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National culture and corporate cash holdings around the world

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ABSTRACT

This paper examines whether cultural dimensions explain the variation in corporate cash holdings around the world as well as within the United States. We establish four major findings. First, in an international setting, corporate cash holdings are negatively associated with individualism and positively associated with uncertainty-avoidance. Second, individualism and uncertainty avoidance influence the precautionary motive for holding cash. Third, firms in individualistic states in the United States hold less cash than firms in collectivistic states. Fourth, we show that individualism is positively related to the firm's capital expenditures, acquisitions, and repurchases while uncertainty avoidance is negatively related. Our findings remain unchanged after controlling for governance factors, firm attributes, and country characteristics.

1. Introduction

Bates et al. (2009) document that the average ratio of cash to assets has more than doubled from 10.5 percent in 1980 to 23.2 percent in 2006. The Institute of International Finance estimated that corporations in the United States, Euro Zone, the United Kingdom, and Japan held approximately $7.75 trillion in cash or cash equivalents.[1] More specifically, corporate cash holdings are $2.64 trillion in the euro zone and $1.19 trillion in the United Kingdom. We observe that over the period 1989–2009 the median cash to total assets ratio varies from 2.3 percent for New Zealand, 3.6 percent for Russia, 5.2 percent for Australia, 8 percent for Finland, 10.1 percent for Sweden, 13.7 percent for Singapore, to 16.6 percent for Hong Kong. How can we explain this significant variation in corporate cash holdings around the world?

Although corporate governance plays an important role in explaining the variation in corporate cash holdings, we still observe puzzling reality that the cash to total assets ratio of corporations in some low shareholder rights countries (such as Greece, Thailand, and Mexico) is lower than the median value of all 41 countries in our sample, whereas corporations in some high shareholder rights countries (such as Brazil, Israel, Japan and Singapore) hold higher cash than the median cash to assets ratio. It is therefore evident that corporate governance alone cannot explain the variation in cash holdings.

In this paper we expand the empirical literature on the determinants of corporate cash holdings by being the first to examine (i) whether national culture explains the variation in corporate cash holdings around the world; (ii) whether there is an association between the individualism–collectivism dimension within the United States (at a state level) and corporate cash holdings; and (iii) what firms around the world and within the United States do with cash holdings? In particular, we employ Hofstede's (1980, 2001) cultural dimensions to investigate whether the degree of a country's individualism and uncertainty-avoidance can explain the variation in corporate cash holdings around the world. We also employ the Vandello and Cohen (1999) individualism–collectivism dimension to address whether there is an association between state-level culture within the United States and corporate cash holdings. To shed light on what firms around the world and within the United States do with cash holdings we examine the firms' capital investments, acquisitions, dividend payouts and repurchase decisions.

Our paper is positioned at the union of two lines of research in the literature. The first line of research focuses on corporate cash holdings and the second line of research focuses on cross-cultural

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[1] The Wall Street Journal (March 23, 2012).

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psychology and behavioral finance. The majority of the prior research on corporate cash holdings has primarily focused on the United States corporations.[2] Three exceptions are Dittmar et al. (2003), Pinkowitz et al. (2006), and Kalcheva and Lins (2007). These studies investigate the determinants of cash holdings in an international setting and the central focus of these studies is the association between corporate governance and cash holdings. Dittmar et al. (2003) show that corporations in countries where shareholders enjoy little protection hold twice as much cash as corporations in countries with good shareholder protection. Pinkowitz et al. (2006) document that the relation between cash holdings and firm value is weaker in countries with poor investor protection than in other countries. Kalcheva and Lins (2007) show that outside investors discount the value of cash held by firms with managerial agency problems. That is, value of cash is lower when controlling managers hold more cash.

The second line of research relevant to our paper focuses on cross-cultural psychology and behavioral finance. Studies in this strand have examined the impact of cultural values on economic outcomes, more specifically, corporate decisions (Guiso et al., 2009; Bottazzi et al., 2010; Giannetti and Yafeh, 2012; Ahern et al., forthcoming).

We provide a new and novel angle by examining whether national culture affects the variation in international corporate cash holdings. By studying a diverse group of countries with various forms of governance structures and different stages of financial development we show that cash holding decisions cannot be effectively studied without considering national culture. Our study investigates the association between cultural differences and corporate cash holdings internationally and at the state level within the United States. Although the culture of the United States is highly individualistic we focus on the state-level analysis within the United States as Vandello and Cohen (1999) show that regions of the United States exhibit measurable variation on the individualism–collectivism dimension. The state-level analysis allows us to focus on the association between the two net of various institutional differences across countries.

We hypothesize a negative relation between individualism and the level of cash holdings and a positive relation between uncertainty-avoidance and the level of cash holdings. We posit that managers in individualistic cultures tend to be overconfident about the firm's future earnings ability and are, thus, more likely to spend money when they have excess cash. A positive relation between uncertainty-avoidance and firm cash holdings is hypothesized as managers in high uncertainty avoiding cultures tend to prefer holding cash to hedge against possible cash shortfalls in the future.

Our analyses yield some striking findings. Using data for 27,801 firms across 41 countries for the period 1989–2009, we confirm that individualism is negatively correlated with firm cash holdings and uncertainty avoidance is positively correlated with firm cash holdings. In addition, individualism is negatively correlated with corporate cash holdings at the state level within the United States. Our findings also show that individualism and uncertainty avoidance influence the precautionary motive for holding cash. Specifically, we find that firms with greater business uncertainty (proxied by cash flow volatility and R&D to sales) are likely to hold higher precautionary cash in low individualism and high uncertainty avoidance cultures. We also show that the effect of national culture on cash holdings is weaker for firms that operate in the global market, suggesting that multinational firms are subject to less influence by the national culture specific to a single country.

We then investigate the implications of cash holdings within the United States and around the world by exploring what firms do with cash holdings. We demonstrate that individualism is positively related to the firm's capital expenditures, acquisitions, and repurchases and uncertainty avoidance is negatively related to the firm's capital expenditures, acquisitions, and repurchases. Our findings are robust to alternative specifications of cash holdings, alternative measures of national culture, and the inclusion of a comprehensive list of country-level control variables.

Our study contributes to the cash holding literature and the cross-cultural psychology literature in four different ways. First, we propose a new motive for firms to hold cash. We call this the "cultural motive" as we provide compelling evidence that national culture is an important determinant of cash holdings. Specifically, we find that even after controlling for governance factors (prior studies have focused on investor protection, shareholders rights and legal origin, etc.) and firm attributes, the cultural factors explain the variation in cash holdings around the world. The "cultural motive" integrates the literature in finance and cross-cultural psychology, while providing compelling evidence that corporate finance decisions are determined not only by an objective judgment of a firm's risks and returns, but also by the manager's subjective beliefs that often hinge on that individual's cultural inheritance.

Second, our study highlights an association between cash holdings and the individualism–collectivism dimension at the state level within the United States. Using the Vandello and Cohen (1999) individualism–collectivism index, we demonstrate that firms in individualistic states within the United States have lower cash holdings than do firms in collectivistic states.

Our third contribution is our analyses of what firms in the United States and around the world do with their cash holdings. We document that a firm's attitude toward capital expenditures, acquisitions and repurchases results in a lower level of cash holdings in individualistic cultures and that firms in high uncertainty-avoidance cultures accumulate cash by reducing their capital expenditures, acquisitions, repurchases and dividends.

The remainder of this paper is organized as follows. The next section of the paper provides a brief review of the literature and develops the testable hypotheses. This is followed by a description of the data, variable construction and the descriptive statistics. Empirical findings on the relation between cash holdings and national culture come next followed by robustness tests. This is followed by the examination of the impact of national culture on investment intensity variables. We then investigate the association between the individualism–collectivism dimension and corporate cash holdings at the state-level within the United States followed by the conclusions.

2. Relevant literature and hypothesis development

2.1. The role of culture in corporate decision-making

A critically important question to address is why firms' policies are dictated by their country's cultural environment. At least two possible channels are envisioned.[3] In the first channel, managers' views and preferences are affected by national culture. Prior research

[2] Prior studies have identified at least seven motives for firms to hold cash. The seven motives include (i) the transaction motive (Baumol, 1952; Meltzer, 1963; Miller and Orr, 1966; Mulligan, 1997); (ii) the precautionary motive (Keynes, 1936; Myers and Majluf, 1984; Opler et al., 1999; Bates et al., 2009); (iii) the agency motive (Jensen, 1986; Dittmar et al., 2003; Mikkelson and Partch, 2003; Pinkowitz et al., 2006; Dittmar and Mahrt-Smith, 2007; Harford et al., 2008; Harford, 1999; Gao et al., 2013); (iv) the financial constraint motive (Almeida et al., 2004; Khurana et al., 2006; Han and Qiu, 2007; Denis and Sibilkov, 2010); (v) the tax motive (Foley et al., 2007); (vi) the diversification motive (Duchin, 2010); and (vii) the product market competitiveness motive (Haushalter et al., 2007; Fresard, 2010; Schroth and Szalay, 2010). In a more recent paper, Dittmar and Duchin (2011) document that firm-level cash holdings in the United States decline each year over the corporate life cycle. The authors show that young firms rebalance their cash holdings toward a target ratio, whereas older firms demonstrate weaker cash rebalancing and market timing behaviors. They further note that while the existing models reflect the cash policies of young firms, they do a poor job of explaining the cash policies of mature firms.

[3] We thank an anonymous referee for suggesting that we improve our hypothesis development by looking at the two channel theory.