



Testing Interaction Effect of Firm Size on Net Trade Credit: Another Perspective from Indonesian Capital Market

Andre¹, Wendy²

¹Universitas Widya Dharma Pontianak, Indonesia

²Universitas Tanjungpura, Indonesia

Correspondent: antandre190@gmail.com¹

Received : May 21, 2024

Accepted : July 9, 2024

Published : July 31, 2024

Citation: Andre., Wendy. (2024). Testing Interaction Effect of Firm Size on Net Trade Credit: Another Perspective from Indonesian Capital Market. *Ijomata International Journal of Management*, 5(3), 714-728.

<https://doi.org/10.61194/ijjm.v5i3.1186>

ABSTRACT: This research takes a different perspective by only using trade credit from third-party transactions. This research uses primary consumer sector corporates listed on the Indonesia Stock Exchange with a purposive sampling method, obtaining a total of 235 data points. The results of this study indicate that capital structure and efficiency positively affect net trade credit. Conversely, firm age has a negative affect net trade credit. When interacted with firm size, the firm age significantly has a positive effect on net trade credit. Meanwhile, efficiency consistently has a positive effect on net trade credit. The interaction effect of firm size on these factors tends to weaken. This study provides implications for the importance of using trade credit from third parties as creditworthiness, as well as further evidence regarding formal financing in the redistribution theory in Indonesian corporations.

Keywords: Net Trade Credit, Age, Capital Structure, Efficiency, Firm Size



This is an open access article under the CC-BY 4.0 license

INTRODUCTION

In the business processes, funding becomes a supporting factor to ensure the success of project operations and business programs. Funding decisions can be tailored to the needs, conditions, and its characteristics. Based on its source, funding is divided into two categories: internal funding and external funding. Firms tend to choose funding options with lower risk and cost. Internal funding decisions, in the context of the pecking order, can minimize asymmetric information and incur lower funding costs compared to external funding. The hierarchy of funding sources in the pecking order theory begins with internal funding, followed by external funding such as debt and equity issuance (Myers & Majluf, 1984). However, internal funding is limited by the financial capacity, so the firm still requires external funding such as formal or informal funding.

According to [Degryse et al. \(2016\)](#), informal funding offers informational advantages, while formal funding is characterized by its measurable nature. Formal funding is closely related to financial institutions such as banks, whereas informal funding refers to trade credit, non-bank financial institutions, and personal loans ([Hou et al., 2022](#)). Trade credit from suppliers is often viewed as

Testing Interaction Effect of Firm Size on Net Trade Credit: Another Perspective from Indonesian Capital Market

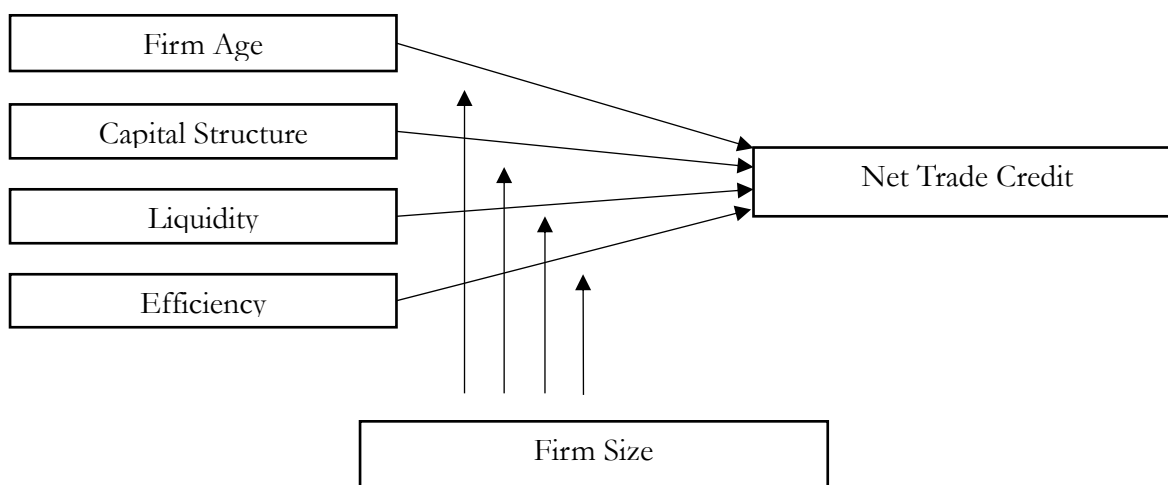
Andre and Wendy

an easier and quicker source of funding when firms lack access to formal funding. According to [Barholdy & Olson \(2023\)](#), trade credit is often used for short-term funding, whereas in the long term, firms will replace trade credit with cheaper sources of funds to finance their business activities. Trade credit becomes more expensive when firms make credit purchases after the discount period has ended ([Abuhommous, 2017](#)). Trade credit is not only related to the recipient of the credit but also acts as a provider of trade credit. Firms are willing to extend trade credit because they have an informational advantage compared to financial institutions. This is because the provider and the recipient of trade credit operate in the same industry.

Each firm has a different capacity to access formal funding. This may relate to the firm's financial capabilities and its characteristics. According to [Fisman & Love \(2003\)](#), young firms have not yet had the opportunity to build a reputation for creditworthiness, making trade credit an alternative funding source. Firms with greater access to informal funding tend to invest more in trade credit extended to their customers ([Afrifa & Gyapong, 2017](#)). A financial capabilities also determine its trade credit policy. Funding is needed when firms liquidity declines, leading to increase accounts payable to meet their working capital needs. A high liquidity position can reduce a firm's dependence on trade credit ([X. Wang et al., 2019](#)). On the other hand, the provision and receipt of trade credit can be utilized by firms to improve cash efficiency by adjusting the gap between payments received from customers and payments from suppliers, thus widening the gap between operating cash inflows and outflows ([Abuhommous, 2017](#)).

Firm Characteristics can determine the direction of its trade credit policy. These characteristics can be associated with resource ownership, accumulated experience, and business nature ([Handoyo et al., 2023](#)). The resources can reflect its size. Large firms are perceived to have greater resources in terms of bargaining power, making them superior to small firms. This perception leads to large firms having more flexibility in negotiation and establishing trade credit policies between suppliers and customers. Large firms also have better access to formal funding, which serves as a benchmark for creditworthiness for banks, as defaults by firms are strategically more significant for banks than for suppliers ([Giannetti et al., 2011](#)).

Based on the above analysis, the research model framework is as follows:



Source: Processeds Image (2024)

In the research [Hyun \(2021\)](#), it was found that corporate engaging in related-party transactions (groups affiliation) tend to increase provision of trade credit to related-party, whereas with non-affiliated, the corporate decrease trade credit provision. To the best of the author's knowledge, there has been no research addressing trade credit from third parties (non-affiliated). If trade credit reflects the creditworthiness reputation of a corporate, then it is irrelevant if trade credit involves credits given or received from related parties. This is because the provision or acceptance of trade credit from related parties does not accurately reflect the true creditworthiness reputation (bias) due to the special relationship between related parties (a source of affiliated transaction). The review, highlights the importance of conducting this research to answer the question, "How does the interaction of firm size explain the phenomenon of net trade credit in Indonesia?" Therefore, this research aims to focused on filling this gap by solely utilizing trade credit from third parties, thereby being able to demonstrate the actual trade credit policy.

Trade Credit

Trade credit as an alternative source of funding has a dual nature, acting both as a provider of trade credit and a receiver of trade credit. Provision of trade credit is typically extended to customers, while the receipt of trade credit is from suppliers. According to [James et al., \(2023\)](#) a negative net trade credit implies that a firm receives more trade credit than it extends (having more accounts payable than accounts receivable). Conversely, if the net trade credit is positive, the firm extends more trade credit than it receives.

Alternative funding sources such as trade credit emerge due to asymmetric information. Trade credit providers have a interest in the continued viability of their customers' businesses and had better information compared to financial institutions (formal funding) regarding the assessment of default risk ([Ono, 2001](#)). This is because trade credit providers and recipients operate as business partners within the same industry, serving as suppliers and customers. Consequently, if trade credit providers (suppliers) perceive signs of financial or industry-related issues with the trade credit recipients (customers), they can to cut and run. This differs from financial institutions, which have limited information and are bound by loan contracts, leading them to adopt a more conservative lending approach.

As an alternative funding source, trade credit is also utilized by credit recipients as a tool to foster relationships with their business partners. Trade credit can be employed as a guarantee to ensure that the quality of goods or services received aligns with the agreed-upon standards, thus mitigating the risk of fraud from credit providers acting as suppliers ([Wilson & Summers, 2002](#)). Furthermore, trade credit can function as a signaling mechanism to banks regarding a corporate's creditworthiness. According to [Ma & Ma \(2020\)](#), the use of trade credit reduces banks' concerns regarding agency costs, thereby making banks more willing to extend credit to corporates (trade credit and loans being complementary).

Net trade credit indicates the extent to which trade credit is extended to customers compared to the trade credit received from suppliers. According to [Liu et al. \(2016\)](#), [X. Wang & Yu \(2023\)](#) and [Xiang & He \(2024\)](#), net trade credit is measured by the difference between accounts receivable and accounts payable, based on total sales. In this research, only accounts receivable from third

parties, accounts payable to third parties, and sales from third parties are used. Based on the studies, net trade credit can be influenced by several factors such as firm age, capital structure, liquidity, and efficiency. Additionally, firm size as a firm characteristic can mitigate the impact of these factors on net trade credit.

Firm Age

Firm age can be a consideration for credit providers as a criterion for creditworthiness. [Robb \(2002\)](#) found that younger firm have a smaller proportion of funding from banks compared to more older firms, reflecting the higher risk associated with younger firm due to unclear information about them. Information about a firm is crucial for assessing creditworthiness as a measure of credibility. Corporates listed on the stock exchange are required to be transparent with their information. The longer a corporate has been listed on the exchange, the more comprehensive the disclosure of information, which can build the firm's reputation and trust. Additionally, being listed on the stock exchange can reduce asymmetric information due to market participants' knowledge about the corporate. Relatively young corporates listed on the exchange tend to be newly recognized by the market participants. During this introductory phase, corporates are likely to use more trade credit ([Hasan et al., 2021](#)). Trade credit requires reputation and trust, as legal protection is not as effective as funding from banks (financial institutions) that have more complex contractual commitments. This aligns with the research by [Abdulla et al. \(2017\)](#), which found that public firm have lower levels of trade credit compared to private firm. The measure of firm age used in this research is listing age, defined as the number of years since the corporate was listed on the stock exchange ([Li et al., 2020](#)).

To build a good reputation and gain trust from financial institutions, transparency and integrity are crucial, which requires a significant amount of time. Younger firms have not had sufficient time to build a reputation for creditworthiness compared to more mature firms ([Fisman & Love, 2003](#)). The longer a firm is widely recognized, the easier it becomes to obtain funding from both formal and informal sources. According to the study by [Ma & Ma \(2020\)](#), as firm age added, they tend to shift from more expensive trade credit to cheaper formal financing. Additionally, mature firms experience higher cash flow increases, reducing their need for external funding ([Adair & Adaskou, 2015](#)). This transition in funding sources and increased cash flow causes mature firms to have positive net trade credit because they receive less trade credit while still providing it. Conversely, [Rodríguez-Rodríguez \(2008\)](#) found that corporate age positively affects the use of received trade credit. [Cosci et al. \(2020\)](#) identified that more mature firms tend to become recipients of trade credit to cover their operational financing needs, in addition to their receivables. This results in a decrease in net trade credit for more mature firms. Based on these considerations, the author formulates the first hypothesis as follows:

H1: Firm age negatively affects net trade credit.

Capital Structure

Capital structure is used to measure the extent to which a corporate's operating activities are financed by equity and debt. A higher proportion of debt on the corporate's balance sheet reflects

the corporate's greater ability to obtain funding from both informal and formal sources. Therefore, the larger the firm's debt, the greater the firm's capacity to channel trade credit. On the other hand, a high proportion of bank debt in the capital structure also indicates the high financial risk on firms. The ability to obtain formal funding (bank debt) can be utilized by firm to redistribute (redistribution theory) in the form of trade credit using its information advantage. This relates to the creditors (suppliers) who have higher security compared to financial institutions, so if the credit recipients fail to make payments, the creditors can take over the goods or services provided ([Ono, 2001](#)). According to [Giannetti, Burkart, & Ellingsen \(2011\)](#) through the advantages possessed by suppliers, they have more reasons to extend trade credit while mitigating the risks of trade credit recipients' failure (moral hazard). The measurement of capital structure uses the bank loan to total assets ratio obtained by dividing total bank debt by the total assets ([Deng et al., 2023](#); [Peng et al., 2019](#)).

Based on the study by [Adair & Adaskou \(2015\)](#), it was found that firms receiving more trade credit have higher debt ratios, resulting in lower net trade credit. Similarly, [Afrifa & Gyapong \(2017\)](#), found that corporateses with financial constraints will reduce their trade credit provision. This contrasts with [Hill et al. \(2019\)](#) dan [Peng et al. \(2019\)](#) show that the higher the proportion of debt in the corporate's capital structure, the higher the trade credit provided. The increase in trade credit provided can lead to higher net trade credit. Based on these studies, the author formulates the following hypothesis:

H2: Capital structure positively effects net trade credit.

Liquidity

The liquidity capability to fill its short-term obligations can prevent the corporate from facing difficulties in fulfilling operational costs. By having good liquidity, the firm will be more stable and flexible in facing crises and uncertainties. This is needed when the firm is faced with the risk of defaulting on credit payments. Poor liquidity can lead the firm to refinance for avoid default ([Higgins et al., 2016](#)). In the context of trade credit, the accounts payable balance will increase if the corporate extends the payment period and continues to purchase goods/services necessary for operational activities ([Nidar, 2023](#)). Thus, poor liquidity can increase trade credit receipts but also reduce the corporate's capacity to provide trade credit. Therefore, corporateses that provide trade credit are likely not those facing credit or liquidity constraints ([Cosci et al., 2020](#)). The measurement of liquidity used in this research is net working capital to total assets, obtained by dividing net working capital by the total assets of the corporate ([Ross et al., 2022](#)).

On the other hand, a corporate's liquidity also indicates how urgently the corporate needs funding from external sources. If internal funding sources are sufficient, then external funding, in the context of trade credit, should not be highly necessary. This is consistent with [X. Wang et al. \(2019\)](#) found that a good liquidity position can reduce the corporate's dependence on trade credit receipts as well as credit from financial institutions. In line with [Afrifa & Gyapong \(2017\)](#), [Hill et al. \(2019: 492\)](#) dan [Hyun \(2021\)](#), state that a liquid corporate will distribute more trade credit. Based on this empirical study, the author formulates the following hypothesis:

H3: Liquidity positively effects net trade credit.

Efficiency

Efficiency is used to measure the level of effectiveness in utilizing the resources a corporate possesses to generate profits. Efficiency can be observed from both financial and operational perspectives. If viewed from a financial performance, a firm's efficiency can indicate the ratio of output produced to the input received. In the context of trade credit, efficiency is related to the firm's ability to manage cash inflows and outflows, including the level of purchases and sales. Thus, a firm can increase cash turnover efficiency by widening the gap between payments received from customers and payments from suppliers. On the other hand, a firm can also utilize the cash generated as internal funding to take advantage of trade credit discounts ([Niskanen & Niskanen, 2006](#)). This may lead to a smaller level of trade credit receipts compared to trade credit provision. The level of efficiency in cash management can also serve as the basis for the firm's policies regarding accessing funding and providing trade credit. The measurement of a firm's efficiency used in this research is days sales outstanding, calculated by dividing accounts receivable by total sales ([Nidar, 2023](#)). The overall value for measuring the efficiency level utilizes values from third parties, then multiplied by 365 days..

[Abuhommous \(2017\)](#) did not find strong evidence supporting the notion that a firm's efficiency can influence trade credit policy. In contrast, ([Afrifa & Gyapong, 2017](#); [Peng et al., 2019](#)),) found that efficiency and net trade credit are negatively. Meanwhile, [Li et al. \(2020\)](#) found that the higher the level of firm's efficiency, the higher net trade credit. Based on these empirical studies, the author formulates the following hypothesis:

H4: Efficiency positively effects net trade credit.

Effect of Firm Size Interaction

Firm characteristics can create different perceptions of the policies and strategies implemented by the corporate. Access to various funding sources depending on the resources and bargaining power of the corporate. Small firms with limited resources increase their trade credit when their cash flow decreases, unlike large corporates where the amount of trade credit is relatively unresponsive to changes in cash flow ([Ono, 2001](#)). Large firms are considered more resilient in crisis conditions, thus large firms tend to have better access to funding and financial positions compared to small firms. This makes large firms have more bargaining power with financial institutions (banks), suppliers, customers, and business partners. A defensive approach is often taken by large firms to prioritize long-term stability with more favorable policies but lower risks, unlike small firms that strive for significant growth ([Handoyo et al., 2023](#)).

The low bargaining power of the corporate in the market share drives the corporate to provide more trade credit than it receives. This low bargaining power is usually possessed by small firms. As a result, small firms tend to offer trade credit to pursue growth. On the other hand, small firms also struggle to obtain formal financing and trade credit, leading to small firms having a positive net trade credit. This aligns with [Cosci et al. \(2020\)](#) where corporates that receive more trade

credit have greater market power compared to corporateses that provide more trade credit. [Hill et al. \(2019\)](#) show that the relationship between firm size and net trade credit is negative, as large firms have significant negotiating power to avoid extending trade credit for longer periods.

Unlike previous studies, [Bartholdy & Olson \(2023\)](#) found that large firms can replace their trade credit with cheaper sources of funding, whereas small firms without access to formal financing use trade credit to fund their long-term investments. The ability of large firms to access formal funding can be utilized to provide trade credit to their customers. This relates to the corporate's goal of creating customer loyalty and sustainable revenue. On the other hand, small firms view the receipt of trade credit as a determinant for their funding composition, both as long-term and short-term funding. Similarly, [Deng et al. \(2023\)](#) found that large corporateses tend to be trade credit providers rather than recipients. [Afrifa & Gyapong \(2017\)](#) also show that large firms benefit more from distributing their trade credit, so the direct relationship between net trade credit and firms size supports the view that large firms will strive to increase their investment in trade credit..

Based on the studies, the bargaining power of each corporate will have an interaction effect on the firm age and financial capability to net trade credit. Additionally, in this research, firm size is measured using market capitalization, which is then natural logarithmized ([Dang et al., 2018](#)). Based on that, the interaction effect of firm size can be hypothesized to weaken the influence of firm age, capital structure, liquidity, and efficiency on net trade credit. This argument supports the development of hypotheses 5a to 5d.

H5a: Firm size weakens the influence of firm age on net trade credit..

H5b: Firm size weakens the influence of capital structure on net trade credit..

H5c: Firm size weakens the influence of liquidity on net trade credit.

H5d: Firm size weakens the influence of efficiency on net trade credit.

METHOD

This study uses a quantitative approach and uses secondary data collected from the annual financial reports of primary consumer sector corporateses listed on the Indonesia Stock Exchange from 2018 to 2022. The population of this sector consists of 125 corporate, which were then selected using the purposive sampling method. The sample selection criteria used were corporate that have been listed on the Indonesia Stock Exchange for at least since 2018 and have had bank debt for 5 consecutive years. Based on these criteria, the details of the resulting sample are as follows:

Table 1. Sample Selection

Primary Consumer Goods	Industry Type			
	Before Selection		After Selection	
	Number	Percentage	Number	Percentage
Agricultural Products	53	42,40%	21	44,68%
Beverages	10	8,00%	2	4,26%
Food & Staples Retailing	14	11,20%	5	10,64%
Personal Care Products	11	8,80%	4	8,51%
Processed Foods	32	25,60%	14	29,79%
Tobacco	5	4,00%	1	2,13%
Total Sample	125	100,00%	47	100,00%
Total Observations (n sample x n years)	625		235	

Source: Processeds Data (2024)

This research utilizes panel data, which is then analyzed using the EViews 13 software. This type of data is a combination of cross-sectional data and time series data. Panel data regression models can create different intercepts and slope coefficients for each sample and each time period (Widarjono, 2018).

This study formulates three research models, each of which can be described in three econometric equations. The first equation model shows the relationship between firm age, capital structure, liquidity, and efficiency with net trade credit, which can be presented as follows:

$$NTC_{it} = \alpha + \beta_1.AGE_{it} + \beta_2.LVG_{it} + \beta_3.LIQ_{it} + \beta_4.EFF_{it} + \epsilon_{it} \dots\dots\dots \text{Model (1)}$$

The second equation model shows the relationship between firm size and net trade credit, which can be presented as follows:

$$NTC_{it} = \alpha + \beta_5.SZE_{it} + \epsilon_{it} \dots\dots\dots \text{Model (2)}$$

The third equation model shows the relationship between firm age, capital structure, liquidity, and efficiency on net trade credit, with firm size as a moderator. This equation model can be presented as follows:

$$NTC_{it} = \alpha + \beta_6.AGE_{it} + \beta_7.LVG_{it} + \beta_8.LIQ_{it} + \beta_9.EFF_{it} + \beta_{10}.SZE_{it} + \beta_{11}.AGE_{it}*SZE_{it} + \beta_{12}.LVG_{it}*SZE_{it} + \beta_{13}.LIQ_{it}*SZE_{it} + \beta_{14}.EFF_{it}*SZE_{it} + \epsilon_{it} \dots\dots\dots \text{Model (3)}$$

Notation Explanation:

- NTC_{it} = net trade credit
- SZE_{it} = firm size
- AGE_{it} = firm age
- LVG_{it} = capital structure
- LIQ_{it} = liquidity
- EFF_{it} = efficiency
- α_{it} = constant

β_{1-14} = regression coefficients

ε_{it} = residual

Before analyzing and testing hypotheses, the author will choose the regression panel data estimation technique. There are three estimation approaches: Common Effect, Fixed Effect, and Random Effect. Testing to select the most appropriate model approach can be done using the Chow test, Hausman test, and LM Breusch-Pagan Lagrange Multiplier test ([Algifari, 2021](#)). After selecting the model, classical assumption testing will be conducted. Classical assumption testing includes testing for residual normality, multicollinearity, heteroskedasticity, and autocorrelation. Because this research uses a regression panel data model with micro-panel data (cross-sectional data > time series data), multicollinearity and autocorrelation issues are not relevant to consider ([Algifari, 2021](#)). Therefore, the classical assumption testing to be conducted in this research will only include testing for residual normality and heteroskedasticity. Hypothesis testing will be conducted through F-test, coefficient of determination (R-squared), and t-test.

RESULT AND DISCUSSION

Panel Data Regression Estimation Selection

The results of Chow Test and Hausman Test can be seen in Table 3 presented as follows:

Table 2. Regression Estimation Selection

Method Test	Chi-Square	Probability
Chow Test	143,596993	0,0000
Hausman Test	32,551625	0,0000

Source: Processeds Data (2024)

The results in Table 3 show that the probability value for the cross-section chi-square test is 0.0000, which is smaller than 0.0500, indicating that the selected model is the fixed effect model. Similarly, in the Hausman Test, the probability value for the cross-section random test is 0.0000, also smaller than 0.0500, indicating that the selected model is the fixed effect model. Through both Chow and Hausman tests, it can be concluded that the fixed effect model is the most appropriate for this research.

The Classical Assumption Test

The result of the normality test on residuals using the Jarque-Bera method indicates non-normal distribution. This is because the probability value in Jarque-Bera is 0.0000, which is smaller than 0.0500. It is known that the number of observations in this research is 235, so the normality test can be ignored because the number of observations in this research exceeds 100 ([Gujarati & Porter, 2009](#)).

Testing Interaction Effect of Firm Size on Net Trade Credit: Another Perspective from Indonesian Capital Market

Andre and Wendy

According to [Algifari \(2021\)](#), if the model selection test result is determined to be the fixed effect model, the method to detect the possibility of heteroskedasticity problems can be comparing the statistical values between the fixed effect model without weighting and the fixed effect model with weighting in the calculation results of the fixed effect model. Table 5 below shows the results of the Fixed Effect test without weighting and with weighting as follows:

Table 3. Identifying Heteroskedasticity Issues

Statistical Value	No Weights	Cross-section weights
T-value (Prob Value) AGE	-2,459527(0,0148)	-4,878815(0,0000)
T-value (Prob Value) LVG	1,580346(0,1157)	2,345597(0,0201)
T-value (Prob Value) LIQ	-1,987449(0,0484)	-0,751505(0,4533)
T-value (Prob Value) EFF	5,200959(0,0000)	14,78563(0,0000)
F-value (Prob Value)	7,092319(0,000000)	88,88265(0,000000)
Coefficient of Determination (R^2)	0,565553	0,949440

Source: Processeds Data (2024)

Overall, the statistical values of the fixed effect model with weighting are better than those without weighting. Therefore, the fixed effect model without weighting exhibits heteroskedasticity issues. Hence, the model to be used for the F-Test, Coefficient of Determination (R^2), and t-Test will employ the fixed effect model with weighting. The results of the regression models for each model can be seen in Table 4, as follows:

Table 4. Summary of Model Testing Results

		Model 1	Model 2	Model 3
Constant	Coefficient	0,0027	0,6380	1,0490
	Std. Error	0,0211	0,1725	0,3867
	Prob.	0,8990	0,0003 ***	0,0073 ***
AGE	Coefficient	-0,0063		-0,0296
	Std. Error	0,0013		0,0122
	Prob.	0,0000 ***		0,0159 ***
LVG	Coefficient	0,0507		0,1268
	Std. Error	0,0216		0,2812
	Prob.	0,0201 **		0,6525
LIQ	Coefficient	-0,0174		-0,0446
	Std. Error	0,0232		0,2996
	Prob.	0,4533		0,8819
EFF	Coefficient	0,0017		-0,0005
	Std. Error	0,0001		0,0015
	Prob.	0,0000 ***		0,7166
SZE	Coefficient		-0,0225	-0,0367

Testing Interaction Effect of Firm Size on Net Trade Credit: Another Perspective from Indonesian Capital Market

Andre and Wendy

	Std. Error		0,0059		0,0131
	Prob.		0,0002 ***		0,0055 ***
AGE*SZE	Coefficient				0,0008
	Std. Error				0,0004
	Prob.				0,0390 **
LVG*SZE	Coefficient				-0,0037
	Std. Error				0,0095
	Prob.				0,6990
LIQ*SZE	Coefficient				0,0012
	Std. Error				0,0103
	Prob.				0,9058
EFF*SZE	Coefficient				0,0001
	Std. Error				0,0001
	Prob.				0,0839 *
	<i>Adjusted R-squared</i>	0,9494	0,9112		0,9493
	<i>F-statistic</i>	88,8827	52,1123		80,6851
	<i>Prob (F-statistic)</i>	0,0000 ***	0,0000 ***		0,0000 ***

Dependent = NTC ; *** sig.1% ; ** sig.5% ; * sig.10%

Source: Processeds Data (2024)

Based on Table 4, each model shows a probability value of 0.0000. This value is smaller than 0.0500, indicating that each model in this study demonstrates good regression model fit. The adjusted R-squared values in Table 4 are high for each model (0,9494; 0,9112; & 0,9493). These results indicate that the variation of independent variables can explain the variation of dependent variable well.

In Table 4, the first model shows that firm age (AGE) significantly influences net trade credit (NTC) at the one percent level. There is a significant negative effect of AGE on NTC, thus H1 is accepted. This proves that young firms have not been able to build a good reputation to receive trade credit, so they tend to extend more trade credit than receive trade credit. On the other hand, mature firms leverage their reputation by continuously receiving trade credit to fund their trade credit provision and operational costs, resulting in mature firms having negative net trade credit. These findings are consistent with [\(Cosci et al., 2020\)](#), [\(Fisman & Love, 2003\)](#) and [\(Rodríguez-Rodríguez, 2008\)](#). Meanwhile, the results in the third model show inconsistent results when interacted with firm size (SZE), thus H5a is rejected. The effect of AGE on NTC becomes positive and significant at the five percent level (as hypothesized weakened) presumably because mature firms shift from more expensive financing like trade credit to cheaper financing like formal financing. Additionally, mature firms leverage their resources such as higher cash flows compared to young firms, resulting in mature firms using trade credit less as a source of funding. This is in line with the findings of [\(Ma & Ma, 2020\)](#) and [\(Adair & Adaskou, 2015\)](#) that mature firms tend to receive less trade credit due to this financing shift. Another assumption may also refer to [\(Petersen & Rajan \(1997\)\)](#) stating that larger firms have better financing access, so they offer more trade credit to smaller firms while simultaneously paying more slowly. Thus, trade credit provision is larger than trade credit reception in large firms.

The capital structure (LVG) significantly and positively influences NTC at the five percent significance level. This indicates that H2 is accepted. The higher the debt composition in the capital structure, the higher the net trade credit. Debt obtained by corporates is utilized for redistribution purposes in the form of trade credit. This is boldly done by corporates because they have information advantages over financial institutions. Corporates can mitigate the risk of failure from trade credit recipients (moral hazard) by guaranteeing the takeover of goods or services provided. These results are consistent with [\(Hill et al., 2019\)](#) and [\(Peng et al., 2019\)](#) which show that as the debt in the capital structure increases, the trade credit provided by corporates will also increase. The high trade credit provided can make net trade credit to increase as well. However, in the third model, there are insignificant results on NTC when LVG is interacted with SZE, thus H5b is rejected. The researchers speculate that when large firms capital structure does not redistribute formal financing obtained to trade credit. Corporate may prefer to invest these funds in other assets, such as fixed assets or more promising investments. These results indirectly challenge the consistency of the redistribution theory. According to the researchers, separate research is needed to prove this hypothesis..

Based on the liquidity (LIQ) test in the first model, it shows no significant influence on NTC, thus H3 is rejected. Similarly, LIQ interacted with SZE in the third model shows no significant influence, thus H5c is rejected. In this case, corporates may prefer not to invest their financial capabilities in trade credit. According to Ross, Westerfield & Jordan (2022: 685:686), investing in trade credit can have income effects related to payment delays because customers take advantage of the benefits of trade credit provision. These payment delays may be perceived by suppliers as not having higher benefits than the firms's liquidity sacrifice. Additionally, in measuring net working capital to total assets, it may not accommodate actual liquidity in the context of trade credit. This is because net working capital comes from the difference between current assets and current liabilities, where trade credit provision is part of current assets composition while trade credit reception is part of current liabilities composition. Even though the firm's liquidity is adequate, if it mostly comes from trade credit provision, the corporate will be more cautious in receiving trade credit, and vice versa.

In the first model, efficiency (EFF) shows a significant influence on NTC at the one percent level. Based on this test, H4 is accepted. Corporate efficiency related to accounts receivable collection can widen the gap between payments received from customers and payments to suppliers, allowing corporates to use generated cash flow to pay trade credit in order to obtain trade credit discounts. This can result in a smaller level of trade credit reception compared to trade credit provision. These results are consistent with [Li et al. \(2020\)](#), who found that the higher the level of corporate efficiency, the higher the net trade credit. Similarly, in the third model, there is a significant influence at the ten percent level (as hypothesized weakened), after EFF is interacted with SZE. In this third model, it can be confirmed that H5d is accepted. A high level of accounts receivable collection remains the basis for corporates in determining their net trade credit. However, as corporate resources increase, trade credit policies become more lenient. This causes net trade credit to be less influenced by the level of efficiency in accounts receivable collection supported by corporate resource ownership..

In the second model, there is a significant influence of SZE on NTC. The results in this model also indicate a negative influence. Referring to the significance of SZE in the second model and the third model, SZE is a spurious moderation.

CONCLUSION

This study investigates the firm age and the financial capability of the corporate on net trade credit from third-party transaction perspective. This is expected to avoid bias from relational transactions that may cause conflicts of interest in those transactions. Based on the analysis and discussion presented, it can be concluded that capital structure and efficiency have a positive influence on net trade credit. Meanwhile, the firm age has a negative influence on net trade credit. A change in direction occurs when the firm age is interacted with the firm size. The firm age becomes positively influential on net trade credit. Other factors such as efficiency, after being interacted with the firm size, consistently show a positive influence. Meanwhile, liquidity and capital structure, after being interacted with the firm size, do not show any influence on net trade credit.

Based on the previous discussion, this study has limitations, namely the need to conduct separate tests to compare the results between net trade credit from third parties and related parties. Thus, further research can provide concrete evidence of the differences in net trade credit between these two types of transactions. Additionally, as speculate by the researchers, further research is needed on the use of formal financing by corporates in trade credit and other assets to prove the redistribution theory in Indonesian corporate.

REFERENCE

- Abdulla, Y., Dang, V. A., & Khurshed, A. (2017). Stock market listing and the use of trade credit: Evidence from public and private firms. *Journal of Corporate Finance*, 46, 391–410.
- Abuhommous, A. A. (2017). Partial adjustment toward target accounts payable ratio. *International Journal of Islamic and Middle Eastern Finance and Management*, 10(4), 484–502.
- Adair, P., & Adaskou, M. (2015). Trade-off theory vs. Pecking order theory and the determinants of corporate leverage: Evidence from a panel data analysis upon french SMEs (2002–2010). *Cogent Economics and Finance*, 3(1), 1–12.
- Afrifa, G. A., & Gyapong, E. (2017). Net trade credit: what are the determinants? *International Journal of Managerial Finance*, 13(3), 246–266.
- Algifari. (2021). *Pengolahan Data Panel untuk Penelitian Bisnis dan Ekonomi dengan Eviews 11* (Pertama). UPP STIM YKPN.
- Bartholdy, J., & Olson, D. (2023). Do trade credits finance long-term investments? *Heliyon*, 9(10), e20448.
- Cosci, S., Guida, R., & Meliciani, V. (2020). Does trade credit really help relieving financial constraints? *European Financial Management*, 26(1), 198–215.

Testing Interaction Effect of Firm Size on Net Trade Credit: Another Perspective from Indonesian Capital Market

Andre and Wendy

- Dang, C., (Frank) Li, Z., & Yang, C. (2018). Measuring firm size in empirical corporate finance. *Journal of Banking and Finance*, 86, 159–176.
- Degryse, H., Lu, L., & Ongena, S. (2016). Informal or formal financing? Evidence on the co-funding of Chinese firms. *Journal of Financial Intermediation*, 27, 31–50.
- Deng, Y., Zhang, L., Zhang, J., & Farooq, U. (2023). Does green innovation promote trade credit activities? New empirical evidence from BRICS. *Borsa Istanbul Review*, 23(6), 1322–1332.
- Fisman, R., & Love, I. (2003). Trade Credit, Financial Intermediary Development, and Industry Growth. *Journal of Finance*, 58(1), 353–374.
- Giannetti, M., Burkart, M., & Ellingsen, T. (2011). What you sell is what you lend? Explaining trade credit contracts. *Review of Financial Studies*, 24(4), 1261–1298.
- Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics* (Fifth Edit). The McGraw-Hill.
- Handoyo, S., Mulyani, S., Ghani, E. K., & Soedarsono, S. (2023). Firm Characteristics, Business Environment, Strategic Orientation, and Performance. *Administrative Sciences*, 13(3).
- Hasan, M. M., Cheung, A., Tunas, L., & Kot, H. W. (2021). Firm life cycle and trade credit. *Financial Review*, 56(4), 743–771.
- Higgins, R. C., Koski, J. L., & Mitton, T. (2016). Analysis for Financial Management. In *Mc Graw Hill Education* (Vol. 11).
- Hill, M., Hill, K., Preve, L., & Sarria-Allende, V. (2019). International evidence on the determinants of trade credit provision. *Managerial Finance*, 45(4), 484–498.
- Hou, X., Yang, R., & Liu, C. (2022). Confucian culture and informal household financing: Evidence from China's counties. *Borsa Istanbul Review*, 22(5), 1005–1019.
- Hyun, J. (2021). Trade credit, group affiliation, and credit contraction Evidence from the.pdf. *Economic Modelling*, 95, 203–214.
- James, H. L., Ngo, T., & Wang, H. (2023). The impact of more able managers on corporate trade credit. *Journal of Behavioral and Experimental Finance*, 40(March 2022), 100857.
- Li, Y., Han, Y., & Fok, R. C. W. (2020). Do cross-border mergers and acquisitions affect acquirers' trade credit? Evidence from an emerging market. *International Review of Economics and Finance*, 70(June), 423–439.
- Liu, Q., Luo, J., & Tian, G. G. (2016). Managerial professional connections versus political connections: Evidence from firms— access to informal financing resources. *Journal of Corporate Finance*, 41(May 2015), 179–200.
- Ma, L., & Ma, S. (2020). Trade credit use and bank loan access: an agency theory perspective. *Accounting and Finance*, 60(2), 1835–1865.
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221.
- Nidar, S. R. (2023). *Manajemen Keuangan Perusahaan Modern Edisi Kedua* (S. R. Nidar (ed.); 2nd ed.). Reka Cipta.
- 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.

- Ono, M. (2001). Determinants of Trade Credit in the Japanese Manufacturing Sector. *Journal of the Japanese and International Economies*, 15(2), 160–177.
- Peng, X., Wang, X. Y., & Yan, L. (2019). How does customer concentration affect informal financing? *International Review of Economics and Finance*, 63(May), 152–162.
- Petersen, M. A., & Rajan, R. G. (1997). Trade Credit: Theories and Evidence. *The Review of Financial Studies*, 10(3), 661–691.
- Robb, A. M. (2002). Small Business Financing: Differences Between Young and Old Firms. *The Journal of Entrepreneurial Finance*, 7(2), 45–64.
- Rodríguez-Rodríguez, O. M. (2008). Firms as credit suppliers: An empirical study of Spanish firms. *International Journal of Managerial Finance*, 4(2), 152–173.
- Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2022). Fundamentals of Corporate Finance. In *Revista Brasileira de Linguística Aplicada* (13th ed., Vol. 5, Issue 1). Mc Graw Hill.
- Wang, K., Zhao, R., & Peng, J. (2018). Trade credit contracting under asymmetric credit default risk: Screening, checking or insurance. *European Journal of Operational Research*, 266(2), 554–568.
- Wang, X., Wu, W., Yin, C., & Zhou, S. (2019). Trade credit, ownership and informal financing in China.pdf. *Pacific-Basin Finance Journal*, 57, 101177.
- Wang, X., & Yu, J. (2023). COVID-19 pandemic and corporate liquidity: The role of SOEs' trade credit response. *Journal of International Money and Finance*, 137, 102901.
- Widarjono, A. (2018). *Ekonometrika : Pengantar dan Aplikasinya Disertai Panduan Eviews* (kelima). UPP STIM YKPN.
- Wilson, N., & Summers, B. (2002). Trade credit terms offered by small firms: Survey evidence and empirical analysis. *Journal of Business Finance and Accounting*, 29(3–4), 317–351.
- Xiang, X., & He, X. (2024). Short selling and trade credit: New evidence. *Borsa Istanbul Review*, 24(1), 61–72.