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Small Businesses Can Enhance Strategic Insights by Text Mining Organizational Writings

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Abstract

The purpose of this study was to examine the potential of textual analysis techniques to inform strategy development in a small business. An evidence-informed, theoretical framework was developed moving from abstract ideas and concerns to enhanced strategic insights through an application of the textual analysis techniques of term frequencies, n-gram frequencies, and thematic analysis to an author-created corpus comprised of 250 independent writings created by firm leadership. The findings of this study suggest that term and bigram frequencies, along with AI-identified themes are useful for revealing points of strategic focus and concern. Correlation analysis of term-usage preferences between the participants provided a rigorous and objective approach for assessing and establishing the degree of strategic alignment between the founder and senior partner. This research provides a foundation for engaging more consistently with organizational strategy development by reducing the randomness associated with impromptu participation in strategic meetings and contributes to the research literature on applied textual analysis and strategy development.

Keywords

Organizational Decision-Making, Corpus-Based Approach, Leadership, Sensemaking, Employee Engagement

1. Introduction

Meetings figure prominently in the execution of organizational work (Bedingham & Thomas, 2006; Köhler et al., 2022; Mroz et al., 2019; Volkema & Niederman, 1995). One task that is routinely executed through meetings is the creation of organizational strategy (Burke & Wolf, 2020; Pünchera, 2021; Jarzabkowski &

Seidl, 2008). Making effective use of meetings is a longstanding concern (Allen & Prange, 2021; Fetzer, 2009; Shanock et al., 2013), and is consequential as strategy is frequently developed in meetings and is linked to performance (George et al., 2019; Iyer et al., 2019). This is of particular concern within small and medium-sized enterprises (SMEs), as they have fewer people from which to draw strategic insights (Owalla et al., 2022; Storey, 1994), and fewer resources to pursue alternatives in strategic planning and execution (Greene et al., 1997; Lonial & Carter, 2015; Nolan & Garavan, 2015). One can conclude that there is a need to improve the efficacy of organizational meetings focused on strategy in SMEs. Findings from this study suggest that an application of textual analysis techniques to independent, organizational writings enhances the strategic insights available.

Research on business and organizational strategy suggests that it often informs decisions of focus (Gibson, 2010; Schiemann, 1993) and resource allocations (Lawrence, 2007; Maritan & Lee, 2017). These decisions are more consequential in SMEs as they generally have less margin than larger corporations (Beck & Demirguc-Kunt, 2006). Research on SME strategies has examined topics including opportunity prospecting (Eggers, 2020; Weinzimmer & Nystrom, 1996), execution (Ames, 2015; Chrisman et al., 2016), and sustainability (Kerr, 2006; Shields & Shelleman, 2015). Despite these examinations, there is little research on how textual analysis techniques can improve the quality of insights available (Rusko, 2015). As such, there is an existing gap in the research literature examining the use of textual analysis techniques in the generation of organizational strategy within SMEs. The purpose of this study was to examine the potential of textual analysis techniques to inform strategy development in SMEs.

Organizational strategy, for all its latent potential and occasional success, is inadequate (Bates, 1992; Beer & Eisenstat, 2000; Mantere & Whittington, 2021). Strategies can fail for a variety of reasons (Mosadeghrad & Ansarian, 2014) including misalignment (Ozkan, 2020; Tawse et al., 2019) and vagueness (Barger & Lambin, 2020; Zámborský, 2021). If an organizational strategy was developed at an offsite or retreat, it could be limited further due to shortcomings associated with impromptu responses (Linder & Flowers, 1996; Hsieh & Juan, 2020). Consequently, organizational strategies benefit from preparation like that given to extemporaneous speaking (Brink, 1947; Smith, 1997). Given the issues associated with informing organizational strategy, there is a need to explore alternative approaches for enhancing strategic insights. An exploration of the application of textual analysis techniques within the strategic deliberations of a SME has yet to be examined. A study of the analytic material through an application of the textual analysis techniques of term frequencies, n-gram frequencies, and thematic analysis provides a view as to how such results can be used to enhance strategic insights within SMEs. These findings suggest the potential for broader application.

The following research question was addressed in this study: In what ways can established textual analysis techniques to a corpus of independent, organization-

al writings, using open-source software, enhance the strategic insights available to SME decision makers? The article is organized as follows. The theoretical framework is presented first, followed by the research method. The findings are presented next. After the findings, implications for practice and research, limitations, and future studies are presented. The paper concludes with a summary of the work. The theoretical framework is presented next.

2. Theoretical Framework

Research benefits from a theoretical framework as it provides structure, vision, and clarity to research (Evans et al., 2011; Osanloo & Grant, 2016). Anfara & Mertz (2015) described a theoretical framework as "any empirical or quasi-empirical theory of social and/or psychological processes, at a variety of levels… that can be applied to the understanding of phenomena" (p. 15). This study defines and examines the social-psychological processes associated with moving from abstract ideas and concerns to enhanced strategic insights by creating and analyzing independent writings through the application of textual analysis techniques. The theoretical framework starts with nebulous abstract ideas and concerns organizational workers hold regarding strategy, performance, opportunities, and risks.

Abstract ideas and concerns remain latent until made manifest. A way to make one's abstractions explicit is through writing (Braun & Clarke, 2019; Sloan, 2020; Zamel, 1982). The proposed theoretical framework is based on individuals within organizations providing an unspecified number of writings related to the strategic environment of the firm. These writings are independent, and without prompt. The only requirement is that the writer produces something relevant to the organization. Over time, these writings provide a basis for reflexive knowledge. Monin (2004) noted, "reflexive knowledge-making is well-served by reader-response theories" (p. 61). Once enough writings are produced, a number that is beneficially determined based on specific operational context, they are combined as the analytic material for an organizational corpus. Corpus linguistics techniques are generally well-established (Brezina, 2018; McEnery & Wilson, 2001). The proposed theoretical framework makes use of term frequencies, n-gram frequencies, and AI-enabled thematic analysis as a basic collocation of approaches to generate enhanced strategic insights.

Repetition within the analytic material becomes potentially important. As Czarniawska (2008) explained, "repetition of strong plots in continually new variations brings about many unexpected consequences. In such a way, certain ideas become strengthened (p. 74)". Two forms of frequency, term and n-gram are used in this framework. Term frequency refers to the number of times a given word is used, and n-gram frequencies are the number of times a given phrase, consisting of n words is used (Brezina, 2018; McEnery & Wilson, 2001). Thematic analysis is an approach used to establish common topics and ideas within a collection of texts (Braun & Clarke, 2022; Scharp & Sanders, 2019) and can be

conducted either subjectively or objectively.

The results of the term frequency, n-gram frequency, and thematic analyses combine to enhance strategic insights and inform the deliberative processes associated with strategy development. Enhanced strategic insights are not the results of the term, n-gram, and thematic analyses. The results provide a basis around which enhanced strategic insights can be formed; they form the basis of retrospective sensemaking (Weick, 1979, 1995). In combination with the writing itself, the results from the textual analyses provide a basis for understanding. Common words, phrases, and themes suggest topics of shared concern. These results can enhance strategic insights by increasing awareness through a synthesis of information.

This theoretical framework for enhanced strategic insights begins with the abstract ideas and concerns employees hold about the organization and its role in society. A portion of those ideas will be articulated in a series of independent writings which become the analytic material textually analyzed resulting in enhanced strategic insight. The proposed theoretical framework is grounded on research and captures essential elements of the research question. The author-created, theoretical framework is presented graphically in **Figure 1**, followed by the method used in this study.

3. Method

This research intended to conduct a thorough and objective textual analysis of an author-created corpus containing independent writings produced by business professionals from a common organization, to determine the degree to which it could enhance strategic insight. This study was based on the writings of the founder and senior partner of a small (n = 4), midwestern firm in the professional, scientific, and technical services industry, hereafter, the firm. A firm of this size is considered a small business in the United States (Anastasia, 2015) and
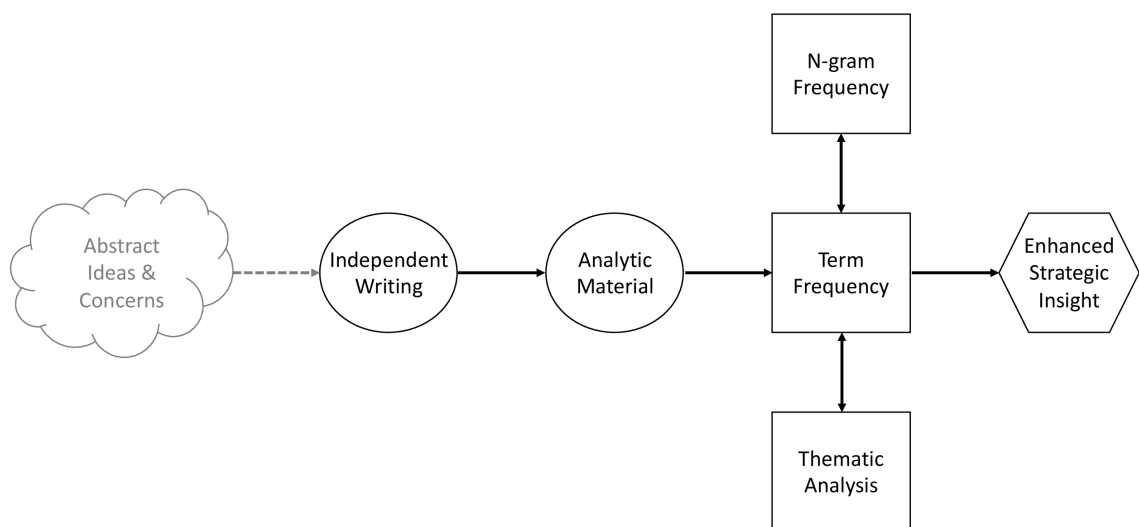

Figure 1. Theoretical Framework for enhanced, text-based, strategic insights.

a micro business in the European Union (Berisha & Pula, 2015). The firm was identified through the professional network of the authors and was selected based on the firm's willingness to participate in the study. Access was granted by the firm to analyze the comprehensive collection of their writings covering their respective perspectives on topics broadly about business, society, and management. The intent behind the firm's willingness to provide access to their writings was an interest in ascertaining the degree to which interrogating writings of that nature, using common textual analysis techniques, could aid in organizational understandings and discussions related to strategy development. Since the focus of this study was on the application of textual analysis techniques within SMEs, open-source software with free training material was used so that price would not be a barrier to further implementation. The research question of this study was unspecific and open-ended, as it was unclear what import would be revealed through the analysis. Computer-aided, textual analysis provides a replicable approach for understanding dominant themes and interconnections within and among the texts of a corpus (Jockers & Thalken, 2020; Krippendorff, 2019; Stemler, 2001).

Textual analysis techniques have been applied to a variety of business-related concerns including those of management (Hannigan et al., 2019; Kushwaha et al., 2021), marketing (Berger et al., 2020; Ma & Sun, 2020; Verma et al., 2021), and finance (Lewis & Young, 2019; Loughran & McDonald, 2020). There have been limited applications of textual analysis to business strategy (Gupta et al., 2019; Saura & Bennet, 2019), and no studies were found using textual analysis for strategy within the context of SMEs. The textual analysis techniques most frequently employed among these studies were frequency analyses, both word and n-gram, clustering, sentiment analysis, and topic modeling. Collectively, research suggests the benefit of applying textual analysis techniques in business research. The techniques used in this study were informed by these applications.

The application of the textual analysis techniques of this study required both data extraction and data analysis. Each of those two areas is subsequently covered. It is worth noting that of the two areas, the data extraction piece was relatively less involved. Data extraction could become more problematic with an increase in the number of firms being analyzed, or if one is required to obtain information indirectly. Focusing on a single firm, and their willingness to provide the information simplified the task of data extraction. This simplification in data extraction was potentially achieved at the expense of generalizability. It is questionable that this, or any, firm is broadly representative of the whole population. However, this firm potentially represents SMEs operating in this section of the gig economy. Since the primary focus of this study is on the application of the proposed technique, this tradeoff between data extraction and generalizability is considered appropriate.

3.1. Data Extraction

The firm provided a total of 250 reflective writings from the founder and senior

partner. Those writings were created from August to December 2022. The files were provided as .md (i.e., markdown) file extension documents. Alternative formats (e.g., .docx, .txt, .xlsx) would have been acceptable. The extracted files were uploaded into RStudio for analysis using the techniques developed by Silge & Robinson (2017).

3.2. Data Analysis Process and Results

Once the 250 files were read into RStudio, they were broken down into discrete words using the *tidytext* package (v0.4.0 (Silge & Robinson, 2016)). This treatment resulted in 83,494 rows of data, with each row corresponding to a single word within the corpus. Common words (e.g., a, the, is) were removed using the *stop_words* function in the tidytext package. This resulted in 31,542 rows of data. Removing the common "stop words" allows one to focus on the words of merit (Jackson & Heath, 2022). In this case, over 60% of the words (51,952 rows) were removed. Establishing word frequencies allows one to ascertain the number of unique words contained in the corpus. This corpus contained 6482 unique words. These words were analyzed and the correlation between the terms of the founder and senior partner was tested for statistical significance using the Pearson correlation function in the *ggpubr* package (v0.5.0 (Kassambara, 2022)). In talks with the members of the firm, it was determined that their strategy was predicated on the two members being strategically aligned. Therefore, the assessment was focused on determining if a positive correlation existed regarding the term usage of the founder and senior partner. If an organization is based on a complementary strategy, the expectation for the existence of a positive correlation in term usage might not hold.

N-grams, in this context, are word phrases consisting of *n*-number of words in direct proximity to each other (Bharadwaj & Shao, 2019; Gurcan & Cagiltay, 2023; Schonlau et al., 2017). This study was focused exclusively on bigrams (i.e., two-word phrases). In addition to the tidytext package, the *dplyr* package was used in RStudio to establish the bigrams (v1.0.10; (Wickham, 2022)). This treatment resulted in 83,244 rows of data. When aggregated in terms of frequency, there were 46,700 unique bigrams. The *tidyr* package was used to assess the bigrams and remove bigrams containing one or two stop words (v1.2.1; (Wickham & Girlich, 2022)). Once removed, there were 7999 unique bigrams.

Lastly, AI-themes were generated using the Latent Dirichlet allocation (LDA) method. LDA is a common topic modeling algorithm, that results in an assessment of a vector of topics contained within a given document (Silge & Robinson, 2017). Whereas there is value in working with the vector of identified themes, for simplicity the vector of themes was reduced to the theme identified first as that is the one that holds the most explanatory power. Each of the 250 writings in the corpus were assessed using the LDA function contained within the *topicmodels* package in RStudio (v0.2-13; (Grün & Hornik, 2022)). This method provided a foundation for the analysis of the 250 independent writings of the

founder and senior partner of the firm.

4. Findings

Consistent with the theoretical strategic insight framework (**Figure 1**), and the method, these writings were analyzed in terms of term frequency, n-gram frequency, and AI-identified themes as a means of enhancing the strategic insight of the firm. The findings are presented in four subsections to correspond directly to each of these focus areas.

4.1. Term Frequency

Consistent with the approach detailed in the method section, the writings were read into RStudio and assessed as a corpus containing 250 texts. Once in RStudio the works were aggregated, broken down into words, standard stop words were removed, and a count of the words of merit was produced. Whereas the complete list was reviewed, the strategic insights tend to emerge from a focus on the most frequent words of merit. There is no rule associated with where, or even if, one should limit the focus of inquiry. It is possible to get bogged down in the minutia of single-use terms and neglect strategic insights which emerge at the meso-level of frequency usage. For illustrative purposes, the most frequent words of merit occurring over 75 times were selected as the terms of focus. These are presented in the author-created graphic (**Figure 2**).
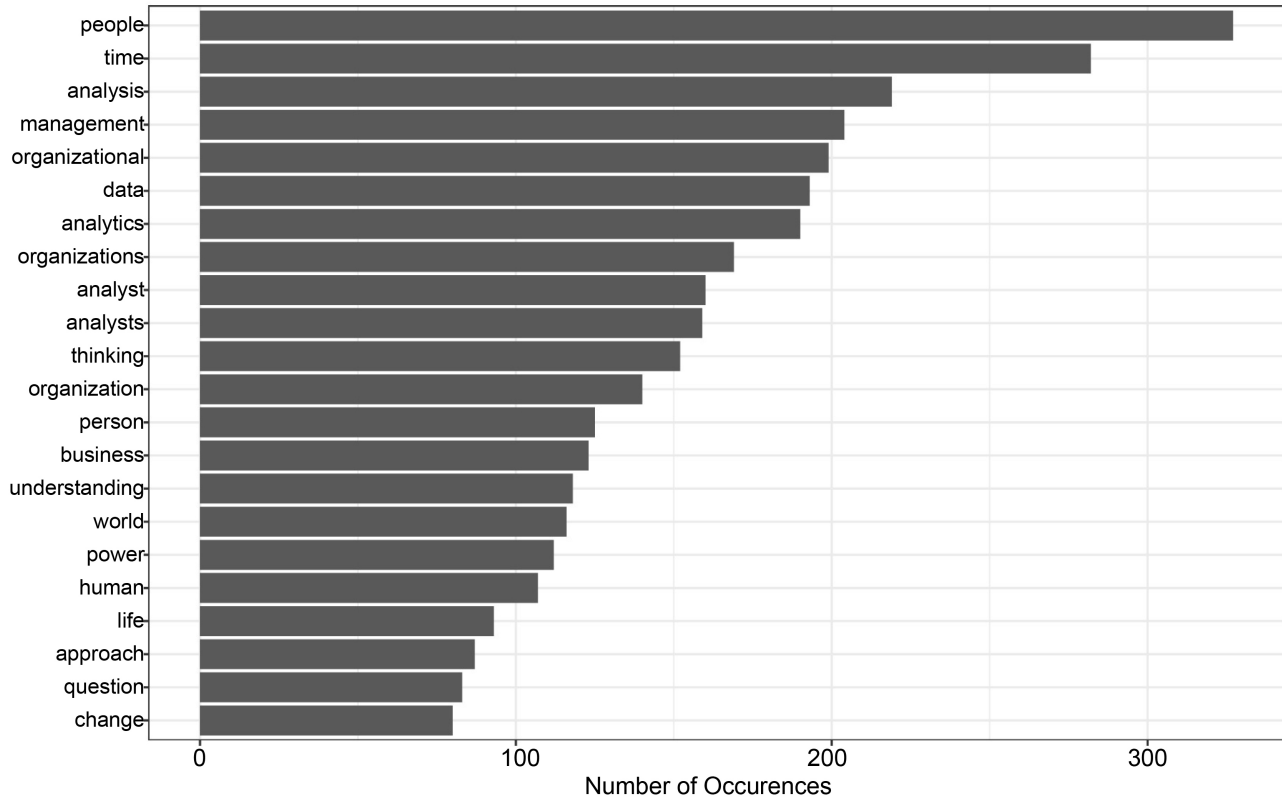

Figure 2. Descending list of most frequent words of merit.

As indicated in Figure 2, there were 22 terms identified as words of merit which occurred more than 75 times within the corpus. The top ten words of merit (frequency in parentheses) were people (327), time (282), analysis (219), management (209), organizational (199), data (193), analytics (190), organizations (169), analyst (160), and analysts (159). In terms of the strategic focus of the firm, these findings suggest that the founder and senior partner collectively write about people-focused, time-contingent organizational concerns and that analysis is a way of understanding and addressing those concerns. In terms of approach, the results highlight the role of stemming terms in textual analysis. Within the top ten words, four variations of the stemmed word analy* were observed (i.e., analysis, analytics, analyst, and analysts). Stemming the words for analysis would result in one observation analy* (721). There is strategic value in assessing both the words as they appear in the corpus and stemmed versions of terms. Ultimately, the decision to stem terms is contextual. Unstemmed terms provide a better understanding of usage and focus; stemmed terms provide a better understanding of magnitude.

The term frequencies presented in Figure 2 were based on the aggregation of the writings of the founder and the senior partner. Implicit in that approach is an assumption that the organizational perspective is reflected by an aggregation of those writings. Whereas such an approach is informative, it may dilute the strength of understanding obtained through an analysis of the leader's perspective. When organizations tend towards democratic participation, the aggregation approach is likely appropriate, and when organizations tend to be more authoritarian, focusing on the leader's perspective is likely more suggestive of the strategic focus (Jackson, 2022). It is possible to break responses down and compare differences in term usage among those providing input. Since the data analyzed here were from the founder and senior partner, a comparative analysis of term usage between those two was conducted and is presented in the author-created graphic (Figure 3).

Correlation is a comparative measure. The dotted line represents perfect symmetry in usage between the founder and senior partner. Such a comparison is potentially suggestive of the degree of strategic alignment in focus and thinking as revealed through independent writing. Terms on the bottom right (e.g., analyzable, trust, systems) are words the founder used more frequently than the senior partner. Alternatively, terms on the top left (e.g., timeline, management's, powered) are words the senior partner used more frequently than the founder. It is possible to compare these mathematically. A statistically significant, positive correlation, $r(6381) = 0.51$, $p < 0.001$, was determined based on the Pearson correlation function in the *ggpubr* package in RStudio. The term usages of the founder and senior partner were topically aligned and positively correlated.

Much is written about the importance of strategic alignment within organizations (Biggs et al., 2014; Gagnon et al., 2008; Walter et al., 2013), and SMEs (Didonet et al., 2019; Li et al., 2016; Malagueño et al., 2018; Werner et al., 2018).
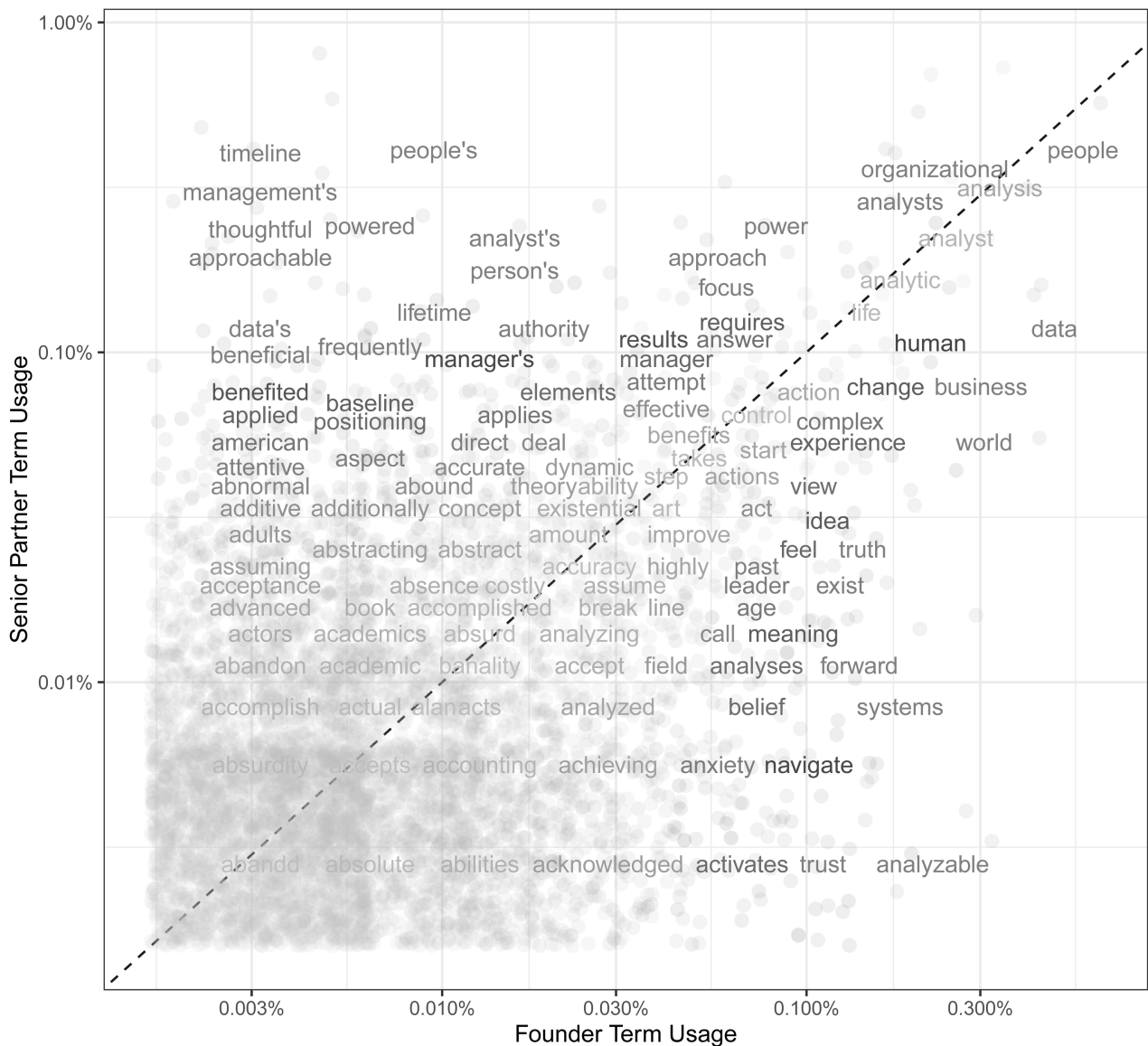
Figure 3. Comparative term usage between founder and senior partner.

Whereas there is certainly a potential benefit to be derived through strategic alignment, there is also potential benefit from complementary perspectives (Khedhaouria et al., 2015; Kornberger, 2017; Ocasio & Radoynovska, 2016). The types of results contained in **Figure 3** are useful in exposing the degree to which differences exist in strategic focus among key organizational members. If an organization's strategy is predicated on alignment, significant variation in term usage could be a point of concern. If the strategy is based largely on complementary perspectives, a lack of symmetry in usage would be both expected and desirable. Under either approach, findings such as these provide a basis of understanding which can inform organizational discussions and enhance strategic insight. The insights derived through an analysis of term frequencies are augmented by an analysis of n-grams.

4.2. N-Gram Frequency

Individual term frequencies are potentially suggestive of strategic focus and concern. As indicated, there is value derived from assessing these collectively (**Figure 2**) and individually (**Figure 3**). In addition, there is a potential insight to be derived in assessing n-grams. This analysis was focused on bigrams. The findings are presented in the following author-created data visualization (**Figure 4**).

Figure 4. Semantic network of frequent bigrams.

Bigrams provide insight into how two words are used in conjunction with each other. Such an analysis provides additional context for assessing the strategic implications contained in independent writings. The network cluster on the right of Figure 4 contains all the bigrams within the corpus which occurred more than three times. The information contained in the dotted circle is magnified on the left side of Figure 4. In examining that area, one can identify several of the frequent words of merit contained in Figure 2. Specifically, the words time (282), management (209), organizational (199), analytics (190), and power (112) are central nodes in the bigram analysis. This information suggests the importance of context in understanding term usage. Simple word frequencies implicitly suggest that the term is the same in its aggregate counts. However, a term can change significantly based on its rhetorical context. Examining the usage of the term management illustrates this point. As conveyed in Figure 4, when management was used, it could refer to specific domains of management (i.e., knowledge, scientific, project), to the generalized management approach, or dismissively as management fads. Such nuances abound with bigram networks. Each potentially contributes to the enhanced strategic insight of an organization. These insights can be augmented by AI-identified themes.

4.3. Thematic Analysis

As indicated in the method, LDA was used to identify themes in the analytic material. Using AI for the identification of themes is useful as it provides an objective way to categorize the analytic material. Whereas the LDA algorithm provides a vector of categorization theme elements, those elements are listed in descending order of explanatory power. To simplify the discussion, the AI-identified themes are presented in the following author-created graphic (Figure 5) based on the dominant element.
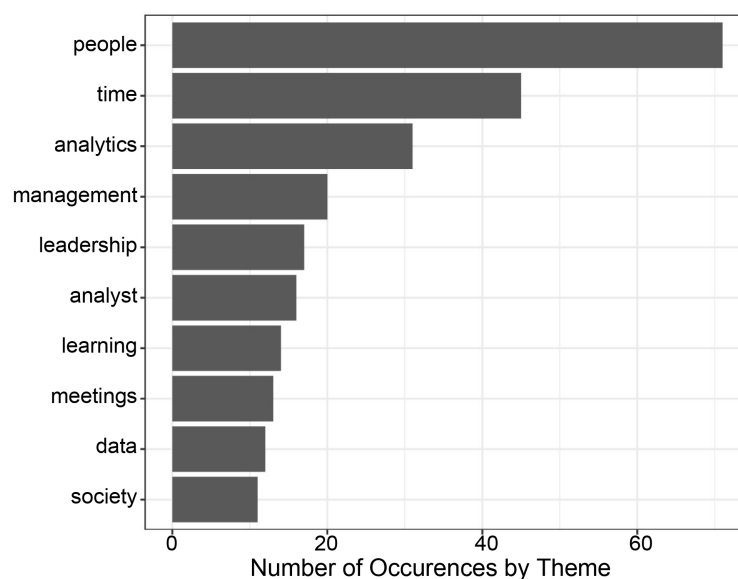

Figure 5. Descending list of AI-identified primary theme designations.

Of the 250 independent writings, the LDA algorithm identified 71 (28%) as pertaining primarily to *people*, 45 (18%) to *time*, 31 (12%) to *analytics*, 20 (8%) to *management*, 17 (7%) to *leadership*, 16 (6%) to *analyst*, 14 (6%) to *learning*, 13 (5%) to *meetings*, 12 (5%) to *data*, and 11 (4%) to *society*. A review of the most frequent words of merit (Figure 2) reveals a significant degree of commonality between those terms and these AI-identified themes. Whereas there is an obvious and expected degree of commonality among word frequency and themes, the themes provide a couple of additional benefits. First, the AI-generated themes are a holistic assessment of independent writing. It is an objective way of categorizing content. Second, word frequencies can become unwieldy. The themes provide insight on a more manageable scale. Lastly, the results of the thematic analysis allow for enhanced granularity. This can be used to determine if individuals or departments hold a particular thematic perspective. Collectively, these techniques provide objective results around which enhanced strategic insights can emerge.

4.4. Enhanced Strategic Insight

The techniques associated with developing word frequencies, n-gram frequencies, and thematic assessments are well established. Additionally, free software and training material exist to assist individuals and organizations in the application of these techniques. These two dynamics combine to radically democratize this approach of informing strategy and make it implementable for small businesses. What is novel in this study is the application of these established techniques as a basis for identifying and unpacking abstract ideas and concerns which inform a series of independent writings within an organization as the basis of forming the analytic material that when analyzed textually results in enhanced strategic insight. In short, this novel application improves the organizational ability to make explicit what would otherwise operate behind the scenes as assumptions and biases.

When the founder and senior partner went through these findings, each indicated that the results were consistent with what they intuitively understood about their respective and collective perspectives. As an example, the focus on *people* was not surprising to either the founder or the senior partner, as they both expressed a deep and continuing concern for the existential growth and empowerment of both those in the organization and society at large. Similarly, each also conveyed that they thought that seeing the results analytically provided more specificity and granularity which enhanced their strategic insights and provided a more solid foundation from which to articulate their strategic goals and concerns. They indicated that this information provided an improved basis from which to start discussions at a strategic offsite. That statement suggested the strongest implication for practice.

5. Implications for Practice

Whereas these techniques provide analytic insights that can enhance organiza-

tional strategy, this approach can only inform and improve, but not replace, existing approaches to developing organizational strategy. At its core, business strategy requires the identification and development of a sustainable competitive advantage (Aaker, 1984). The process of consistent, independent writing and analysis presented here can make explicit areas of frequent and common concern, along with the semantic interconnections among those areas and themes. The writings hold the potential of understanding risks and opportunities. This is important because as Sloan (2020) indicated, "what matters…is not the quality of writing…but, rather, the quality and clarity of thinking that the process invites" (p. 71). To operationalize this approach in small businesses a few practical considerations need to be addressed. First among these practical concerns is the determination as to whether the proposed approach is worth the required time and effort.

Essential to an assessment of the application potential of this proposed approach to strategy development is an adjudication as to whether the results are worth it. Whereas it is ultimately too soon to know if the developed strategy will result in improved long-term profitability, there are several promising early indicators. First, the founder and partner both indicated that the process was worth doing. There were two rationales given as to why they found the process advantageous. First, whereas there is an upfront cost associated with creating the writings, there was a significant reduction in the time associated with conducting the strategic offsite. When pressed for a little more detail, the founder indicated that the strategic offsite was previously conducted over a five-day workweek, and that with the implementation of this approach the offsite was completed in a little under two days. This equates to an approximate 60% reduction in the time allocated to conducting the strategic offsite. The other rationale given is the strategic focus has remained relevant. The founder indicated that in the past the focus on the strategy would recede with time, and there was a feeling that it needed to be updated but that the feeling was largely ignored until the next strategic offsite. The founder and partner agreed that the strategic focus generated under this approach resulted in a strategy that had greater focus, relevance, and persistence. Since the initial strategy development session, the organization's strategic focus has not changed. The founder and partner both indicated that this longevity does not preclude future refinements or changes. In fact, there was a discussion related to how they envision this would occur. They indicated a desire to keep writing although the frequency might be reduced. The partner indicated that two to three writings per week might be more sustainable moving forward, whereas the founder indicated an intent to continue writing daily. They both indicated that these continued writings in aggregate will be instructive to determining when to modify the strategy. The founder indicated that a persistent change in the topical focus of their writings would become a point of discussion during their quarterly reviews. Focus on these reviews will be given to determining why a given topic is receiving so much increased attention.

The results of this paper were based on 250 individual writings that were generated over four months. Such a delay could be unpopular with organizational leaders as small businesses are often characterized by a sense of urgency (Coleman et al., 2016; Shields & Shelleman, 2015; Zhao, Wang, & Li, 2022). To make this approach tenable, organization leaders would need to see sufficient value in the approach to warrant the upfront delay in strategy development required to generate the material necessary to inform its development. Until sufficient organizations have adopted this approach to reveal that it generates appreciably better results in strategic position and performance, the decision to adopt this approach can be informed only by the strength of the theoretical framework, its accepted reasonableness, and the findings of this application.

6. Implications for Research

Discussions with the founder and partner around these findings generated insights related to implications for research. More specifically, the founder and partner described aspects of this approach focused on how the process of writing helped improve their strategy. The founder indicated that the process of producing daily writings enhanced the focus on organizational strategy as compared to alternative approaches for strategy development. The partner agreed that in the past there would be days or weeks in which execution precluded a focus on strategy and that this approach helped maintain a focus on strategy as well as execution. The partner followed up on this by indicating that the act of producing multiple writings allowed for a coalescing of thinking over time. The founder indicated that the approach helped in making key strategic perspectives salient and that there was less ambiguity and uncertainty related to the strategic focus. Lastly, the founder indicated that due to this improved confidence in the focus and content of the strategy that it has received greater focus in implementation and more consistency in terms of its content. Collectively, these implications for research suggest that at least from the perspectives of the founder and partner of the small business this approach improved the content and longevity of their organizational strategy. However beneficial, there are opportunities to build on this study and to address some of its limitations.

7. Limitations

This study was based on a textual analysis of 250 writings of the founder and senior partner of a single, small business in the professional, scientific, and technical services industry. As indicated, a company of this size (n = 4) can be considered a small business. This company is very small, and the findings of this study may not represent SMEs and large companies. Consequently, these results lack generalizability validity. Whereas the results are promising for a general approach for enhancing strategic insights within organizations, such hope is currently a point of conjecture. There are further limitations associated with the act of writing itself.

Writing can be a source of anxiety (Fritzsche et al., 2003; Onwuegbuzie, 1999). Operating within a SME can be chaotic and overwhelming (Samujh, 2011). Each of these concerns makes the task of routine writing potentially unpopular, as people find it difficult to take time to write and could feel exposed when they do. Organizations could overcome part of these concerns through their approach. One can set up a system for anonymous submissions. This could reduce the degree of vulnerability one experiences. As for finding time to write, setting aside 20 minutes at either the start or end of the day, several days a week, requires making this activity a priority. As indicated in the implications for practice section, there is the potential that such a prioritization could result in aggerate improvements in terms of focus and the longevity of the selected strategy. Attempting to write during the day would likely result in too many interruptions. Like anything in business, what gets measured gets done, and sometimes it improves (Robson, 2004). These concerns are real and should not be ignored. However, they can be overcome if the organization makes accomplishing this task an organizational priority.

Lastly, limitations exist in terms of the current application of the approach. Organizations have yet to make wide use of these textual analysis techniques in the formulation of their strategies. These results suggest potential benefit from doing so. Refinements as to the application of these techniques within organizational contexts focused on strategy development may improve their application and efficacy. Future studies could be constructive in that endeavor. Some potential future studies are presented in the following section.

8. Future Studies

This study illustrated that the textual analysis techniques of term frequencies, n-gram frequencies, and AI-enabled thematic analysis can result in enhanced strategic insights for small businesses. This theoretical framework can inform future business strategy research. The writings forming the basis of this study were unconstrained and independent. Different approaches to writing exist. Among the available approaches to writing that might be constructive in this context are prompt-based (Malogianni et al., 2021; Nash, 2021), narrative (Burt, 2022; Ewick & Silbey, 1995), and persuasive (Czarniawska, 1999). Using these approaches to writing, individually or in conjunction, could provide different analytic material to analyze and result in different enhanced strategic insights. Further, there are additional textual analysis techniques, including concordancing, sentiment analysis, and working with diachronic data (Beckner & Bybee, 2009; Brezina, 2018; Kehoe & Gee, 2009). Future research exploring the incorporation of these techniques could enhance strategic insights.

Lastly, the approach presented provides an opportunity for robust, atypical, interdisciplinary research. Psychology and sociology were mentioned; examining organizational writings in this way, provides a meaningful inroad for broader interdisciplinary research including fields like communications, history, and or-

ganizational anthropology. The focus of this research was primarily in the field of business and organizational strategy, and limited to research published in academic sources, written in English. Other sources could nuance the initial perspective developed in this study. Reviewing the existing literature suggests that there is a need for additional research in this area. Fostering greater interdisciplinary research is needed to address business strategy formation more holistically (Feurer & Chaharbaghi, 1994; Hu & Kee, 2022; Jasimuddin, 2008). Without limiting the types of interdisciplinary research that could be beneficially formed to address business strategy development, especially within the context of SMEs, this research suggests that further synthesis among analytics, business, and linguistics would be useful. Additionally, there are certainly psychological and sociological aspects that could be incorporated for understanding better the internal and institutional processes and barriers associated with integrating independent, reflective writing organizationally as a means of developing inputs for strategy formation. To capture more of the potential polyvocality existing within organizations, additional research is needed that captures not only the writings of executives but also those of employees throughout the organization. Further, incorporating similar research in different cultural contexts enhances an understanding of the potential generalizability of the approach. More broadly, understanding linkages among latent concerns in one's thinking, manifesting those concerns through writing, and addressing a subset of those concerns through organizational strategy would benefit from more rigorous research, more robust sample sizes, and more critical incorporation of theory.

9. Conclusion

The findings of this study contribute to enhancing strategic insights within organizations through an application of the textual analysis techniques of term frequencies, n-gram frequencies, and AI-enabled thematic analysis to the analytic material created through intentional organizational writing. This approach provides a foundation for engaging more consistently with organizational strategy development by reducing the randomness associated with impromptu participation in strategic meetings (Seidl & Guérard, 2015). Additionally, this study contributes to the research literature on applied textual analysis and strategy development.

This application provides initial evidence that senior leaders within small businesses understand and value the enhanced strategic insights generated through this approach. This is consistent with the finding that leaders benefit from information that informs and strategically aligns organizational decision-making (Michel, 2007). Regular organizational writing can produce analytic material that when analyzed textually produce enhanced strategic insights. Taking time to do the preparatory work enabling these enhancements will be a challenge, as time is a major constraint. Role modeling commitment to writing and making use of the results in strategy development can help members see the val-

ue of the approach and prioritize its execution.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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