

Social Media Analytics and Business Value: A Theoretical Framework and Case Study

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Abstract

Social media analytics (SMA) uses advanced techniques to analyze patterns in social media data to enable informed and insightful decision-making. It provides organizations with new ways to create value and gain competitive advantage. In this paper, we present a theoretical framework that explains how organizations create value with SMA. We use the framework as a lens for a case study involving a large financial institution (Bankco) that used SMA as a critical component of a major and highly successful marketing campaign. Bankco successfully distinguished itself from its competitors with a marketing campaign based on the creative and innovative use of a number of social media channels. SMA provided Bankco with important insights into customer sentiments, engagement and brand awareness. A number of important lessons learned about effective use of SMA are discussed.

1. Introduction

During the past decade there has been significant interest in business analytics (BA), from both practitioners and researchers. BA systems enable managers and other decision-makers to interpret organizational data to improve decision-making and optimize business processes [1]. BA has become one of the top strategic priorities for senior executives. Recently there has also been strong interest in social media analytics (SMA), the use of analytics capabilities to analyze and interpret vast amounts of semi-structured and unstructured social media data [2]. Social media is defined as a “group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user generated content” [3]. Social media has revolutionized the way organizations engage with the marketplace and society, providing an alternative communication channel and access to vast amounts of social media data [4]. Social

media data includes consumer opinions, experiences and sentiments towards brands, products and services, and is potentially of great value to business [4, 5].

SMA makes use of advanced techniques to analyze patterns in semi-structured and unstructured social media data to enable informed and insightful decision-making. Frequently, the insights gained and based on real-time analysis of social media data accessible by non-traditional analytics users. SMA provides a new strategic approach towards business decision-making resulting in new ways to create value, which are not well understood. The research question addressed in this paper is: *How do organizations achieve value with social media analytics?*

To address this question, we focus on two key issues: understanding the motivations that explain *why* organizations use SMA; and understanding *how* the use of SMA leads to organizational value. To understand *why* organizations use SMA we use the concept of awareness motivation from Larson and Watson’s recent work on social media strategy [7]. To understand how the use of SMA leads to organizational value we use the resource-based view (RBV) [8] and dynamic capabilities [9].

There are two motivations for our work. First, there is significant interest in SMA in practice. Organizations are investing in SMA technologies and capabilities to better understand their customers and perceptions of their market positions [1]. Second, although there is much practitioner interest concerning the business value of SMA, there is currently little research published in the IS field. Previous studies have provided some insights into the SMA phenomenon [10], yet they have not provided a systematic and theoretically based explanation of how SMA provides value to organizations.

In this paper, we describe a framework based on awareness motivation [7] and the resource-based view (RBV) [8], in which SMA resource combinations are required to successfully implement SMA initiatives. The framework described extends our previous work [11]. Succeeding with SMA requires expanding the

traditional organizational ICT resource base [12] to include both SMA resources and dynamic capabilities to renew and reconfigure the SMA resources in the rapidly changing and turbulent social media environment. We then use the framework as a lens to describe and analyze a case study involving a large financial institution, and its use of SMA in an important marketing campaign. A number of key lessons learned are identified.

The paper is structured as follows. First we discuss the background to the study, including social media, SMA, RBV, and dynamic capabilities. Then we describe the SMA Value Framework and define key concepts and relationships in the framework. Next we discuss the case study research approach used in the study, and then present case study. We then present some lessons learned from the case study. Finally we discuss implications for researchers and practitioners and conclude the paper.

2. Background

In this section, we discuss relevant literature and identify a knowledge gap. First, we discuss social media and the use of SMA by businesses, and distinguish between the fields of SMA, big data and BA. Second, we discuss relevance of RBV and explain how organizations can achieve value with SMA.

2.1. Social media and social media analytics

Social media enables users to generate content by sharing their knowledge, opinions and experiences on a variety of issues. Social media has changed the way customers engage with organizations, brands, products and services. It influences customer attitudes, perceptions and buying decisions [3]. Social media provides organizations with many opportunities. It provides a new and powerful low cost marketing channel that can be harnessed to increase customer awareness of organizations and associated brands, products and services [1]. Also, it enables organizations to improve their customer relationships through better engagement on a real time basis.

SMA involves the collection, analysis and interpretation of social media data to support effective decision-making. SMA has been widely used in e-commerce, for customer and market intelligence, in supply chain and product development, in e-government and politics, to achieve influence and improved customer relationships, brand awareness and marketing, scale and speed, lower costs and flexibility.

SMA uses the content of social media platforms (e.g. Twitter, Facebook) to create a real-time

understanding of how people, trends, products and brands are mentioned in those social media sites. SMA provides organizations with an ‘intimate’ platform to connect with customers and shape their perceptions, whether through timely and targeted campaigns, responsive customer service or creating communities of interest. It enables organizations to track and understand customer views, sentiments, key topics and trends and identify key influencers [10]. SMA techniques include web analytics and text mining, marketing analytics and customer insights, and customer engagement [5, 6].

Although SMA is closely related to big data and BA, we argue that research into SMA specifically is justified and important. SMA can be distinguished big data and BA as follows. Big data involves the data storage, management, analysis, and visualization of very large and complex data sets [13]. It focuses on new data management techniques that supersede traditional relational systems, and are better suited to the management of large volumes of social media data. While SMA uses this data, it focuses primarily on the interpretation and use of insights from social media data to achieve organizational benefits [14]. BA involves the analysis and interpretation of structured, historical organizational data, to gain insights and achieve organizational benefits. This contrasts with SMA, which uses different techniques to analyze and interpret unstructured, text-based social media data to gain insight into contemporary, rather than historical, phenomena. We argue that these differences are important and while there is some overlap between SMA, big data and BA, the differences are very important in terms of motivations, resources required and benefits achieved.

2.2. Resource-based view

The RBV has been widely used by information systems (IS) researchers in relation to understanding how investments in IS lead to organizational value and competitive advantage [12, 15]. An organization may be viewed as a collection of resources that enable it to succeed and compete. Resources comprise both assets and capabilities. Assets include hardware, software and data. Capabilities include competencies (skills) and practices (routines). To be of strategic importance and achieve competitive advantage, resources must be valuable, rare, inimitable and non-substitutable (VRIN) [7].

Organizational resources are a critical determinant of firm performance [12, 16]. There has been a long-running debate over whether investment in IS contributes to business value and whether the impact is direct [12]. RBV theory has been used to demonstrate

the impact of different types of IS investment at various levels within organizations, including business processes, business units and organization-wide impacts [12].

Dynamic capabilities extend the RBV by ‘shaping’ and reconfiguring an organization’s existing resources to adapt to rapidly changing technology and business environments [9, 17]. Organizations invest in and reconfigure resources and learn how to use these resources over time by developing skills and accompanying practices.

2.3. Social media analytics and value

There is strong anecdotal evidence of the value that SMA provides to organizations, particularly reported in the practitioner literature [1, 5, 6, 10]. Much is known about the benefits that can be achieved with BA, including increased customer profitability, reduced customer attrition, and increased response rates from marketing campaigns [11]. However, there is no systematic, theoretical explanation as to how and why SMA brings value and competitive advantage to organizations. We address this gap by proposing the SMA framework, which is described in detail in the next section of the paper.

3. SMA Benefits framework

The social media landscape may be conceptualized as the intersection of the activities of social media stakeholders, including specialist SMA firms and customers, and the level of analysis at which those activities are investigated [10]. We focus on social media activities at the level of *management and organization*. This includes how firms manage and allocate their internal resources when adopting and using SMA to meet business objectives in order to *create value*.

The SMA framework is based on RBV [8], dynamic capabilities [9], IT resources, organizational benefits [12, 15], and awareness motivation [7] (see Figure 1).

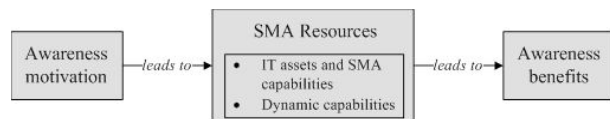


Figure 1. Social media analytics benefits framework

The SMA framework comprises three main concepts: awareness motivation, SMA resources and

awareness benefits. *Motivations* are the goals that an organization pursues and guide the subsequent actions of that organization. Typical motivations include better customer engagement, increased brand awareness, and greater market value. *SMA resources* include effective combinations of IT assets and SMA capabilities that take time to develop, and require significant of learning and optimization. They also include dynamic capabilities that enable organizations to respond to environment turbulence by renewing and reconfiguring its existing resource base. *Awareness benefits* reflect the extent to which SMA resources contribute to the success of the organization. Benefits may be measured using financial, perceptual and behavioral indicators [17, 18]. We now discuss these concepts in detail.

3.1. Awareness motivation

Organization motivations are defined as the goals that an organization pursues, that guide the subsequent actions of that organization [19]. Social media provides organizations with the opportunity to monitor and analyze customer discussions and interactions on social media platforms. In their analysis of the value of social media to organizations, Larson and Watson [7] identify three motivating consequences: awareness, persuasion and collaboration. While persuasion and collaboration are important for understanding the strategic use of social media, they are less relevant to the use of SMA. We focus on the analysis of social media data to create awareness about customer discussions and interactions. The awareness is usually associated with the customer intelligence, marketing and sales functions within organization [1, 20].

We define *awareness motivation* as collecting and analyzing social media data in order to increase organizational knowledge or understanding about issues related to customer-empowered environments [7]. Analysis of social media data enables organizations to increase awareness about its brands, products, services, events, marketing campaigns and overall market trends [21].

The three main goals of awareness motivation in SMA are: developing insights into customer’s values and behaviors [1]; understanding the impact and effectiveness of online marketing campaigns [1, 22]; and discovering new ideas for brand reputation and engagement purposes [6, 23].

3.2. SMA resources

Awareness motivations drive organizations to develop and renew *SMA resources* in order to understand the content, context and business impact of

online posts and conversations (sentiment analysis), discovering valuable customer information (insight mining), and monitoring relationships between online users and communities (influence analysis, network analysis). SMA resources are mutually reinforcing systems of IT assets (IT infrastructure and SMA tools), SMA capabilities (analytical competencies and practices) and dynamic capabilities.

3.2.1 IT assets. These are combinations of IT hardware, software and networks that provide the foundation for shared IT services [12]. They provide a flexible base for SMA initiatives, enabling the development of new applications for improved business performance. Whereas traditional information assets involve an organization's internal databases and information shared with business partners [12], SMA requires new data assets. Organizations require access to external social media data streams to identify trends and important issues quickly to drive business change. These new IT assets include storage and analysis technologies for large-scale unstructured databases (e.g. Hadoop). Eventually, this will facilitate the development of a big data capability for firms.

SMA applications can be integrated with operational IS systems (e.g. CRM system). Many existing BA systems include SMA applications [24]. Examples include SPSS predictive analytics, and Google Analytics. IT solutions combined with SMA applications provide organizations with text analytics tools, including sentiment analysis techniques and weak-signal analysis techniques for identifying emerging trends early [20].

3.2.2 SMA capabilities. These are interlocking systems of competences and practices that enable organizations to utilize SMA applications to perform SMA tasks. For example, in order to perform a customer insight-mining task, an organization needs to allocate appropriate IT assets and people with relevant SMA competencies. To interpret and insights gained from that data and take actions, organizations need to embed them into daily business routines. Two key aspects of SMA capabilities within organizations are *competencies* (skills) and *practices* (routines).

SMA *competencies* refer to the skills embodied in individuals or teams that actively manage or accomplish organizational tasks [25]. They are developed through learning and the repeated performance of related activities [8]. As individuals or teams engage in SMA for a particular purpose, they learn, build skills, and develop competences. According to Aral and Weill [12], competencies have two major dimensions: skills related to IT, SMA and business understanding; and skills related to management. IT, SMA and business understanding skills relate to application development, database

administration, and networking complemented by business skills. The SMA skills include management of unstructured data, text mining, natural language processing, machine learning, and social network analysis [2, 20]. SMA skills are prominent in the recently emerging role of data scientist [20]. Management skills include a strong commitment to SMA initiatives and alignment of SMA initiatives with other business initiatives [11, 12, 18]. Senior management support drives IT-related projects with adequate funding and clear communication and contributes to business value [25, 26].

Since SMA insights can impact many organizational functions, a cross-functional approach to SMA adoption may be required. This may include close partnerships with people in areas including marketing and sales, product development and IT.

SMA *practices* serve as a means of accomplishing organizational tasks and as mechanisms for storing and accessing knowledge about the most effective ways to accomplish those tasks [12]. Practices and competencies support and complement each other. Practices help individuals and teams develop competencies with particular ways of working, while competencies are necessary for the effective execution of organizational practices toward specified goals. SMA practices include practices relevant to IT-based communication and digital transactions, use of Internet architecture [12], evidence-based management [27], and information management practices [18].

Organizations that are using digital work practices and evidence-based decision-making, achieve higher performance benefits from SMA as these practices have been ingrained into their employees' work routines [12, 24]. Personalized SMA dashboards, based on social media results, 'democratize' intelligence and embed relevant insights deeply into the organization's working norms.

Successful use of SMA insights depends on three key organizational practices: customer management, process management and performance management [8, 18]. *Customer management* is an organization's ability to understand its customer base (e.g. expectations) and market characteristics [21]. This is important in an SMA context, as it enables organizations to improve their customer and market intelligence. *Process management* is an organization's ability to attain flexibility, speed, and cost economies through the effective design and management of key processes [18]. In an SMA context, process management practices ensure that SMA insights are integrated with relevant business process and appropriate metrics and controls are developed. *Performance management* is an organization's ability to design and manage effective performance measurement and monitoring systems to

support managerial decision-making and communication of performance to appropriate stakeholders [18]. If a SMA insight is exercised effectively, the organization will be able to measure its business impact and execute relevant competitive actions.

3.2.3 Dynamic capabilities. The ability of IT assets and SMA capabilities to provide organizational benefits may change over time in turbulent environments [9]. The RBV has been criticized as being too ‘static’ in nature, and dynamic capabilities have been proposed as a means of renewing and reconfiguring IT assets and SMA capabilities to ensure they continue to provide benefits and competitive advantage [9].

Dynamic capabilities are conceptualized as ‘second order’ constructs, as they are not directly involved in the production of goods or provision of services [9]. Their role is to renew and reconfigure other ‘first order’ assets and capabilities, to ensure they remain valuable, rare, inimitable and non-substitutable (VRIN). Dynamic capabilities involve two routines: *searching for and selecting* new innovations and opportunities, and *asset orchestration* to renew and reconfigure assets and capabilities [9].

In the context of SMA resources, search and select routines involve identifying opportunities to exploit SMA in order to provide increased organizational benefits. Potential SMA opportunities may then be prioritized and selected based on their potential business value [25]. Asset orchestration involves implementing the selected SMA opportunity by identifying required IT assets and SMA capabilities and sourcing them. Dynamic capabilities are themselves organizational routines that have been developed over time through organizational learning [10].

3.3. Awareness benefits

We define three types of awareness benefits that are achieved with SMA resources: customer-related benefits, financial-related benefits and organizational effectiveness benefits [16,17,18]. Benefits may be measured using financial (e.g. revenue, costs), perceptual (e.g. customer satisfaction) and behavioral measures (e.g. use of SMA insights) [18].

Customer-related awareness benefits include better understanding of customer satisfaction levels, improved customer engagement and better knowledge of customer sentiments about products and services [1, 2, 14].

Financial-related benefits relate to actions resulting from SMA insights that lead to increased revenue, reduced costs and improved profits [12]. Financial-

related benefits are often indirectly related to customer-related and organizational effectiveness-related benefits and may take some time to occur.

Organizational effectiveness benefits include reduced time to market, higher levels of innovation, and improved production and supply chain flexibility [18] and improved marketing campaign success [5, 22]. They involve the use of ‘soft’ measures and may also impact financial-related benefits.

3.4. Relationships in the SMA Framework

There are two relationships in the SMA value framework: Awareness motivation *leads to* SMA Resources, and SMA resources *lead to* awareness benefits.

Awareness motivation defines the goals that an organization pursues, that guide the subsequent actions of that organization [19]. We argue that depending on the particular awareness motivation, an organization will develop, outsource, acquire and renew its SMA resources in order to achieve those goals. We defined three awareness motivations: developing insights into customer’s values and behaviors [1]; understanding the impact and effectiveness of online marketing campaigns [1, 22]; and, discovering new ideas for brand reputation and engagement purposes [6, 23]. Each of these different motivations will lead to particular SMA resources. For example, the insights into customer values and behaviors motivation should lead to the development, outsourcing, acquisition and renewal of IT assets and SMA capabilities related to sentiment analysis.

SMA resources are the IT assets, SMA capabilities and dynamic capabilities relevant to a particular awareness motivation. Based on RBV, we argue that SMA resources lead to awareness benefits [12, 16]. For example, a sentiment analysis SMA resource should lead to better customer engagement and brand awareness as sources of awareness benefits.

4. Research Method

In order to understand how organizations achieve value with social media analytics, we use a single case study research approach. Case studies are particularly useful for in-depth studies of contemporary phenomena within their organizational context [28]. They provide a rich and detailed description of the phenomena and describe how and why outcomes occur. Single case studies are appropriate when they are revelatory [28]. The case study reported in this paper is revelatory as the SMA initiatives implemented were novel and critical to the success of a major, one-off marketing

campaign. The unit of analysis is the marketing campaign, within a large financial institution (Bankco).

Data collection involved semi-structured interviews and other publically available material. We conducted a total of thirteen interviews with senior managers (5), BA experts (3), project managers (3), and business analysts (2). Each interview lasted about one hour. In addition to the interviews, a significant amount of publically available material about the marketing campaign was sourced from various media outlets and industry presentations. All interviews were recorded and transcribed.

Case study data was analyzed using thematic content analysis to identify common patterns and themes emerging from the data [29].

5. Case study

5.1. Case study context

Bankco is a major global financial institution with over 8 million customers in 10 countries. It provides a range of financial services including personal and business banking, wealth management and investment banking. Bankco's core business strategy is to provide innovative and relationship-based customer services. It is highly customer focused and has a mature customer relationship management (CRM) driven culture.

In 2009, Bankco's senior management announced a strategy of *reputation change* to grow retail banking by competing on price, cutting fees and providing wealth management services. A major change management program was initiated across Bankco branches and customer channels based on brand differentiation and achieving closer engagement with customers.

Bankco had a stable and mature BA group within its central marketing function. The group was referred to as a "*world class capability*" by several interviewees. "*We're probably years ahead of some of our competitors...*" (BA Project Manager). Over many years, Bankco had achieved considerable success with its BA initiatives, including outbound and inbound marketing support, campaign management and dashboards to support bankers interacting with customers. The BA group comprised about twenty highly experienced BA managers, experts and business analysts. A sophisticated IT infrastructure had been established with a large customer data warehouse and many BA tools for reporting, dashboarding, propensity modelling. In particular, Bankco developed a sophisticated multi-channel, multi-step inbound marketing capability that was highly regarded within the financial industry. The BA group did not have a strong SMA capability, although some people had

worked within the central marketing unit on digital strategy.

5.2. The marketing campaign

A survey commissioned in August 2010 indicated that consumers did not perceive Bankco to be different from other financial institutions. A widely held belief among consumers was that all banks were "working together, fixing fees and eliminating competition". In order to achieve the strategic goal of *reputation change*, a major marketing campaign as initiated by the marketing unit in collaboration with the BA group, with strong support from senior management, to clearly differentiate Bankco from its competitors. The campaign was designed to provide Bankco with a reputation of providing *fair* service to customers and develop a "*simple brand value delivery model with societal, cultural and commercial impact*" (General Manager of Customer Analytics and Research). It was intended to enable Bankco staff to better compete on service and advice and to increase new customer conversions from other banks..

The marketing campaign had a budget of over \$5 million and was launched on Valentine's Day (Feb 14th, 2011). It used a number of media channels including social media, newspapers, television and other live activities that were featured in daily news reports. The campaign was radical for a large bank, and started with a seemingly accidental tweet about 'breaking up' (from the other banks), followed by a series of web, live and radio stunts, and daily press posts involving 'Dear John' letters about 'breaking up'. The social media content was placed on various platforms including Facebook, YouTube, and Twitter and intended to engage potential customers. In addition to the 'break up' theme, the campaign also involved the abolition of fees on the bank's e-banking accounts, savings accounts, business fees and fees on credit cards.

The campaign attracted significant media attention and was an excellent example of a marketing innovation achieved using social media (e.g. there were over 100 re-tweets within the first hour of the original tweet). It was estimated to have earned over A\$5 million worth of public relations in a single day and was instrumental in changing people's perceptions of Bankco.

5.3. Case Study Analysis

The case study analysis is organized using the three main concepts in the SMA value framework: awareness motivation, SMA resources and awareness benefits.

5.3.1 Awareness motivation. Social media played a crucial role in the marketing campaign, as one of several communication channels. It served to disseminate information, engage potential customers and provided a forum for consumer discussion and interactions. One clear awareness motivation for using SMA was to ‘understand the impact and effectiveness of the online marketing campaign’. Bankco needed to understand if consumer sentiment towards the bank had been impacted by the campaign. For example, they included a strong message in the campaign: “*we want to be the lowest cost player...*” (Strategic Partner of Personal Banking). Analyzing social media data is a means to understand if consumers have this perception. Monitoring and analyzing real-time social media data also provided Bankco with the ability to reconfigure its marketing campaign over time, as the impact of initiatives was understood.

5.3.2 SMA resources: IT assets and SMA capabilities. In order to achieve the awareness motivation, Bankco utilized its existing core competencies in CRM and BA and outsourced the technical aspects of SMA to a US-based vendor. These included the sourcing, storage and analysis of social media data in order to generate insights about consumer reactions to the marketing campaign. The IT assets outsourced included large social media content databases, and sentiment analysis using advanced text analysis techniques. However, the capability to take actions based on the SMA insights received from the outsourcing vendor was seen as crucial, and was developed within Bankco. These included the ability to refine the marketing campaign based on sentiments about Bankco and its brand, perceptions of the levels of service provide and about the cost of Bankco services.

A further important capability developed within Bankco was to integrate some of the insights from SMA into their existing outbound marketing BA capability. Using sentiment analysis, a list of potential new customers was generated and forwarded to Bankco’s marketing group. This insight was integrated into Bankco’s mature outbound marketing capability and used to acquire new customers. The strong existing collaboration between the marketing group, the BA group and retail product groups facilitated the integration of insights from SMA.

Finally, SMA insights were used by the BA group to provide input into indicators that were developed to measure the success of the marketing campaign. Once again, the mature capabilities of the BA group in developing and using measures for marketing campaigns facilitated the smooth transition to the new measures.

5.3.3 SMA resources: dynamic capabilities. Bankco already had in place a number of well-established routines for identifying and acting upon new BA opportunities. These included monthly meetings of BA, product and marketing analysts and managers to identify and prioritize new BA opportunities. New BA opportunities were identified from a number of sources including business analysts who identified opportunities based on feedback from banking staff, and BA experts from the BA group. An example of a new BA opportunity was a new customer lifecycle event that could be identified using propensity modeling and the used to cross sell or up sell products to existing customers from within several channels. BA opportunities that were prioritized selected for implementation were then funded and other resources allocated.

BA and SMA assets and capabilities identified for the marketing campaign were presented to the monthly meeting of this group and strongly supported by senior management. Some of these were available within Bankco, others were developed within Bankco, while technical SMA assets and capabilities were outsourced. The mature dynamic capability routines within Bankco were evident and instrumental to the success of the marketing campaign.

5.3.4 Awareness benefits. A number of indicators were used to measure the impact of the marketing campaign. A strong indicator of the success of the campaign was an increase in the number of retail customers from 3 million to 3.9 million, with almost a million new customers joining Bankco. Many of these new customers contacted the bank directly but a significant number were the result of outbound marketing activities following leads generated using SMA. Further, there was a 66% increase in sales lead conversions, a 77% increase in home loan enquiries, a 50% increase in credit card applications, and a 20% increase in new transaction accounts.

Perceptual measures included an increase in customer satisfaction with Bankco ranked first within an independent customer service survey. SMA indicated that Bankco was perceived to be different to the other banks by 39% or consumers, a significant increase. In terms of ‘making banking fairer’, Bankco increased from 10% to 17%, whereas its competitors dropped to between 5% and 8%. The Business Engagement Partner at Bankco noted, “We got people to believe that Bankco was a better bank (than its competitors)”.

The success of the marketing campaign was indicated by a 600% increase in consumers visiting Bankco’s social networking site. Bankco and its marketing campaign became the highest trending topic in Twitter and there were over 100,000 visits to the

campaign blog in the first week after the campaign was launched.

These are strong examples of customer-related benefits and organizational effectiveness benefits in the SMA benefits framework.

6. Discussion

In this section we discuss four lessons learned from the Bankco case study, and implications.

6.1. Lessons Learned

6.1.1 SMA assets and technical capabilities may be outsourced. Bankco's experience with the marketing campaign has shown that organizations do not need to possess specialized SMA assets and technical skills (e.g. sentiment analysis, text analysis) to succeed with SMA. SMA assets and technical capabilities can be outsourced, as they are readily available and therefore not rare, and can be easily imitated by other competitors. They are *non-core resources* [25]. It is the interpretation of SMA insights and resulting actions that provides value and competitive advantage. The ability to act on SMA insights is a *core* internal capability. Core SMA capabilities are those required to exploit SMA and result in improved business performance [30].

Bankco had developed the capability to act on BA insights over many years within their marketing and CRM groups using customer feedback from other communication channels. This capability was reconfigured to also include the ability to act on insights from SMA.

SMA provided Bankco with rapid feedback and insights into customer perceptions of the marketing campaign. Bankco has the necessary governance mechanisms and project management skills to successfully combine the outsourced non-core SMA assets and technical capabilities with the core capabilities required to interpret SAM insights and take actions.

6.1.2 Dynamic capabilities are important in using SMA. Well-developed dynamic capabilities are crucial for the introduction of innovations into organizations [12, 17]. Bankco had mature BA dynamic capabilities developed over many years. These included the ability to search and select for new BA innovations and then to renew and reconfigure existing BA capabilities. An example of such BA innovations was the new life cycle events identified and incorporated in inbound marketing processes and routines.

Two new SMA opportunities were identified at Bankco. First, SMA was used to determine consumer sentiment towards the marketing campaign. This

enabled Bankco to obtain timely information about the impact of the marketing campaign. Second, SMA provided a source of leads for new customers, which were incorporated into existing BA-enabled outbound marketing processes.

Organizations planning to use SMA will need mature dynamic capabilities that search for and select SMA relevant opportunities, and asset orchestration routines to renew and reconfigure existing organizational capabilities to include SMA insights and actions.

6.1.3 Early adopters of SMA can gain competitive advantage. Bankco used SMA to compete with other large banks in two ways. First, SMA provided Bankco with insight into how successful its marketing campaign was and enabled Bankco to understand the impact of the campaign on consumers, particularly young consumers. This enabled Bankco to take action and adjust the campaign and enhance its effectiveness.

Second, Bankco was able to identify potential new customers using SMA. These arose from the 600% increase in consumers visiting Bankco's social networking site and the large number of visits to the campaign blog after the campaign was launched.

It is important to emphasize that it is not social media technology, data and technical skills that directly provides competitive advantage. It is the development of capabilities to interpret SMA outcomes to provide insight and then subsequent actions that lead to competitive advantage. This contrasts markedly with the BA resources within Bankco, which are all in-house.

Changes in consumer perceptions of Bankco and significant increases in new customers were important outcomes of the campaign, related in part to the early adoption and use of SMA in the campaign.

6.1.4 Embedding SMA within organizational processes and routines is important. Bankco successfully embedded SMA insights and actions into organizational processes and decision-making routines within the marketing group. Embedding SMA insights and actions into business processes was apparent; in particular with marketing campaign impact measurement and new customer lead identification. The use of SMA insights and subsequent actions became habitual within these business processes [31]. SMA insights were increasingly embedded within the decision-making routines of marketing managers and BA group managers. As evidence of the importance of SMA for the marketing campaign became apparent, SMA became a prominent technique for use within multi-channel marketing initiatives.

SMA was also seen to be strategically important and well aligned with the goal of Bankco to target the growth of younger customers. These customers are

more likely to be using social media than older customers.

6.2. Implications for Researchers

The SMA framework provides researchers with a theoretically based explanation of how SMA provides value for organizations. The SMA framework is based in RBV and organizational motivation theory. It is parsimonious and novel as it is one of very few theoretical frameworks focusing on SMA.

The three key concepts in the framework: *awareness motivation*, *SMA resources* and *awareness benefits* provide information systems researchers with a clear and systematic means of conducting empirical research about SMA. The framework provides case study researchers with a useful lens for conducting data collection and analysis. Case study research will enable richer understanding of the concepts in the framework and their interrelationships. After these concepts are further refined and precisely specified, they may form the basis of survey research. This will enable the strength of the relationships in the framework to be better understood.

6.3. Implications for Practitioners

The SMA framework provides practitioners with a systematic means of thinking about SMA and how it might be used to create value and competitive advantage. Concepts in the framework will provide organizations with a means to understand the planning, coordination and execution of SMA activities.

The Bankco case study provides practitioners with a revelatory case study as Bankco is an early adopter of SMA within the banking sector. Lessons learned will be particularly useful for those organizations intending to use SMA in the near future.

7. Conclusion

This paper proposes the SMA framework as a means of understanding and explaining how SMA brings value to organizations. The framework was developed by synthesizing concepts from two theories: organizational motivation theory and the resource-based view of the firm.

One limitation of the study is that it is based on one case study. Although we argue that the Bankco case study is revelatory, more case studies are required to further refine and develop the framework. Our next step is to further develop the SMA benefits framework using expert interviews and more industry case studies.

Further research his planned to conduct a survey based on constructs within the model.

8. References

- [1] D. Kiron, R.B. Ferguson, and P.K. Prentice, "From Value to Vision: Reimagining the Possible with Data Analytics," MIT Sloan Management Review: Spring Research Report (2013), 1-19.
- [2] H. Chen, R.H.L. Chiang and V.C. Storey, "Business Intelligence and Analytics: From Big Data to Big Impact", Special Issue: Business Intelligence Research, MIS Quarterly 36:4 (2012), 1165-1188.
- [3] A.M. Kaplan, and M. Haenlein, "Users of the World, Unite! The Challenges and Opportunities of Social Media," Business Horizons 53:1 (2010), p. 61.
- [4] R. Kohavi, N. Rothleder, and E. Simoudis, "Emerging Trends in Business Analytics," Communications of the ACM 45:8 (2002), 45-48.
- [5] N. Koudas, "Social Media Meets Business Intelligence". Retrieved 12 September, 2012, (2009) from <http://www.sysomos.com/docs/CMA2009_Sysomos.pdf>.
- [6] W. Chamlerwat, P. Bhattarakosol, T. Rungkasiri, and C. Haruechaiyasak, "Discovering Consumer Insight from Twitter via Sentiment Analysis," Journal of Universal Computer Science 18:8 (2012), 973-992.
- [7] K. Larson, R. and Watson, "The Value of Social Media: Towards Measuring Social Media Strategies," in Proc. of the 32nd International Conference on Information Systems (2011), China.
- [8] J.B. Barney, "Firm Resources and Sustained Competitive Advantage," Journal of Management 17:1 (1991), 99-120.
- [9] D.J. Teece, G. Pisano, and A. Shuen, "Dynamic Capabilities and Strategic Management," Strategic Management Journal 18:7 (1997), 509-533.
- [10] P.M. Di Gangi, and M. Wasko, "Steal My Idea! Organizational Adoption of User Innovations From a User Innovation Community: A Case Study of Dell IdeaStorm," Decision Support Systems 48:1 (2009), 303-312.
- [11] Kurniawati, G. Shanks and N. Bekmamedova, "The Business Impact of Social Media Analytics," Proc. European Conference on Information Systems 2013, Paper 52.
- [12] S. Aral, and P. Weill, "IT Assets, Organizational Capabilities and Firm Performance: How Resource Allocations and Organizational Differences Explain Performance Variation," Organization Science 18:5 (2007), 763-780.

- [13] P. Russom, "Big Data Analytics," TDWI Best Practices Report, 2011.
- [14] Lau, R., Liao, S., Wong, K. and Chin, D., "Web 2.0 Environmental Scanning and Adaptive Decision Support for Business Mergers and Acquisitions", Special Issue: Business Intelligence Research, MIS Quarterly 36:4 (2012), 1239-1268.
- [15] R. Kohli, and V. Grover, "Business Value of IT: An Essay on Expanding Research Directions to Keep Up With the Times," Journal of the Association for Information Systems 9:1 (2008), 23-39.
- [16] M. Wade, and J. Hulland, "Review: The Resource-based View and Information Systems Research: Review, Extension, and Suggestions for Future Research," MIS Quarterly 28:1 (2004), 107-142.
- [17] B. Wheeler, "NEBIC: Net-enabled Business Innovation Cycle," Information Systems Research 13:2 (2002), 125-146.
- [18] S. Mithas, N. Ramasubbu, and V. Sambamurthy, "How Information Management Capability Influences Firm Performance," MIS Quarterly 35:1 (2011), 1-24.
- [19] L.B. Mohr, "Determinants of Innovation in Organizations," The American Political Science Review, 63:1 (1969), 111-126.
- [20] B. Pang, and L. Lee, "Opinion Mining and Sentiment Analysis," in Foundations and Trends: Information Retrieval 2:2 (2008), now Publishers Inc., MA, 1-135.
- [21] G. Ray, W.A. Muhanna, and J.B. Barney, "Information Technology and the Performance of the Customer Service Process: A Resource-based Analysis," MIS Quarterly 29:4 (2005), 265-652.
- [22] S. Asur, and B.A Huberman, "Predicting the Future with Social Media," arXiv:1003.5699, 2010.
- [23] J. Cable, "Fueling Auto R&D with Social Media," Industry Week 260:9 (2011), p. 42.
- [24] T.H. Davenport, J.G. Harris, and R. Morison. Analytics at Work, Harvard Business School Press, 2010.
- [25] C.K. Prahalad, and G. Hamel, "The Core Competence of the Corporation," Harvard Business Review 63 (1990), 79-91.
- [26] N. Melville, K. Kraemer, and V. Gurbaxani, "Review: Information Technology and Organizational Performance: An Integrative Model of IT Business Value," MIS Quarterly 28:2 (2004), 283-322.
- [27] J. Pfeffer, and R. Sutton, "Evidence-based Management," Harvard Business Review 84:1 (2006), 62-68.
- [28] R. K. Yin, Case Study Research: Design and Methods. Sage Publications, 2008.
- [29] M. Miles, and M. Huberman, Qualitative Data Analysis: An Expanded Sourcebook. Sage Publications, 1994.
- [30] L. Willcocks and D. Feeny, "IT Outsourcing and Core IS Capabilities: Challenges and Lessons at DuPont," Information Systems Management, Winter, (2006), 49-56.
- [31] G. Polites and E. Karahanna, "The Embeddedness and Information Systems Habits in Organizational and Individual Level Routines: Development and Disruption", MIS Quarterly 37:1 (2013), 221-246.