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Working capital, cash holding, and profitability of restaurant firms

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ABSTRACT

Efficient working capital management is becoming important for restaurant firms coping with weak financial conditions and increased economic uncertainty. This study investigates the impact of restaurant firms' working capital on their profitability. We further examine the effects of firms' cash levels on the relationship between working capital and profitability. The findings ascertain a strong inverted U-shape relationship between working capital and a firm's profitability, which indicates the existence of an optimal working capital level for restaurant firms. This study also reveals that a firm's cash level is an important factor for efficient working capital management. The results suggest that interactive effects exist among working capital, cash levels, and profitability. Thus, restaurant managers should consider these different roles and impacts when developing an efficient working capital management strategy. Detailed results and implications are presented in the main body of this paper.

1. Introduction

The U.S. economy has shown many positive signs in the years since the National Bureau of Economic Research (NBER) declared the end of the 2007–2009 recession in June 2009. However, there are still significant drags hampering recovery, such as continued distress in the housing market and high unemployment rates. More importantly, economic policy uncertainty has increased in the U.S. and globally since the recession, which has negative effects for both firms and nations alike (Baker et al., 2012). In line with this increased economic uncertainty, between 1995 and 2010, U.S. corporations have been holding a record-high amount of cash (from $1.22 trillion to $4.97 trillion), with an annual growth rate of 10%. In 2011, cash holdings extended to nearly $5 trillion, more than any other year in history (Sánchez and Yurdagul, 2013).

Unlike other industries, the restaurant industry has not shown a similar upsurge in cash levels over the same period. Conversely, restaurant firms have very low (even negative) levels of working capital (.87% of sales in our sample) and very large accounts payable (the largest component of working capital; 4.78% of sales in our sample). This means that restaurant firms rely substantially on suppliers' credit for business operations. This may be because restaurant companies typically have limited capital resources and are financially constrained. Severe competition among restaurants also hinders increasing menu prices even in situations where commodity costs increase, which causes low operating margins and ultimately reduces internal financing. Accordingly, restaurant firms may be more vulnerable to unexpected economic turbulence than other industries. Indeed, according to Parsa et al. (2005) about 26% of restaurant firms fail during their first year of operation and 60% fail within three years. The main reasons for this high failure rate are limited resources and a lack of capital (Parsa et al., 2005).

In this respect, efficient working capital management is critical for a restaurant firm's ability to cope with weak financial conditions and increased economic uncertainty. Likewise, liquidity management (cash level management) is important for restaurant firms in good times and even more so in uncertain economic conditions. Insufficient current assets may impede a firm's ability to maintain efficient operations and further increase its risk of bankruptcy (Dunn and Cheatham, 1993). However, excessive liquidity can also be detrimental to a firm's profitability (Bhattacharya and Nicodano, 2001). Efficient working capital management means that management is able to plan and control a firm's current assets and liabilities to meet short-term obligations while at the same time avoiding excessive investment in short-term assets (Eljelly, 2004). Thus, it is important to note that a firm's profitability can be enhanced not only through efficient operations, but also by utilizing optimal working capital management. However, identifying and maintaining optimal working capital levels is not a simple task because the level of working capital differs based on economic conditions, as well as firm-specific factors, such as capital intensity, profitability, size, etc.

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A firm's working capital reflects its operating aspects (i.e., operating efficiency) and liquidity aspects (i.e., financial risks) simultaneously. In other words, operating and liquidity aspects are mingled within a working capital measurement. Therefore, if the two are not considered separately it is difficult to identify which aspect really influences restaurant firms' profitability. Previous empirical studies of other industries reveal this difficulty, suggesting that traditional working capital measures, including cash, accounts receivable, inventories, accounts payable, and current debts, disregard the interactive effects among the components of the working capital measure (Jose et al., 1996).

Therefore, this study is designed to overcome these difficulties and limitations by determining whether working capital influences restaurant firms' profitability. More specifically, the objectives of this study are (1) to investigate the impact of working capital on firms' profitability (ROA: return on assets); (2) to identify the optimal level of working capital for restaurant firms; and (3) to examine the moderating effect of firms' cash levels on the relationship between working capital and profitability (ROA). By fulfilling these objectives, this study provides a better understanding of the interactive effects among working capital components and reveals the non-linear relationship between firms' working capital and profitability. It should also be noted that, to our knowledge, this study is the first effort in either hospitality or finance academia that attempts to understand working capital management and cash holding interactively.

2. Literature review

2.1. Working capital management

Working capital is defined as the difference between current assets and current liabilities and is often used to measure a firm's liquidity level. The components of working capital are cash, accounts receivable, inventories, accounts payable, current debt, and the current portion of long-term debt. Recent researchers (e.g., Jose et al., 1996; Shin and Soenen, 1998; Deloof, 2003; Padachi, 2006; García-Teruel and Martínez-Solano, 2007; Raheman and Nasr, 2007) have studied the effects of a firm's working capital on its profitability with the Cash Conversion Cycle (CCC), which refers to how long it takes to convert accounts receivable, inventories, and accounts payable into cash, rather than traditional working capital measures. CCC reflects only a firm's operational side (e.g., accounts receivable, accounts payable, and inventories), while traditional working capital measures capture a firm's financial aspects as well (e.g., cash and current debts). In this way, researchers who use CCC examine the effects of the operational side of working capital on a firm's profitability.

Conceptually, a firm's Cash Conversion Cycle (CCC) indicates a firm's decisions regarding how much money to use for inventories and customers and how much credit to accept from suppliers because it represents the difference between when a firm collects payment from customers and when it pays suppliers. Generally, CCC can be considered as a proxy for the level of working capital management. Tighter control of a firm's CCC is viewed as better for operational efficiency.

Jose et al. (1996) examined the relationship between Cash Conversion Cycles (CCC) and firms' profitability in seven industry groups over a twenty-year period (1974–1993). They found that efficient working capital management (i.e., lower CCC) is associated with higher profitability in several industries (e.g., Natural Resources, Manufacturing, Service, Retail/Wholesale, and Professional Services) but not in all industries. Shin and Soenen (1998) also supported a strong negative relationship between a firm's net trading cycle, which is similar to CCC, and its profitability. In addition, they indicated that a shorter net trading cycle can cause higher stock returns, emphasizing the importance of efficient working capital management for creating shareholder value. García-Teruel and Martínez-Solano (2007) noted the particular importance of working capital management in small and medium-sized companies. Their study is meaningful to the restaurant industry since small and medium-sized firms are more financially constrained, similar to the average restaurant firm. Their findings are consistent with previous studies in terms of the relationship between CCC and profitability (Jose et al., 1996; Wang, 2002; García-Teruel and Martínez-Solano, 2007; Dong and Su, 2010; Baños-Caballero et al., 2014), whereas Deloof (2003), investigating 1009 large Belgian firms between 1992 and 1996, did not find a significant relationship between CCC and gross operating income.

Further, a low level of working capital may deteriorate a firm's operating performance (Blinder and Maccini, 1991). For example, if a firm maintains a low inventory level it will need to purchase small amounts frequently, which increases supply costs. Thus, the firm cannot obtain adequate discounts from suppliers. In such a situation, firms may also struggle with obtaining high and consistent quality raw ingredients. Further, it may be difficult for the firm to maintain sustainable profits because of unexpected potential business losses due to a scarcity of products (Blinder and Maccini, 1991). Similarly, Wang (2002) pointed out the trade-off effect; if a firm sets its inventory levels too low it may risk losing sales due to items being out of stock.

It is also well known that credit policies that are too tight or pay suppliers too slowly weaken relationships with customers and suppliers. A firm can achieve higher sales and strengthen its relationship with customers by offering generous credit policies (Long et al., 1993; Deloof and Jegers, 1996; Shah, 2009). Indeed, many credit card companies offer special promotions that encourage customers to spend more. In the restaurant industry, strong relationships with suppliers are important because food quality is critical for customer service. Suppliers may make an effort to collect cash early by offering discounts for early payment. Thus, paying cash by the due date or paying early is one way to maintain good relationships with suppliers. Thus, it is rational that accounts receivable (AR) levels that are too low and too much accounts payable (AP) impede a firm's operating performance.

Recently, Baños-Caballero et al. (2014) argued that there is an inverted U-shaped relationship between a firm's net trading cycle ((accounts receivable/sales) × 365 + (inventories/sales) × 365 − (accounts payable/sales) × 365) and its performance (Q = (market value of equity + book value of debt)/book value of asset). They suggested that a firm should increase investments in accounts receivable and inventories to increase sales when net trading cycles are too short. However, the effect of net trading cycles on corporate performance can turn negative at a certain point when the net trading cycle is too long. Thus, managers have to find and maintain an optimal level of accounts receivable, accounts payable, and inventories that can maximize the firm's value. This finding by Baños-Caballero et al. (2014) can be quite useful for the restaurant industry where many financially constrained restaurant firms have a low level of working capital, which may deteriorate operating performance.

Despite these findings, their study cannot capture the whole picture of working capital since it did not consider the firms' cash levels in the net trading cycle model. For instance, if firms maintain a lot of cash with short net trading cycles, the relationship between the firms' net trading cycles and performance will not be the same as firms holding small amounts of cash. Moreover, the market value of a firm is not only determined by business results using the firm's accounts receivable, accounts payable, and inventories. Instead it may be influenced by many other non-operational aspects, such as dividends, ownership, R&D, and financial market conditions. That