661-691.
- Pike, R., & Cheng, N. S. (2001). Credit management: an examination of policy choices, practices and late payment in UK companies. *Journal of Business Finance & Accounting*, 28(7-8), 1013-1042.
- Pike, R., Cheng, N. S., Cravens, K., & Lamminmaki, D. (2005). Trade credit terms: asymmetric information and price discrimination evidence from three continents. *Journal of Business Finance & Accounting*, 32(5-6), 1197-1236.
- Scherr, F. C., & Hulburt, H. M. (2001). The debt maturity structure of small firms. *Financial management*, 85-111.
- Schwartz, R. A. (1974). An economic model of trade credit. *Journal of Financial and Quantitative Analysis*, 643-657.
- Smith, J. K. (1987). Trade credit and informational asymmetry. *The Journal of Finance*, 42(4), 863-872.