

Chapter 9

Event Studies in Logistics Research: An Overview of the Method and Application

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ABSTRACT

The event study method allows researchers to examine the importance of an event to firms based on the magnitude and direction of abnormal returns, and then use these results in a cross-sectional regression to understand which managerial decisions may affect these outcomes. While the method has been heavily used in some disciplines, in-management research and logistics research, in particular, the method remains little used and is often used with little thought to key assumptions and design considerations. This chapter aims to provide an overview of the method for logistics and supply chain researchers with a focus on developing the capability to design an effective study and to evaluate research articles to determine possible weaknesses.

INTRODUCTION

The event study method is a valuable and powerful technique that has helped logistics researchers to better understand the impact of changes from different logistics management approaches. In this way, it is an analysis of the impact of a given event. The method allows researchers to determine whether or not there is an abnormal

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return on the stock price that has been associated with the event; that is, whether it is believed (by stock market investors) that the event will make a substantial difference to the fortunes of the firm. Examining these abnormal returns allows researchers to infer whether or not the event was useful and valuable for the firm or the magnitude or overall significance of the event. From this, a logistics manager would be able to understand better the costs associated with a negative event – this may help them to invest in preventative measures. Alternatively, they can more clearly understand the positive returns from taking particular management actions.

The method has been used extensively in the accounting and finance literature as this is where it was developed. It is often used to examine the impact of mergers and acquisitions and dividends. In management literature, however, the approach has been more widely used to examine a range of different scenarios including how firms becoming sustainable (Cheung, 2011), the impact of new executives joining the firm (Hendricks, Hora, & Singhal, 2014), the impact and management of recalls (Wood, Wang, Olesen, & Reiners, 2017), research into sustainable practices in construction (Kajander, Sivunen, Vimpari, Pulkka, & Junnila, 2012), or the impact of outsourcing business processes (Duan, Grover, Roberts, & Balakrishnan, 2014)

One of the major research focuses for logistics management researchers is determining whether or not a technique or management approach is capable of providing a substantial benefit to a firm. Just because of a few firms, as highlighted in a few case studies, can successfully make use of an approach does not mean that, overall, it is capable of providing a benefit when generalized to other firms and circumstances. While research is sometimes conducted with surveys, it can prove challenging to extract objective and reliable data using this approach. In contrast, finance researchers have for many years found value by addressing this type of problem with the event study analysis to determine the impact of an event. While our friends in finance may be more interested in the impact of a stock split, an operations manager may be more interested in the impact of a quality improvement program.

While it is true that operations managers and finance managers rarely worry about the same type of issues, the end impact of valuable changes is on the stock returns for the firm. For an operations or logistics manager, this is likely not to be the primary day-to-day driver of interest. Rather, they may be more inclined to worry about more pressing operationally focused metrics; e.g., stock turns. However, exceptional operational performance (whether positive or negative) should be transformed into stock returns that exceed what we otherwise expect to observe. In this way, the positive and advantageous logistical or operational changes made by the manager should result in improved operational performance; in turn, this should flow to improved financial returns. There several important steps in the causality, yet the measurement of stock returns is only one method of evaluating the success of these managerial changes. A more direct measurement might include assessing

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