Chapter 10
Exploring the Hidden Pattern from Tweets: Investigation into Volkswagen Emissions Scandal

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ABSTRACT

Social media has recently emerged as a key tool to manage customer relations in industry. This chapter aims to contribute a step-by-step Twitter Analytic framework for analysing the tweets in a fiscal crisis. The proposed framework includes three major sections – demographic analytic, content analytic and integrated method analytic. This chapter provides useful insights to develop this framework through the lens of the recent Volkswagen emission scandal. A sizable dataset of #volkswagenemissions scandal tweets (8,274) was extracted as the research sample. Research findings based upon this sample include the following: Consumer sentiments are overall negative toward the scandal; some clustered groups are identified; male users expressed more interest on social media in the topic than female users; the popularity of tweets was closely related with the timing of news coverage, which indicates the traditional media is still playing a critical role in public opinion formation. The limitations and practical contribution of the current study are also discussed.

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INTRODUCTION

The Volkswagen (VW) scandal broke when the United States Environment Protection Agency (USEPA) declared that over 482,000 cars in the US had been fitted with a so-called “defeat device” to guarantee the passing of Government conditions emission tests (Hotten, 2015). The “defeat device” allows a diesel car to turn on the “safety mode” to pass emission tests. Under the “safety mode”, the engine of the car will run below normal power and performance (Hotten, 2015) so as to guarantee low emissions but once customers drove the car on the road, the car will automatically switch out of “safety mode” into “road mode”, thus improving the performance of the car, but increasing emissions. This means that a VW car with “road mode” enabled produces significantly more air pollution than would be suggested by calculations based upon “safety mode” emissions. On 23 September 2015, VW admitted that there are around 11 million diesel cars worldwide that have the relevant “defeat device” fitted (Winston, 2015).

The VW emission scandal is a new form of automobile reputational crisis, which is not related to automobile quality or safety issues (such as the Aston Martin recall in 2014). Instead, it is characterized as a form of deliberate fraud and/or criminal intent, rather than stemming from negligence or corporate wrongdoing (Hartman, 2015). According to Hartman (2015), the VW scandal has therefore “set the bar at a whole new level”. The consequences of the VW emission scandal are threefold. Firstly, the VW scandal might raise industrial concerns regarding related diesel car supply chains. VW also supplies diesel engines to both Audi and Porsche (as subsidiary firms) and therefore these firms may also be suspected to have sold cars containing the affected engines (Rucker and Gardner, 2015; Saarinen, 2015).

Secondly, the emission fraud threatens the health of millions in Europe, because of the high levels of nitrogen oxide pollutants. The World Health Organization (WHO) estimates there are around 7 million premature deaths are associated with air pollution (Winston, 2015). Therefore, the emission scandal might make the public more concerned about the issues of air pollution and the need for sustainable development. Thirdly, the VW incident potentially increases the public mistrust of the diesel car industry as a whole, as VW plays a central role in this market sector (Bach, 2015). In fact, it could even be argued that the scandal is risking the reputation of the entire automobile industry as a whole, and its efforts in using technology to achieve environmental sustainability (Winston, 2015; Bach, 2015). Currently, sustainability is of growing importance in business strategy and firm credibility (Elkington, 1994). In short, VW’s reporting of sustainability performance data to enhance ‘green’ positioning and the nature of the VW scandal demonstrates highly
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