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# Demand collapse or credit crunch to firms? Evidence from the World Bank's financial crisis survey in Eastern Europe

Ha Nguyen*, Rong Qian [1]

*The World Bank, USA*

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A B S T R A C T

This paper assesses whether the primary effect of the global crisis on Eastern European firms took the form of an adverse demand shock or a credit crunch. Using a unique firm survey conducted by the World Bank in six Eastern European countries during the 2008–2009 financial crisis, the paper shows that the drop in demand for firms' products and services was overwhelmingly reported as the most damaging adverse effect of the crisis. Other "usual suspects", such as rising debt or reduced access to credit, were reported as minor. The paper also finds that the changes in firms' sales and installed capacity are significantly and robustly correlated with different demand sensitivity measures of the sector in which the firms operate. However, they are not robustly correlated with various proxies for firms' credit needs.



## 1. Introduction

The role of credit and demand factors in the 2008–2009 financial crisis is still not well understood. A negative credit shock to firms is generally thought of as a credit crunch— a reduction in the general availability of loans, or a sudden tightening of the conditions required to obtain them. Credit crunches squeeze firms' working capital and cripple their production. On the other hand, adverse demand

* Corresponding author. Development Research Group, The World Bank, 1818 H Street, NW, Washington D.C. 20433, USA. Fax: +1 202 522 3518.

*E-mail addresses:* hanguyen@worldbank.org, nguyenminhha20@gmail.com (H. Nguyen).

[1] Rong Qian is at Latin America's Poverty Reduction and Economic Management (LCSPR).

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shocks to firms come from general declines in consumers' demand for firms' products and services. The declines can be driven by many reasons, such as consumers' dwindling wealth, or their collapsing confidence on the economy etc. While there is a consensus among researchers and policy makers that the 2008–2009 crisis was triggered by financial market disruptions in the United States, there is little agreement on whether the transmission of the crisis and the subsequent prolonged recession are due to credit factors or to a collapse of demand for the goods and services. Each type of factors has fundamentally different policy prescriptions. If credit factors are found to play the main role, the correct prescription involves providing more and cheaper credit, directly injecting credit and liquidity to banks, or issuing loan guarantees. On the other hand, if demand factors are the main drivers, the focus should be on boosting aggregate demand. Fiscal policy and the reduction of uncertainty regarding fiscal, monetary and regulatory policies are the conventional instruments in this case.

The existing theoretical literature almost exclusively focuses on credit factors to explain the transmission and propagation of the crisis. Recent theoretical contributions by Mendoza (2010), Devereux and Yetman (2010), Perri and Quadrini (2011) and Kalemli-Ozcan et al. (2013) generally argue for a strong role of credit market frictions in the propagation and transmission of the crisis, following a long tradition starting from Kiyotaki and Moore (1997). An exception is Van Wincoop (2013), who develops a two-country model with leveraged financial institutions to show that the model cannot account for the impact of the crisis, nor the extent of the transmission.

Perhaps due to the strong influence of a well-established theoretical literature, the empirical literature also focuses on credit factors.[2] Tong and Wei (2011) use data on 3823 listed firms in 24 emerging economies and find the impact of declines in stock prices to be, on average, more severe for firms intrinsically more dependent on external finance. Cowan and Raddatz (2013) use industry-level data for 45 countries to show that industries dependent on external finance decline significantly more during a sudden stop, especially in less financially developed countries. Paravisini et al. (2011) use export data for Peruvian firms to show that credit shortages explain a 15 percent decline in Peruvian exports during the crisis. Similarly, Ahn (2013) also finds that bank liquidity shocks in Colombia had significant impacts on its imports.

Recently, empirical studies that examine the demand channel have started to emerge. In a study across 42 countries, Claessens et al. (2012) investigate the impacts of both demand shocks and credit crunches on 7722 listed firms. They show that demand, trade and credit channels matter. However, they do not compare the relative importance of the channels. In the U.S., Mian and Sufi (2012) show that a drop in aggregate demand, driven by shocks to household balance sheets, is responsible for a large fraction of the decline in U.S. employment from 2007 to 2009. Using data on U.S. counties, they estimate that the decline in aggregate demand accounted for 65% of the lost jobs, implying that the demand channel was more important. In a different study, Isyuk (2013) focuses in U.S. non-financial firms and shows that around the collapse of Lehman Brothers, liquidity shocks had a greater impact, while in the first few months of recovery, improvements in demand mattered more. If we take these studies on demand as face value, the overall impression is that in the U.S. (the epicenter of the crisis), credit shocks mattered more at the very beginning of the crisis. When the crisis dragged on, the demand channel gradually became more dominant. However, there has been no evidence regarding the relative importance between credit and demand shocks in other countries.

This paper is an effort to fill the gap. We explicitly look for the impact of the demand channel on firms. Using the Financial Crisis Firm Survey conducted by the World Bank in six Eastern European countries, this paper shows that the drop in demand for firms' products and services was very severe, and was reported as the most damaging factor on firms in these countries. In addition, the firms' changes in sales and installed capacity are significantly correlated with two measures of the sector's demand sensitivity,[3] and not with various proxies used for firms' credit needs.

[2] For early evidence see Bernanke and Blinder (1992), Khwaja and Mian (2008). Recent studies on the current crisis using aggregate data include Amiti and Weinstein (2009), Helbling et al. (2011), and Chudik and Fratzscher (2011).

[3] A sector's demand sensitivity captures how affected the demand for the sector's goods or services is when aggregate consumption declines (or rises). This concept is related to the wealth elasticity of demand. For example, food is less demand sensitive than consumer electronics.