INTERNAL DRIVERS OF SHORT-TERM OVERPRODUCTION

Haihong He, Accounting Department, College of Business and Economics, California State University, Los Angeles, 5151 State University Drive, Los Angeles, CA 90032, hhe@calstatela.edu

ABSTRACT

This research examines internal causes of overproduction in manufacturing firms. Overproduction will result in higher inventory holding costs, future inventory value drop due to obsolesce, and loss of cash flow available for potential investment opportunities (Hendricks and Singhal 2009). Thus, researchers are interested in explaining why some firms recklessly choose to do so. Previous research on inventory overproduction mostly focus on external financial reporting incentives – absorption accounting required by the US GAAP (Gupta et al. 2010, Young et al. 2014) and earnings management to meet profit targets (Gunny 2006, Cook et al. 2012).

Absorption accounting requires allocation of fixed manufacturing overhead to inventory costs. Currently, SFAS 151 describes the inventory accounting. Under SFAS 151, "allocation of fixed production overheads to the costs of conversion is based on the normal capacity of production facilities. In periods of abnormally high productions, the amount of fixed overhead allocated to each unit of production is decreased so that inventories are not measured above cost." Thus high volume production will result in lower inventory cost each unit while low volume production will result in higher inventory cost each unit.

When firms have incentives to manage earnings, overproduction can be employed to meet/beat earnings target. Because of the nature of absorption accounting that both variable and fixed manufacturing costs are used to determine inventory values, the excess production in an accounting period can allocate higher fixed manufacturing costs to the ending inventory on the balance sheet and lower fixed manufacturing costs to the income statement to increase current period earnings. Thus, overproduction in absorption accounting can be used opportunistically to bias earnings upward temporarily.

Different from prior research, our research attempts to explain how internal accounting system can drive overproduction decision to occur. Overproduction is a result of management incapability in identifying sales needs and scheduling production accordingly, and the internal accounting system and information used in decision making and control plays a vital role in influencing noises in inventory production decision. Using a sample of US manufacturing firms from 2006 to 2015, we find that firms' overproduction is positively related to excess fixed assets in the current period, and also positively related to the past period sales. Our results suggest that managerial accounting information could drive overproduction when there is concurrently mismatched financial investment and undue reliance on the past period sales in production scheduling. Our research adds new findings to the overproduction literature in both accounting and operations management.

Our research also provides an alternative explanation to research on inventory change. Thomas and Zhang (2002) find the association between inventory changes and future abnormal returns and conjecture that "seemingly innocuous" inventory changes and abnormal future stock returns and profitability reversals is caused by business changes. However, Thomas and Zhang (2002) does not empirically provide evidence to support such explanation. Our research provides some evidence to support their assertion.

Inventory production is an operational decision that may result in suboptimal result - overproduction. In decision making, accounting information is used in many business functions, including both financial and operational decisions. This study contributes to the extant research in showing that internal accounting information could cause the misalignment in production and sales demand through the prior financial investment decision and the information choice in operational decision.

Keywords: Overproduction, fixed assets investment, sales

REFERENCE

[1] Cook, K.A., G. R. Huston, and M. R. Kinney, 2012. Managing earnings by manipulating inventory: The effects of cost structure and valuation method. Working Paper. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=997437

[2] Gunny, K. A. 2010. The relation between earnings management using real activities manipulation and future performance: evidence from meeting earnings benchmarks. *Contemporary Accounting Research* 27 (3): 855-888.

[3] Gupta, M., M. Pevzner, and C. Seethamraju. 2010. The implications of absorption cost accounting and production decisions for future firm performance and valuation. *Contemporary Accounting Research* 27 (3): 889-922.

[4] Hendricks, K., and V. Singhal. 2009. Demand-supply mismatches and stock market reactions: evidence from excess inventory announcement. *Manufacturing & Service Operations Management* 11 (3): 509-524.

[5] Thomas, J. K. and H. Zhang. 2002. Inventory changes and future returns. *Review of Accounting Studies* 7: 163-187.

[6] Young, C., C. Peng, C. Chien, and L. Tsai. 2014. Does SFAS No. 151 trigger more overproduction? *Journal of Management Accounting Research* 26 (1): 121-143.