



Differential cash constraints, financial leverage and the demand for money: Evidence from a complete panel of Taiwanese firms

Jin-Tan Liu ^{a,b}, Meng-Wen Tsou ^c, Ping Wang ^{b,d,*}

^a National Taiwan University, Taipei, Taiwan

^b NBER, Cambridge, MA 02138, United States

^c Tamkang University, Tamsui, Taiwan

^d Department of Economics, Washington University in St. Louis, One Brookings Drive, Campus Box 1208, St. Louis, MO 63130, United States

Received 1 August 2006; accepted 12 January 2007

Available online 13 March 2007

Abstract

This paper studies firms' demand for money by developing a differential-cash-constraint framework with firms' entire wage bills requiring cash in advance and a fraction of investment purchases being financed by credits. In addition to conventional scale and opportunity-cost factors, firms' financial status and profitability are crucial determinants for their money demand behavior. Employing a new data set consisting of a panel of Taiwanese firms over 1990–97, our econometric analysis lends empirical support to our theory. The estimates suggest that economies of scale in firms' cash management are present and that lower financial leverage or higher profitability raises money demand significantly.

© 2007 Elsevier Inc. All rights reserved.

JEL classification: E41; D92; C21

Keywords: Firms' transactions use of money; Financial structure; Panel data estimation

* Corresponding author. Tel.: +1 314 935 5632; fax: +1 314 935 4156.
E-mail address: pingwang@wustl.edu (P. Wang).

1. Introduction

Theoretical and empirical studies on money demand have been at the center of the stage of monetary economics. Such issues are not only important for understanding the relationships between money, inflation and growth, but also crucial for conducting monetary policy and evaluating its welfare implications. While there is a large body of research on household demand for money, the literature examining money demand by firms is rather thin. Our paper contributes to the latter literature both theoretically and empirically. Specifically, we develop a generalized differential cash constraint model by taking an explicit account of firms' financial status. We then perform a systematic empirical test of the validity of our theory using a newly available panel data set of reliable quality.

Four decades ago, Miller and Orr (1966) extend the Alais–Baumol–Tobin inventory model to study firms' demand for money under uncertainty, suggesting the presence of economies of scale as money serves as a medium of exchange for firm transactions. Although the property of scale economies is empirically supported by Selden (1961) and Frazer (1964), Meltzer (1963) uses cross-section data and finds that the sales elasticity of money demand by firms is very close to unity, thereby implying the absence of economies of scale.¹ Since then, Whalen (1965), Vogel and Maddala (1967), and Falls and Natke (1988) have revisited this issue. By considering the portfolio choice aspect, their cross-sectional analyses reconfirm Selden's finding. Whalen and Vogel and Maddala suggest a tendency for cash economization when they incorporate assets as well as transactions into the demand function, obtaining estimates of the sales elasticities ranging from 0.86 to 1.08 (with only four industries below unity). Falls and Natke find that the sales elasticity of liquid assets of Brazilian manufacturing firms is about 0.9 after controlling for foreign ownership, industry structure, and macroeconomic variables. Thus, a general conclusion drawn from this later literature is that the economies of scale in cash management are essentially negligible. More recently, Mulligan (1997) re-estimates firm's money demand based on the value of time approach developed by Karni (1973) and Bomberger (1993), by constructing a pseudo panel data set from COMPUSTAT, which is clearly superior to the conventionally used cross-sectional data. In particular, Mulligan uses the wage rate to measure the cash manager's value of time and finds that an increase in the value of time results in higher money demand. His estimates of sales elasticities around 0.83 suggest moderate economies of scale of money in facilitating firm transactions. Bover and Watson (2005) correct measurement errors, accounting for firm unobserved effects that are correlated with sales. They find economies of scale in cash management in the US, but not in the UK or Spain.

Our paper contributes to the literature in two important aspects. First, we construct an intertemporal model of money demand by firms, in contrast to the conventional inventory or value of time approach.² The central feature of the theory developed here is the consid-

¹ The cross-section studies by Selden (1961), Frazer (1964), and De Alessi (1966) are based upon the asset approach in which the wealth of the firm is viewed as a constraint on its money holdings. Selden relates the velocity of money to the assets of the firms, Frazer (1964) examines the percentage of cash to liquid assets as a fraction of the total assets of firms, and De Alessi examines the relationship between the cash holdings of British firms and the value of their common stock. While Selden and Frazer suggest the presence of sale economies in the holding of money, De Alessi finds little evidence of economies of scale in cash holdings.

² For a survey of dynamic models of money from an integrated household-firm unit, the reader is referred to Dornbusch and Frenkel (1973) and Wang and Yip (1992).

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات