



Sustainable competitive advantage and profitability persistence: Sources versus outcomes for assessing advantage



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ARTICLE INFO

JEL classification:

M4
D4
G1

Keywords:

Mean reversion
Return on assets
Competitive advantage
Sustained competitive advantage
Barriers-to-entry
Sustained market share

ABSTRACT

This paper explores how variables measuring firms' sustainable competitive advantages influence profitability persistence. Using a large sample of firms from MSCI 23 developed countries during 1985–2013, I find that an index of economic rents (such as size and market share) significantly reduce profit mean reversion, whereas traditional barriers-to-entry measures do not lower mean reversion. Higher previous long-term performance and sustained market share are associated with lower future mean reversion in profitability. Outcomes dominated sources of advantages, although both were useful in predicting future profitability persistence.

1. Introduction

Competitive advantage can be assessed by analyzing the *sources* of the advantage such as the firm's market position (Porter, 1980) and resources (Barney, 1991) or by measuring the *outcome* of competitive efforts through firm performance (e.g. profitability) or market share stability. While competition tends to revert corporate profitability towards the mean (e.g. Healy, Serafeim, Srinivasan, & Yu, 2014; Stigler, 1961), high profits can be sustained if firms have sustainable competitive advantages. In practice, the sustainability of a firm's competitive advantage, or franchise, can be measured by superior long-term performance (Dehning & Stratopoulos, 2003; Huang, Dyerson, Wu, & Harindranath, 2015; Porter, 1985; Wiggins & Ruefli, 2002) and by using barriers-to-entry and other economic rent proxies (Baginski, Lorek, Willinger, & Branson, 1999; Cheng, 2005; Dickinson & Sommers, 2012; Lev, 1983). This paper tests the relative impact and the joint effects of using information on past superior performance (or outcome) and proxies of barriers-to-entry and other economic rent proxies (or sources) on changes in profitability using global data.

Prior research shows that the profitability and growth in assets mean revert to economy-wide averages (e.g. Nissim & Penman, 2001). To measure profitability persistence, I follow the model in Li, Lundholm, and Minnis (2013) in which the future change in profitability is regressed on the level of current profitability and changes in investments and the interactions of profitability and competitive

advantage proxies. Competitive advantages and firm characteristics are measured by three sets of variables: traditional barriers-to-entry variables, other economic rent proxies, and control variables. Furthermore, the impact of past superior performance and sustained market share are considered as alternative summary measures of firms' proven competitive advantages both separately and in combination with other advantage proxies. The focus in this paper is on measures of competitive advantages that can be operationalized by analysts and investors.

This paper uses a large international firm-level data set covering 23 developed countries to explore the effect of competitive advantage proxies on corporate profitability persistence. The findings in this paper show that certain competitive advantage-related variables significantly reduce future profit erosion towards the mean. While traditional barriers-to-entry variables do not significantly reduce the erosion of profitability, economic rent proxies such as firm size and market share are associated with lower mean reversion. Besides the proxies for competitive advantages, past superior firm performance and sustained market share are associated with significantly lower mean reversion of profitability. Comparisons show that outcomes of advantages tend to dominate sources of advantages.

This paper contributes to previous literature in several ways. First, the paper explores the relation and horse race between competitive advantage-related variables and past long-term superior performance as measures to predict future performance persistence, which is of high relevance for analysts and investors. While previous research has

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considered sources of sustainable competitive advantages, such as barriers-to-entry and economic rents (e.g. Baginski et al., 1999; Cheng, 2005; Lev, 1983), and outcomes of advantages, such as financial performance (e.g. Wiggins & Ruefli, 2002), this paper evaluates the relative merits of these two approaches for predicting firms' profitability persistence.

Second, whereas prior research has studied the relation between market competition and persistence in firm profitability internationally (Healy et al., 2014), this study provides evidence on the commonalities in the relation between profitability persistence and measures of sources and outcomes of competitive advantages across a large set of developed countries.

The remainder of the paper is organized as follows. Section 2 reviews prior literature, and offers testable hypotheses relating to competitive advantages and past performance. Section 3 presents the data, the variables and the methodology. Section 4 presents the main findings as well as offers further analysis and robustness tests. Section 5 concludes the paper.

2. Theoretical framework and hypotheses

The profitability should be higher and the mean reversion of profits lower for firms that can protect themselves against competition. Competitive advantage can be defined as “a capability (or set of capabilities) or resource (or set of resources) that gives the firm an advantage over its rivals which ceteris paribus leads to higher relative profitability” (Wiggins & Ruefli, 2002, p. 84). I focus on two approaches to measure firm-level determinants of profitability persistence: (i) the sources of profitability measured by a set of proxies that reflect barriers-to-entry and economic rents and (ii) the outcome of competitive advantages measured by past long-term profitability and market share stability. Before presenting the hypotheses, I present theories and previous empirical research on the mean reversion of profitability as well as both approaches to measure the sustainability of a firm's competitive advantages.

2.1. Mean reversion in future profitability

There is a large body of research that documents the mean reversion in firm profitability (Beaver, 1970; Nissim & Penman, 2001). Profitability (ROCE) tends to mean revert to an economy-wide average of around 12% (Nissim & Penman, 2001), rather than towards the industry average (see Fairfield, Ramnath, & Yohn, 2009). Firms with profitability levels further from the mean tend to exhibit stronger mean reversion (Fama & French, 2000). However, there is also significant persistence in earnings over time. An examination of the data presented in Penman (1991) indicates that the highest performing decile measured by return on equity outperformed the average decile by more than a decade. The investigation of factors that slow down the erosion of profits and the speed of mean reversion is important.

2.2. Sources of sustainable competitive advantage

When the sources of competitive advantage, whether they stem from protected market positions (Porter, 1980) or firm-specific resources and capabilities (e.g. Barney, 1991), resist competition, the advantage is sustainable. The view by researchers in industrial organization, management, and accounting as to what industry and firm variables measure barriers differs.¹ In this paper, the focus lies on measureable mostly accounting-based variables. Greenwald and Kahn (2005) order sources of competitive advantages based on their durability. Of the market-based advantages, supply advantages (such as

cost advantages) often represent low durability, while demand advantages especially coupled with economies of scale can lead to strong barriers for competitors. Furthermore, government-aided protection such as patents, copyrights, trademarks, licenses etc. can be strong entry barriers.

Economics and strategic management literatures have identified several characteristics that cause more persistent profitability. Such characteristics include barriers-to-entry, firm size, capital intensity, and product type (e.g. Baginski et al., 1999; Lev, 1983). High barriers-to-entry reduce competition by limiting entry into an industry (Stigler, 1963). Lower competition leads to market share stability, and the market power enjoyed by firms that have created such barriers enables profitability persistence (lower mean reversion). While the consequences of barriers-to-entry are profitability and market share persistence (e.g. Greenwald & Kahn, 2005), the sources of barriers include product differentiation that can be measured by R&D and advertising intensity (Connolly & Hirschey, 1984) and contracting that reduces competition including patents (e.g. Porter, 1985).

Large firms can be more diversified due to their larger financial resources which can lead to more persistent profitability (Scherer, 1973). Relatedly, capital intensity is theoretically related to the persistence in costs included in earnings. The higher earnings volatility of capital intensive firms is due to operating leverage reflected by the proportion of fixed cost to total cost (Lev, 1983; Scherer, 1973). In addition, the difference in the demand for durable and nondurable goods may affect profitability persistence (Friedman, 1957). Darby (1972) finds that permanent income is related to the consumption of nondurable goods and services.

The empirical evidence on the sources of barriers-to-entry is mixed. Lev (1983) and Baginski et al. (1999) find that firm size, nondurable industries, R&D and advertising intensity, and the inverse of capital intensity are positively related to earnings persistence. Cheng (2005) considers the effects of firm characteristics such as market share, firm size, and firm-level barriers-to-entry (such as R&D, advertising, and capital intensity) on firm profitability persistence. He finds that the difference between firm and industry abnormal return on equity increases with firm-level barriers-to-entry (especially product differentiation through advertising and R&D), firm size, and market share, while industry abnormal profitability increases with industry concentration and industry-level barriers-to-entry. Though not focusing directly on the mean reversion in accounting profitability, Dickinson and Sommers (2012) find that a credible threat of expected retaliation and power over suppliers improve firm performance, while barriers-to-entry such as differentiation, innovation, and capital requirements do not result in persistent economic rents for most firms. In a different approach, Li et al. (2013) find that lower competition, based on firms' own references to competition in 10-K reports, reduces the mean reversion of firms' profitability. Based on previous studies on economic determinants of profitability persistence, I state the first hypothesis:

Source hypothesis (H1). Firms with stronger barriers-to-entry and higher economic rents should have lower future mean reversion in profitability.

2.3. Outcomes of sustainable competitive advantage

The outcome of a firm's competitive advantages is more straightforward to assess than the sources of the advantages. A firm can be viewed to have a competitive advantage over its rivals when it can create more economic value, and sustained competitive advantages are advantages that last a long time Barney (2011). Porter (1985) defines the consequences of sustained competitive advantages with long-term profitability and with above-average performance in the long run. By focusing on long-term historical superior performance one can identify the firms that exhibit superior performance that has persisted over time. Researchers have used time-horizons ranging from a few years to

¹ Bain (1956) defined as a barrier to entry anything that allows incumbent firms to earn above-normal profits without the threat of entry.

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