

Competitive Intelligence Practices in Small Business: a Social Media Analytics Approach

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Abstract

With the recent advances in the development of Information and Communication Technologies (ICTs), a lot of small businesses and micro-enterprises achieve their business goals and reach economic development. While Competitive Intelligence (CI) is the practice of studying competitors and competitive environment, its purpose is to provide actionable intelligence for informative organizational decision making.

However, traditional CI studies mainly use primary data collected from surveys or secondary data provided by online database. Their CI process also involves a lot of manual works done by analysts. Therefore, the cost is high and the result is also subjective to processing error and subjectivities. One of the major problems is managerial myopia of the stakeholders inside the organization (Levitt, 1960). They usually recognize only a few major competitors who produce the same products while ignoring other competitors whose size is small or whose products are different but satisfy similar consumers' needs. Another limitation of these studies is that they only focus on a few major players in certain specific industries such as airline.

In this work we proposed to address the limitations of previous studies by designing a social media analysis and text mining-based model to study CI. It is especially designed to serve the Intelligence needs of small businesses. We put our work under the design science paradigm (March and Smith, 1995; von Alan et al., 2004) by design an artifact to study CI for small business. In particular, we conducted a case study on the restaurants industry. In particular, we want to address three research questions in developing and evaluating our model:

1. How can we discover the patterns about competitors and competitions from social media?
2. How can we effectively combine the information extracted from social media with other attributes of the business in predicting company performance?
3. How can we evaluate the proposed model?

We choose to do a case study on restaurants industry. Restaurant industry is often used to study small businesses (Revell et al., 2007; Winborg and Landström, 2001). This is because most of the restaurants are small businesses, and the competitions in this area are fierce. The social media data we choose for our analysis is Yelp because it contains both consumers' reviews and detailed information about the businesses.

We also evaluate the performance of the designed artifact by comparing it to the survey results obtained from managers. Our work contributes to the CI body of knowledge by introducing advanced text mining techniques and social mediate data into CI analysis. It is also one among of few works in this area that focus exclusively on small businesses.

In evaluation experiment, we first compare all the restaurants names identified using our model with the competitors' name identified by surveying the owner of restaurants. Our predisposition is our model will have a better coverage of all possible competitors. Second, after we established the relations between interim rivalry and competitive actions, we will look at if the restaurant's revenue will increase or decrease when it can make competitive move/fail to make competitive move in a timely manner.

Keywords

Competitive Intelligence, ICTs, Small Business, Development.

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