

The Impact of Economic Policy Uncertainty on Business Transaction Credit Supply

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Abstract

Based on the China Economic Policy Uncertainty (EPU) Index, this study uses quarterly data of listed companies from 2003 to 2022 to examine how economic policy uncertainty affects corporate commercial credit supply decisions. This report mainly uses simple OLS regression method and fixed effects OLS to study the impact of EPU on commercial credit supply. The results indicate that an increase in EPU will significantly reduce the commercial transaction credit provided by companies. After eliminating the impact of time and industry, EPU has a more significant impact on the credit supply of commercial transactions. Thus, for policy makers, it is necessary to maintain the stability of economic policies as much as possible and, if necessary, supplement corresponding supporting measures to alleviate the adverse effects of EPU.

Keywords:

Business Transaction Credit Supply, Economic Policy Uncertainty, Fixed Effect OLS

INTRODUCTION

Commercial transaction credit is a crucial element of a company's working capital and strategic decisions. It also plays a significant role in the company's business strategy. In addition to giving customers commercial transaction credit, businesses will make use of the commercial credit offered by suppliers. Giving customers a certain amount of commercial transaction credit can increase sales and keep them as clients.

Early studies on the motivations for commercial transaction credit supply typically assumed that the external economic environment remained unchanged, believing that the reasons businesses offered commercial credit were because they assured the quality of their products, had access to more information about their clients' ability to pay their debts than financial institutions like banks, and had closer relationships with their clients in terms of traded goods. An organization's operating environment is not always constant in terms of the external economic environment. This study examines the effect of macroeconomic variables on the availability of commercial credit, concentrating primarily on the impact of economic policy uncertainty on a company's access to commercial transaction credit.

LITERATURE REVIEW

Commercial transaction credit can boost customer loyalty, increase sales volume, lower sales expenses, and increase competitive advantages in a market with intense competition. However, giving businesses too much access to commercial credit can result in cash flow issues and financial risks, severely limiting their ability to grow. Previous studies have shown that the bargaining power between businesses and consumers affects the availability of commercial transaction credit (Fabbri & Klapper, 2016).

According to the financial intermediary theory, suppliers who obtain credit information from their clients, keep an eye on them, and pursue payments have a cost advantage over financial institutions when compared to conventional bank loans. Suppliers frequently interact with customers as a result of the need for transactions, and they have some advantages when obtaining customer credit information. By threatening to stop providing future supplies, suppliers can lower the probability of customer default. Suppliers' products may be used as security for loans for business purposes. Due to these benefits, suppliers are more willing than banks to grant customers' credit.

Giannetti et al. (2011) argued that suppliers do not have an information advantage and instead tend to focus less on customer opportunism because of their strong customer relationships or low decentralized value invested. This contradicted the traditional theory. It is challenging for the supplier to replace products that the customer receives that are unique or customized. Lower default rates are the result of customers being reluctant to end this relationship due to the higher conversion costs (Cunat, 2007). As a result, suppliers are more inclined to offer their clients commercial credit.

Currently, there is little research on how shifts in the macroeconomic environment impact a company's choices regarding commercial credit. Studies have looked at how changes in monetary policy affect businesses' decisions regarding commercial credit. Altunok et al. (2015) discovered that businesses with strong credit channels offered commercial credit during times of tightening monetary policy that was comparable to the bank credit they could get. Credit for business transactions will move from publicly traded companies to privately held businesses.

The increased unpredictability of economic policy will make it harder for businesses to obtain external financing and raise their internal liquidity needs, which will decrease their desire to extend commercial credit. Banks will tighten credit supply, enact stricter loan standards, and screen loan companies more rigorously in times of high economic policy uncertainty, lowering the company's overall capacity for external financing. Therefore, the research hypothesis is:

The higher the uncertainty of economic policy, the less commercial transaction credit the company provides.

METHODOLOGY

This study uses the quarterly financial statement data of Chinese listed companies from 2003 to 2022 from the Rasset Database sample, and excludes observations of financial listed companies and related missing data. The Economic Policy Uncertainty Index uses the China Economic Policy Uncertainty Index constructed by Baker et al. (2016).

Commercial transaction credit supply (AR). Commercial transaction credit supply refers to allowing the buyer to delay payment in credit sales contracts. Therefore, for enterprises providing commercial credit supply, they will generate corresponding accounts receivable, notes receivable, etc.

By using text analysis to analyze assessments of economic policy uncertainty from mainstream news media, Baker et al. (2016) filled in the gaps and weaknesses of previous research and created a monthly index of economic policy uncertainty. This index more effectively addresses the shortcomings of earlier related variables by reflecting not only the overall uncertainty of national macroeconomic policies, such as monetary policy, fiscal policy, tax policy, etc., but also the understanding and expectations of mainstream news media on economic policy changes.

Table 1: Variables description

Variable Index	Explanatory
AR	transaction credit supply. $AR = (\text{accounts receivable} + \text{prepayments} + \text{notes receivables}) / \text{total assets}$
EPU	Annual Average of monthly EPU from Backer et al. (2016)
Loan	$\text{Loan} = (\text{short term loan} + \text{long term loan}) / \text{total asset}$
ROA	$ROA = \text{net income} / \text{total asset}$
Growth	Represent the revenue growth, $\text{Growth} = (\text{Sales}_t - \text{Sales}_{t-1}) / \text{Sales}_{t-1}$
Size	Represent the company size, the Natural logarithm of total assets
EBIT	Represent the profitability, EBIT to total asset
Liq	Represent the liquidity, Current asset to total asset
CFO	Represent the ability to generate cash flow, Cash from operation to total asset
Age	Age of the company
State	Whether the company is state owned, 1 for yes, 0 for no.

The regression model is based on Love et al. (2007), as:

$$AR_{i,t} = \beta_0 + \beta_1 EPU_{i,t} + \beta_2 LOAN_{i,t} + \beta_3 ROA_{i,t} + \beta_4 GROWTH_{i,t} + \beta_5 SIZE_{i,t} + \beta_6 EBIT_{i,t} + \beta_7 Liq_{i,t} + \beta_8 CFO_{i,t} + \beta_9 Age_{i,t} + \beta_{10} State_{i,t} + \varepsilon_{i,t}$$

The control variables in the model mainly consider the characteristics of the company, such as financial condition, profitability, owner nature, etc. All variables in this article are annual data. Therefore, annual fixed effects and industry fixed effects were added to the model to control for the impact of macroeconomic factors that change over time, quarterly differences in commercial credit supply decisions, and the impact of industry characteristics. Fixed effects refer to the experimental results that only compare the differences between specific categories or categories of each independent variable and their interaction effects with specific categories or categories of other independent variables.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 2 shows the descriptive statistical results of the relevant variables. The maximum value of commercial credit supply (Credit) is 0.975, indicating that the total proportion of accounts receivable, notes receivable, and prepayments to total assets reaches 97.5%, with an average of 11.7%. The average economic policy uncertainty (EPU) is 377.37.

Table 2: Descriptive statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
AR	47114	0.975	-	0.975	0.167	0.121	0.015	1.035	0.011	1.408	0.023
EPU	47114	726.912	64.962	791.874	377.374	255.748	65406.850	0.372	0.011	-1.362	0.023
Loan	47114	25.698	-	25.698	0.149	0.211	0.044	47.495	0.011	5064.874	0.023
ROA	47114	33.312	- 20.548	12.763	0.034	0.189	0.036	-21.318	0.011	3840.084	0.023
Growth	47114	134,608.368	- 1.309	134,607.058	3.330	620.319	384795.618	216.874	0.011	47060.336	0.023
Size	47114	13.219	15.418	28.636	22.019	1.343	1.804	0.797	0.011	1.361	0.023
EBIT	47114	33.020	- 20.194	12.825	0.051	0.191	0.036	-15.681	0.011	3620.629	0.023
Liq	47114	0.991	0.009	1.000	0.570	0.209	0.044	-0.272	0.011	-0.602	0.023
CFO	47114	5.439	- 4.270	1.170	0.048	0.084	0.007	-3.939	0.011	177.868	0.023
Age	47114	4.159	-	4.159	2.733	0.450	0.203	-1.075	0.011	2.103	0.023
State	45602	1	0	1	0.42	0.493	0.243	0.332	0.011	-1.890	0.023

Linear Regression Analysis

Table 3 shows the regression results based on the model. In the regression model, commercial transaction credit supply (AR) is used as the dependent variable, and economic policy uncertainty (EPU) is used as the explanatory variable. Column (1) is the regression result based on the EPU. Column (2) shows the regression results of company characteristic variables. Column (3) shows the regression results with control for the time fixed effects. Column (4) shows the regression results with further controlling for industry fixed effects. There have been significant differences in China's economic environment, trade openness, business environment, and policy improvement over the past 30 years. Moreover, the characteristics of companies in different industries and the Bargaining power between suppliers and buyers vary greatly. Therefore, this study selected a fixed effects model to control the influence of industry and time period.

Table 3: Empirical analysis result

Model	(1)	(2)	(3)	(4)
EPU	-0.0000186***	-.0000163***	-.0000714***	-.0001225***
	-8.5	-6.94	-10.86	-19.32
Loan		.0363763***	.0341237***	.0391367***
		12.4	11.6	13.85
ROA		.0085236	.0044173	-.0152122
		0.32	0.17	0.60
Growth		3.58e-08	8.89e-08	1.09e-07
		0.05	0.11	0.15
Size		-.0059783***	-.0054566***	-.0008629**
		-14.81	-13.24	-2.10
EBIT		-.0301384	-.023875	-.0063429
		0.241	-0.93	-0.26
Liq		.2411663 ***	.2450563***	.270424
		95.09	97.06	100.66
CFO		-.1787685***	-.1826977***	-.208021***
		-29.54	-30.30	-35.99
Age		-.0094374***	-.0066327***	.007665***
		-7.43	-4.78	5.67
State		-.0064449***	-.0080071***	-.0045609***
		-5.84	-6.99	-4.10
Constant	0.1741841***	.2002414***	.2121922***	.0118553
	175.12	22.06	21.83	1.14
Control Year	No	No	Yes	Yes
Control Industry	No	No	No	Yes
Adjusted R Square	0.0015	0.2262	0.2392	0.3085
F	72.3	1377.99	530.03	468.11

Notes: the upper value is the coefficient of independent variables. And the lower value is the t-statistics of the coefficient values.

The regression coefficients for economic policy uncertainty (EPU) from columns (1) to (4) are -0.0000186, -0.000163, -0.000714, and -0.001225, respectively, and are significant at the 1% level. The empirical analysis conclusion indicates that when the degree of economic policy uncertainty is higher, the scale of commercial credit transaction supply is smaller which supports the findings by Avsar & Hudgins (2022).

In addition, considering the impact of company characteristic variables on commercial transaction credit supply, the company's borrowing level and liquidity have a significant positive impact. The cash flow of company scale operation, company age, and nationalization have a significant negative impact on commercial transaction credit supply. State owned companies provide less commercial credit. The regression coefficients of other control variables are also within a reasonable range. With the increasing uncertainty of economic policies, the company's access to external financing such as financial institutions are subject to certain restrictions, resulting in increased internal operational uncertainty and limited funds and decreased liquidity. This is in line with the research hypothesis of this article.

CONCLUSION

Due to the uncertainty of economic policies, changes in the supply of corporate commercial credit are relatively exogenous, which can effectively alleviate the endogeneity problems caused by reverse causality in existing research on commercial credit supply. This article uses the Economic Policy Uncertainty Index to measure the degree of uncertainty in China's economic policies. Using quarterly data from Chinese listed companies from 2003 to 2022, empirical testing shows that economic policy uncertainty has a significant negative impact on the supply of commercial credit for companies. Based on the result of this article, for policy makers, it is necessary to maintain the stability of economic policies as much as possible and, if necessary, supplement corresponding supporting measures to alleviate the adverse effects of economic policy uncertainty.

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