

P2P lending Fintechs and SMEs' access to finance

Abstract

Given the importance of Small and Medium Enterprises (SMEs) to the economy, we investigate whether peer-to-peer (P2P) lending financial technologies (Fintechs) enhance the SMEs' access to finance. Using a sample of OECD countries from 2011-2018, our fixed effects model finds that P2P lending Fintechs increase the access to finance for SMEs. We also evidence that institutional quality positively moderates the association between P2P lending Fintechs and SMEs' access to finance. Our results suggest that SME managers may meet the liquidity needs of their firms through the use of P2P lending Fintechs.

Keywords: Peer-to-peer lending; Fintechs; Small and Medium Enterprises; Institutional quality

1. Introduction

Small and Medium Enterprises (SMEs) find it difficult to raise finance from traditional banks. Lack of collateral and lack of availability of detailed financial information are some of the issues that make it tough for SMEs to gain access to finance (Beck & Demirguc-Kunt, 2006). If SMEs are not provided with more financing opportunities then, due to their small size, they may be unlikely to survive. Given that SMEs form a major part of any economy and provide employment to a major segment of the workforce (Abbasi et al., 2021), the failure of SMEs may have negative repercussions on an economy. Thereby, any novel practices that have the potential to contribute towards meeting the liquidity needs of SMEs need to be investigated. In this context, we investigate whether Peer-to-Peer (P2P) lending technologies (a type of financial technology (Fintech)) enhance the availability of finance for SMEs.

The theory of reasonable action suggests that SMEs adopt policies that are likely to be beneficial for them (Abbasi et al., 2021). Therefore, we contend that SMEs are expected to utilize

P2P lending FinTechs, given the difficulty for SMEs to gain access to loans through traditional banks. It has been suggested that, when making decisions to lend, P2P lending Fintechs incorporate factors that conventional banks may not consider (Lee & Shin, 2018), thereby affecting the lending criteria. As P2P lending Fintechs utilize big data, they may be able to assess the credit risk of SMEs more accurately, thereby potentially enabling SMEs to qualify for loans (Jagtiani & Lemieux, 2019). Further, it is argued that P2P lending Fintechs are associated with lower interest rates due to reduced operating costs (Lee & Shin, 2018), making it more affordable for SMEs to apply for loans. Therefore, P2P lending Fintechs may provide a mechanism for SMEs to meet their financing needs. However, this mechanism has been ignored in the existing literature and, hence, requires empirical evidence.

Our results suggest that the greater the P2P lending Fintechs in a country, the greater the SMEs' access to loans. Moreover, we find that institutional quality has a positive moderating impact on the association between P2P lending Fintechs and the SMEs' access to finance, suggesting better institutions provide an adequate platform for entrepreneurs to establish P2P lending Fintechs, thereby increasing the SMEs' access to finance.

This study contributes to P2P lending Fintechs literature in two ways. First, our study is the first to report cross-country evidence on the link between P2P lending Fintech startups and the availability of finance for SMEs. Second, this study assesses how the link between P2P lending Fintechs and SMEs' access to loans is influenced by institutional quality.

The structure of the paper is as follows. Section two details the methodology. Section three presents the results, while section four concludes the study.

2. Methodology

We focus on SME firms from OECD countries over the period 2011-2018. We collect P2P lending FinTech data from Crunchbase whereas financial characteristics data are obtained from the Osiris database. Higher SME leverage denotes greater access to debt finance for SMEs (Judge & Korzhenitskaya, 2012), hence, this study employs leverage (liabilities divided by assets) as a measure to ascertain SMEs' access to loans (Arun et al., 2015). Our main independent variable (P2P lending Fintechs) is measured by the number of P2P lending FinTechs in a particular country in a given year. We determine institutional quality by taking the average of the six institutional quality dimensions as reported by World Governance Index. In order to address multicollinearity, we mean center our variables before interacting average institutional quality with P2P lending FinTechs (Nguyen et al., 2015). Our control variables encompass firm size (log of assets), tangible assets (proportion of fixed assets in total assets) and firm performance (return on shareholders' funds) (Cheng & Shiu, 2007; Mills & Chen, 1996; Nguyen et al., 2015), year dummies, country dummies and industry dummies. A higher proportion of tangible assets suggests greater availability of collateral (Fischer & Ringler, 2014), making it more likely for banks to lend. Large and better performing firms are expected to be financially sound, which suggests greater reliance on internal funds than external sources of finance such as loans (Berger et al., 2005; Weill, 2008).

Table 1

Variables	Definition
Leverage	Total liabilities divided by total assets
FinTech P2P	Number of peer-to-peer lending FinTechs
Institution quality	Average of six institutional quality dimensions as reported by World Governance Index
Tangibility	Proportion of fixed assets to total assets
Firm size	Log of assets
Firm performance	Return on shareholders' funds

3. Results

As our dataset encompasses panel data, we utilize the Hausman test to choose between fixed effects and random effects model (Fan et al., 2020). Based on the Hausman test, we adopt fixed effects model. Moreover, fixed effects models partially address the issue of unobservable firm characteristics (Frondel & Vance, 2010). Column 1 in Table 3 presents our empirical results wherein we find a positive association between P2P lending FinTechs and SME leverage. This suggests that the use of big data enables such technologies to accurately ascertain the credit risk of SMEs, thereby enabling them to qualify for loans. This finding supports Sheng (2020) who evidences a greater supply of finance to SMEs if banks utilize Fintechs. Further, column 2 in Table 3 finds that higher institutional quality positively moderates the link between P2P lending FinTechs and SME leverage. Better institutional quality provides a supportive environment for potential entrepreneurs to invest in startups. This may increase the number of P2P lending FinTechs in a given country, resulting in higher availability of finance for SMEs. Furthermore, tangible assets are positively associated with leverage as per our expectation. In addition, firm size and firm performance are negatively linked with leverage, in line with our predictions. Moreover, in order to address endogeneity concerns, we utilize Generalized Method of Moments (GMM) estimation. Our results in Table 4, using GMM estimation, are consistent with our main findings.

Table 2 Descriptive statistics

Variables	Mean	Std. Dev.	Minimum	Maximum
Leverage	0.434	0.227	0.001	0.998
Fintech P2P	6.015	9.416	0.000	36.000
Institutional quality	1.206	0.416	-0.477	1.873
Tangibility	0.228	0.252	0.000	0.999
Firm size	11.182	1.572	5.204	17.228
Firm performance	-0.115	0.764	-9.962	9.142

All variables are defined in Table 1.

Table 3: Fixed effects regression

	Column 1	Column 2
Fintech P2P	0.002*** (5.594)	0.001*** (2.903)
Fintech P2P * Institutional quality		0.006*** (2.984)
Institutional quality		-0.090*** (-3.945)
Tangibility	0.183*** (7.281)	0.181*** (7.369)
Firm size	0.019*** (3.333)	0.019*** (3.410)
Firm performance	-0.068*** (-19.890)	-0.068*** (-19.880)
constant	0.177*** (2.778)	0.180*** (2.801)
Observations	18,417	18,417
Adjusted R ²	0.167	0.171
Year effects	YES	YES
Industry effects	YES	YES
Country effects	YES	YES
F Test	58.47***	53.01***

Standard errors are clustered at firm-level. *t*-statistics are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 4: Robustness test: GMM analysis

	Model 1	Model 2
Fintech P2P	0.004* (1.932)	0.001 (1.591)
Fintech P2P * Institutional quality		0.006* (1.689)
Institutional quality		-0.183*** (-4.668)
Tangibility	0.393** (2.352)	0.246*** (3.069)
Firm size	-0.034** (-2.093)	0.003 (0.134)
Firm performance	-0.065 (-1.090)	-0.062** (-2.014)
constant	0.000 (0.000)	0.420 (0.763)
Observations	16,085	16,085
Year effects	YES	YES
Industry effects	YES	YES
Country effects	YES	YES
F test	322.67***	23.46***
Hansen J test: <i>p-value</i>	0.149	0.772
AR(2) test: <i>p-value</i>	0.132	0.105

Standard errors are clustered at firm-level. *t*-statistics are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

4. Conclusion

Considering the importance of SMEs towards an economy and the limited opportunities available to SMEs to acquire loans from conventional banks, we investigate whether alternative modes of finance, specifically P2P lending FinTechs, could enhance the availability of loans to SMEs. After utilizing data from OECD countries for the period 2011-2018, our study finds that P2P lending FinTechs positively affect SME leverage. Moreover, our findings reveal that this association is positively moderated by institutional quality.

Our findings have implications for SME managers and policy-makers. SME managers, who are struggling to raise debt finance, may utilize P2P lending FinTechs to meet their

requirements. In relation to policy-makers, our findings recommend strengthening the country's institutions, which may increase P2P lending FinTech startups, resulting in greater access to finance for SMEs.

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