Research Timeline & Synopsis of Findings

Preamble

In a plethora of books, articles, blogs, and social media postings during the past few years, pundits and consultants have claimed that digital technologies have significantly and irrevocably changed the business-to-business (B2B) customer's buying process, which they now call ***The Customer Journey***. While scant on proof, they argue categorically that sales and marketing professionals, as well as their counterparts in supply management, need to implement a new set of strategies and tactics to be successful.

Struck by the almost religious fervor of pundits and consultants, we decided to undertake rigorous research to verify and document some of their claims. The thrust of our study can be summarized via a series of related questions: "Have emerging digital technologies significantly changed the B2B buying process or have they instead prompted customers to use new digital tools in their existing processes?" In either case, we wanted to learn, "Which digital tools have had the greatest impact on the buying process, where and how?" Based upon our findings, we hope to propose more effective sales and marketing as well as supply management practices for the digital age.

Initial Literature Review, Citation Counts, and Managerial Interviews

To learn the stages in the "traditional buying process", we conducted an extensive study of the academic literature, including "citation counts" of keywords such as buying process models. We were able to identify over 15, frequently cited models. The models began to appear with the classic, Cyert, Simon, & Trow (1956) article and peaked with the Johnston & Lewin (1996) article. Among the noteworthy models included: Webster (1965); Robinson, Faris, with Wind (1967); Webster & Wind (1972); Ozanne & Churchill (1971); Sheth (1973); and Moriarty & Galper (1978). Since 1996, few articles on the topic have been published in academic journals.

To gauge if and how the buying process has changed and which digital tools have had the greatest impact on purchasing, we conducted personal and/or telephone interviews with 48 purchasing managers from a wide variety of industries and firms located across the U.S. To prompt discussions, we provided managers with charts of the top-10 most frequently cited, "traditional" buying process models and asked them which one corresponds to their companies procedures. We also gave managers the option of "white boarding" their own models, if their companies used different processes. Although we had a small sample of purchasing managers (i.e., n = 48), we discovered that the Robinson, Faris, with Wind (1967) "BuyGrid Model" remains most commonly used. Using each respondent's preferred buying process model as a roadmap, we next asked them which traditional and digital tools they used when completing each step in process.

We gleaned the following insights from our discussions and hoped to use some of them as hypotheses in our quantitative research efforts.

- In addition to search engines (e.g., Google and Yahoo!), purchasing managers increasingly rely on peer-to-peer professional online communities for reviews and comments on new products, suppliers, and technologies.
- There are a paucity of online review and rating cites (e.g.., Yelp!) in the B2B marketplace. Interviewees posited that B2B purchasing managers were reluctant to review products/services online fearing that either their firms would be sued or that they would be ostracized, particularly in the case of negative reviews and comments.

- Respondents remained bullish on the use of "Trade Shows" as a source of information.
- The middle portion of the buying process, particularly in regards to placing transactions, making payments, and monitoring deliveries has been highly automated. Software systems such as Ariba and Verian were often cited; however, many managers stated they used software developed within their own firms.
- In additional to external reviews and comments, B2B purchasing managers often rely upon internally generated reviews which are often referred to as Vendor Scorecards.
- Interviewees perceived a significant difference between the way Millennial purchasing managers conducted business and more traditional methods. Most importantly, they observed that Millennials were more likely to use digital tools, particularly when it came to establishing a "network" of peers. We learned that in the next 5 years, Millennials would account for around 50% of all purchasing managers in the U.S. Respondents indicated concerns and reservations about Millennial practices and indicated that significant "mentoring" would be required.

Survey of Purchasing Managers to Identify Digital Tools Used in Buying Process

To gather descriptive information on the types and popularity of digital tools used in today's B2B buying process, we conducted an online survey of 220 purchasing managers from a variety of firms and industries located across the U.S. Using the 8-stages of the Robinson, Faris, with Wind (1967) BuyGrid Model as a foundation, we asked respondents to rate the extent to which they used various traditional and digital tools during the process. Overall, the results confirmed many of our observations from the interviews.

- Search Engines and Peer-to-Peer Online Communities were the most widely used during the initial stages of the buying process, most notably when searching for new products and suppliers.
- Trade Shows were seen as an important tool for remaining current on industry trends.
- Internally created software was relied upon far more frequently for placing transactions, making payments, and managing deliveries, than commercially available software systems such as Ariba or Verian.
- Internally generated Vendor Scorecards were rated as a critical tool during the latter stages of the buying process.
- At this time, respondents stated that the "Partner Management" stage of the buying process featured the least usage of digital tools. Respondents commented that at this point, the tools available to manage and develop partners were highly limited.

Large-Sample, Quantitative Research

We gathered considerable insights on the B2B buying process and purchasing managers' usage of digital tools during the previous stages of the study. At this point, we wanted to subject a set of promising hypotheses to rigorous, academic data gathering and testing. Naturally, we could not test all potential hypotheses and use all of the myriad of large-sample data gathering and statistical analyses tools. Instead, we narrowed down our focus as follows.

- Rather than test all of our hypotheses in all 8-steps of the Robinson, Faris, with Wind (1967) BuyGrid Model, we decided to focus on two – selection of alternative vendors and the purchase decision. We selected these two stages because we believe them to be the most critical in the process and to capture pivotal "decisions".
- Testing the applicability of all available digital tools would be too cumbersome for one study. For this reason, we focus primarily on two, digital tools – peer-to-peer online professional reviews and comments and internally generated Vendor Scorecards. This would enable us to assess the impact of both internally and externally generated digital information.

- Instead of using such techniques as descriptive data-collection and analyses or structural equation modeling, which are popular in current academic marketing research studies, we decided to conduct and analyze a series of field experiments. We did so in order to gain insights into the actual decision-making process. Furthermore, we found very few examples of experiments reported in B2B academic research. Those that do exist relied primarily on MBA students as subjects. We planned to use actual B2B purchasing managers.

Before formulating our research hypotheses and crafting our narratives for each experiment, we conducted an extensive review of the extant, digital marketing literature. Among the observations we made include the following. We shaped our experiments around some of these insights.

- By far, most of the research conducted and reported relates to consumer products. There are very few studies that address the concerns of B2B purchasing professionals and their use of digital tools in the buying process.
- Most of the consumer product studies relied on traditional marketing performance measures – sales, brand image, and ROI – as dependent variables. Instead, we choose to develop a new latent construct, engagement. Not only is this construct consonant with the extant literature, it would contribute by producing an operational definition for use in the B2B context.
- Most consumer studies exclusively address "external reviews" often from non-professional and anonymous consumers. We choose to contrast the impact of both external and internal reviews (i.e., in the form of Vendor Scorecard results).
- Many of the consumer studies examine the impact of negative and positive reviews. We too chose to include valence in our experiments.

We conducted a series of field experiments.

Experiment #1: Stage, Source, & Valence

The purpose of Experiment 1 was to determine how external and internal reviews may differentially influence engagement across two stages of the B2B customer journey. Further, we were interested in how reviews of different valence originating from these different sources might further influence the level of engagement.

- Engagement reflects four key variables of interest in the decision-making literature and a new variable specific to the B2B journey:
    - likelihood to learn more about a supplier,
    - attitude about the supplier,
    - intention to purchase from the supplier, and
    - propensity to share with others about the supplier.

  Holistically, then, engagement is the degree of participation, involvement and positive affect that a buyer has for a supplier.
- We examined two stages of decision-making:
    - selection of alternative vendors, and
    - the purchase decision.
- We examined both positive reviews and negative reviews. Reviews were deemed positive or negative both by stating the general judgment as well as empirical evidence (e.g., "one particular supplier, ThermoNexto, created more problems for their company than they solved, scoring a 3 out of 10 on their annual evaluation, well below the company's minimally accepted score" or "performed very well for them, scoring a 9 out of 10 on their annual evaluation, well above the company's minimally accepted score").

- Two sources of reviews were the focus. External reviews which were described as from an online private community forum limited to purchasing professionals, and internal reviews which were from ratings scored by internal members of the purchasing professional's company during the supplier's annual review.

To tease out the hypothesized differences of stage, source and valence, we conducted a field experiment with 265 purchasing professionals across industries. Purchasing professionals read one of eight scenarios at random. Each scenario represented a combination of the variables of interest.

- In the early stage of decision-making, reviews from **external sources** resulted in a higher level of engagement than did reviews from internal sources.
- However, when the time neared to make the purchase decision, reviews from internal and external sources resulted in the same levels of engagement.
- When the review was positive, internal sources stimulated greater engagement than external reviews. However, this pattern reversed when reviews were negative, with external reviews creating higher levels of engagement than internal reviews.

Given a general fear of suppliers about receiving negative reviews, yet the willingness of purchasing professionals to explore more about the conditions of a supplier's negative review, we decided to investigate further with a second field experiment.

Experiment #2: Source & Source Similarity—Negative Reviews

We recognized that purchasing professionals do not have unlimited choices nor time in the decision-making process. We also knew from our earlier interviews that purchasing professionals see reviews, and any element speaking to a supplier's performance, as one part of a larger decision-making matrix. So we were interested to understand the conditions under which purchasing professionals may willing to be more or less engaged when presented with a negative supplier review.

Similarity of the source of a review had be examined in B2C research in terms of similar geographic location of a reviewer to a potential customer and similar language and interests between the two. The findings suggest that similarity breeds greater interest in a product. However, in these situations from previous research in B2C, the reviews were neutral or positive. What might happen if the review was negative? Where might the attribution for failure fall, with the reviewer or with the supplier?

In the second field experiment with 100 purchasing professionals, we investigated the situation comparing engagement that resulted from reading a negative review from a reviewer similar or dissimilar to the purchasing professional, as well as comparing those results to those from purchasing professionals who read a review from an internal stakeholder. The internal review we suspected should produce identical results to the review from the reviewer deemed similar to the purchasing professional's company.

- We found that indeed there was no difference in the level of engagement between purchasing professionals who read a negative review of a supplier authored by internal stakeholders as compared to those who read a negative review from external sources deemed very similar to the purchasing professional's company.

- However, the level of engagement was greatest across the three scenarios when the purchasing professional read a negative review of a supplier from an external source who was very different from the purchasing professional's company.

The idea was interesting to us that purchasing professionals seemed to attribute the fault of the supplier's poor performance to the buyer when that buyer was described as "very different" from their company, and thus purchasing professionals were more engaged in those cases. Suppliers have little to no control over the way in which others speak about their performance. So, understanding how purchasing professionals mentally process negative reviews and determine who is to blame for the supplier's poor performance rating is important. We decided to conduct a third experiment to dig a bit deeper into this topic.

Experiment #3: Source & Source Similarity—Negative Reviews & Attribution of Blame

Experiment 3 included 97 purchasing professionals who read one of three scenarios of a negative review of a supplier (internal review, external review from a company similar to purchasing professional's company, external review from a company different from the purchasing professional's company). In this field experiment, we specifically asked how likely it was that the buyer was to blame for the supplier's poor performance.

- Overall, purchasing professionals were more likely to blame the buying firm for the supplier's poor performance when the buying firm from which the review originated was very different from the purchasing professional's company.

- There was no difference in the degree of blame placed on the shoulders of the buying firm in situations in which the review came internally or externally from a source similar to the purchasing professional's company.

These results underscore the importance of suppliers identifying relevant characteristics of their customers to explain to prospects the similarities and differences in previous partnerships.

Experiment #4: Mixed Reviews from Different Sources Considered Simultaneously

After isolating the effects of different types reviews in the three field experiments, we decided to expand the portfolio to include two types of reviews of different types of valence (external reviews and internal reviews) considered together, but of conflicting valence. We also compared these results to settings in which two reviews were again considered simultaneously, but of the same valence (both positive or both negative).

- As we expected, the highest level of engagement was found when the reviews were both positive and the lowest when both reviews were negative.

- Mixed reviews with an internal positive review, but an external negative review produced higher engagement than cases in the reverse.

- However, interestingly, the mixed reviews, no matter if the positive review originated internally or from other firms, resulted in the same interest in learning more about the supplier.

If you would like to know more about these studies, or have experiences that you would like to share with us, please email us at stewarmd@wfu.edu.
Thank you!