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Trade credit and determinants of profitability in Europe. The case of the agri-food industry

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ABSTRACT

The objective of this paper is to analyse the effect that trade credit has on the determinants of profitability during the crisis period in Europe. We use panel data for a total of 24,177 European agri-food companies from 2010 to 2014. Among our main contributions, we highlight that we isolate the sector effect and study the country effect by separating the different policies and customs with respect to the granting of trade credit. The results confirm, in general, that trade credit affects profitability depending on the country and the characteristics of size, specificity, market power or reputation.

1. Introduction

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Trade credit is an arrangement to postpone payment that companies grant to their customers, with the aim to attract customers and increasing revenues, which in turn means assuming the risk of default. According to Brachfield (2006), in recent years Europe has had to assume an exorbitant volume of financial costs, primarily for overdue and uncollected (in many cases uncollectible) debts, as well as for outstanding receivables. Virtually 25% of corporate bankruptcies are due to the delay in payment obligations. This situation is not due to the natural course of business activity, but rather it is becoming a habit for debtors to adopt negligent and abusive attitudes towards their payment obligations.

The objective of this paper is to analyse the effect that trade credit has on the determinants of profitability during the crisis period in Europe. The risk of default is higher if the economy is in recession, resulting in an increase in the volume of customers, not for reasons of investment strategy but rather involuntarily, due to arrearage. We focus our research to the agri-food industry, which is a key and strategic sector of the European economy (FoodDrinkEurope, 2014: www. fooddrinkeurope.eu).

We believe that this study has notable implications for business managers and policy makers, at both national and European levels. We consider that business managers should pay particular attention to client policy not only as part of their sales policy, but also as a part of the management of working capital. Additionally, policy makers should make a special effort to increase the efficiency of the legal system in order to support companies that have high levels of arrearage.

Following the publication of Directive 2000/35/EC regulating the period of payment to suppliers, each of the European countries assumes the obligation to develop and adapt the directive in order to achieve harmonization in payment rules. However, this task is difficult because each country can adapt the requirements of the directive in its legislation based on its interests, circumstances, culture or behaviour.

The profitability of the company depends on, among other things, the economic situation of the market in which it operates and the characteristics of the company, such as the size and specificity of the assets, reputation and age. The effect of each of these variables will, in turn, depend on the role of trade credit, since in each situation the profits generated by the granting of trade credit in order to acquire customers will either exceed or not the costs that the higher probability of default involves.

Previous literature indicates that, in times of financial crisis, firms tend to increase their use of trade credit to mitigate the effects of the crisis. Indeed, bank credit tends to become less accessible during such periods, and thus the use of trade credit rises (Peterson & Rajan, 1997; Wilner, 2000; Nilsen, 2002; Fisman & Love, 2003; Alphonse, Ducret & Séverin, 2016; Santos, Sheng & Bortoluzzi, 2011).

Miyanoto (2012) indicates that European firms generally offered more trade credit at the start of the financial crisis, in 2008. However, in a country by country analysis, the less nations have been affected by the crisis, the more they appear to offer in terms of trade credit.

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Among the functions of trade credit, we also highlight the Agency Theory argument that the granting of a payment deferral to customers is a way to publicise and signal the characteristics of quality products (Smith, 1987; Long, Malitz & Ravid, 1993; Freixas, 1993; Rodríguez, 2008) and, by providing facilities to customers, it helps to create a good reputation. But this signalling role will be more important if the company has a reputation, as measured by size, market share or age, or whether it offers specific products or services.

We apply our research to the agri-food industry and use a panel of economic-financial data from 2010 to 2014 from European agri-food companies that were active during this period. Given that the study focuses on the period of financial crisis, we do not include data from 2015, as there was notable recovery in the sector in that year. The agrifood sector is characterized by the fact that, in general, it produces nondurable products with low variability of demand in the face of changes in the economic cycle, and also that it is a very competitive sector in which the use of trade credit to attract customers and position themselves in the market can be important for new and small businesses. Among the most recent studies analysing the determinants of the profitability of the agri-food sector are Chaddad and Mondelli (2013) and Hirsch, Scheifer, Gschwandtner, and Hartmann (2014), which analyse the US food sector and, in the Spanish case, Pindado and Alarcón (2015) and Grau and Reig (2015). All of them introduce the characteristics of size, age and market share as determinants of profitability. However, none of them consider that these factors will be more or less relevant depending on the customer policy that the company has in place.

The main contribution of our work is the study of the determinants of economic profitability in different European countries in terms of trade credit granted. Another contribution is to have isolated the sector effect. The characteristics of the industry or sector directly influence the role of trade credit, as well as the determinants of profitability. By focusing on one sector we eliminate the distortion that the industry effect can produce.

Finally, it should be noted that the study has been carried out firstly for a large sample of European companies, separating countries with different policies and customs regarding the granting of trade credit. To do this, we chose European countries that meet two criteria throughout the period under study: on the one hand those have the highest average GDP per capita and on the other, those with the highest volume of net sales in the sector.

The findings confirm that the relationship between trade credit and profitability depends both on the characteristics of the company and on the characteristics of the country. All variables considered as determinants, i.e. size and specificity of the assets, market share, reputation and country effect, are determinants of profitability, their relevance depending on the trade credit granted.

The scheme we follow is as follows: in the second section we lay the theoretical foundation of our work and we propose the hypotheses that we intend to contrast. In the third section we present the sample, the variables considered as explanatory of the profitability and the empirical methodology. In the fourth section we analyse the findings and, finally, in the fifth section we present the most relevant conclusions.

2. Theoretical framework and hypotheses

Like any financial decision, the decision to grant trade credit should aim to increase the value of the company, improve its profitability and its efficiency, while minimizing the risk. We can consider granting trade credit to customers as an investment in current assets that seeks to increase sales at the cost of bearing greater risks. As Grau and Reig (2014) show, the increase in trade credit granted in times of crisis can make the company less efficient and profitable.

The objective of this paper is to analyse whether the relevance of factors such as reputation, market share or size in the determination of economic profitability depends on the company granting more or less trade credit to its customers. The granting of trade credit will be attractive if the profits generated by the acquisition of customers are greater than the costs implied by the increased probability of nonpayment that its granting implies.

Regarding the trade credit granted and its relation to economic profitability, the results are disparate. The relationship could be positive if the granting of the credit was due solely to the truthful signalling of a quality product and the desire to create a good reputation.

If the context is a crisis phase, some studies such as Martínez-Sola, García-Teruel, and Martínez-Solano (2014) show that the increase in the customer account may be involuntary due to the rise in the delinquency generated by the situation. Note that Grau and Reig (2014) apply the study to Spanish agri-food companies and detect a positive relationship between economic profitability and trade credit granted in a year of economic stability and a negative relation in a year of recession. On the other hand, in Yujie (2014) there is no relation between trade credit and economic profitability.

Therefore, when conducting the study on European companies that belong to countries that have been affected very differently by the recent crisis, we do not expect to see a clear relationship between profitability and trade credit. The role that investing in customers can have depends on the size of the assets and their specificity, market power and age as a measure of reputation. Therefore, we are going to study the effect of these variables on profitability and propose the hypotheses of the study.

Regarding asset size, its ability to explain profitability has generated quite a few contradictions. Hirsch et al. (2014) and Chaddad and Mondelli (2013) agree on a positive effect in the agri-food sector, and explain it from the point of view of transaction costs, since larger companies are in a better position to avoid contractual costs. However, Grau and Reig (2015) analyse the profitability of the Spanish agri-food company in times of crisis and observe a negative relation between asset size and economic profitability if the companies are vertically integrated. In times of crisis in a very competitive sector, many small cost-efficient companies are created.

In principle, it may be assumed that larger firms, by being better positioned than smaller and more self-financing businesses, would grant more payment deferments to clients (Petersen & Rajan, 1997; García-Teruel & Martínez-Solano, 2010). However, it is also argued that a larger size already indicates reputation in and of itself and thus larger firms will not be interested in granting trade credit, which involve risk in times of crisis (Long et al., 1993; Canto-Cuevas et al., 2016).

Greater assets does not necessarily have to imply higher profitability if they are not accompanied by efficiency and productivity. Whether size positively or negatively affects profitability depends to a large extent on the trade credit strategy that the company chooses. Martínez-Sola et al. (2014) conclude that in times of economic expansion larger firms can increase profitability with greater trade credit. In that paper the different sectors are not separated, but they do introduce a sector indicator that is relevant in explaining profitability, which shows that the effect of the other variables should not be generalized for any industry.

We expect that the granting of trade credit will affect the relationship between size and profitability and that, being in a context of crisis in a very competitive sector, the relationship will be negative. Large companies will be more profitable if they grant trade credit to maintain and attract customers.

Hypothesis 1. The greater the trade credit granted, the smaller the negative relation between size and economic profitability existing in times of economic crisis.

In addition to asset size, its structure, i.e. the weight of the intangible assets such as advertising or R & D, is important. The greater the weight of these assets, the more investment is made in the quality and specificity of the product. We consider the role of trade credit to be fundamental as a way of signalling the quality of the product in light of

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