

Deciphering Consumer Aspirations: A Search Engine Analysis to Long-Tail Keyword in Entrepreneurship

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HIGHLIGHTS

- ❖ Long-tail keywords reveal entrepreneurial information-seeking patterns
- ❖ Five entrepreneurial aspiration dimensions emerge from keyword semantics
- ❖ Entrepreneurial opportunities are evaluated through multiple interconnected search considerations
- ❖ Search engine queries provide valuable digital traces for understanding entrepreneurial opportunity exploration



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ABSTRACT

Search engines generate valuable digital traces that reveal entrepreneurial information-seeking behavior. This study analyzes long-tail keywords derived from the Indonesian search query “*ide usaha*” (business ideas) to examine their structural characteristics, thematic patterns, and semantic relationships. Using a quantitative exploratory approach, 43 unique keywords collected from Google Search suggestions were analyzed through descriptive statistics, thematic categorization, modifier frequency analysis, and co-occurrence network analysis. The findings show that entrepreneurial searches are dominated by specific and contextualized queries related to capital requirements, target user groups, online business models, and home-based operations. Semantic analysis identifies five recurring aspiration dimensions: low-risk, accessibility, flexibility, growth, and innovation. Network analysis further highlights *modal*, *online*, *rumahan*, and *pemula* as central concepts linking multiple entrepreneurial considerations. These findings demonstrate that long-tail keywords provide meaningful insights into entrepreneurial opportunity exploration and contribute to digital entrepreneurship research by positioning search engine data as indicators of entrepreneurial information-seeking behavior.

INTRODUCTION

In the digital economy, search engines have become one of the primary channels through which individuals seek information, evaluate alternatives, and support decision-making processes. Online search activities generate digital traces that provide valuable insights into users' interests, motivations, and intentions, making search behavior an increasingly important object of study in digital marketing, information systems, and entrepreneurship research (Steininger, 2018). Within entrepreneurial contexts, search engines serve not only as information retrieval tools but also as platforms for opportunity exploration, enabling individuals to assess business feasibility, identify market opportunities, and acquire relevant knowledge before engaging in entrepreneurial action (Nambisan et al., 2019; von Briel et al., 2017). Consequently, search queries can be viewed as observable manifestations of entrepreneurial information-seeking behavior and early-stage entrepreneurial cognition.

Among various forms of search queries, long-tail keywords have attracted considerable attention in digital marketing and search behavior research. Long-tail keywords refer to relatively specific multi-word search phrases that reveal clearer informational needs and narrower search intentions than generic short-tail queries (Erdmann et al., 2022; Skiera et al., 2010). Compared with broad search terms, long-tail keywords contain contextual modifiers that often reflect specific constraints, preferences, expectations, and decision-making criteria. Because of this specificity, they are widely recognized as valuable indicators of user intent and have been extensively utilized in search engine optimization (SEO), content strategy, and digital marketing practices (Search Engine Journal, 2025; Ematic Solutions, 2024). The ability of long-tail keywords to capture nuanced user interests makes them particularly relevant for understanding how individuals articulate needs and aspirations through online search behavior.

Previous studies have predominantly examined long-tail keywords from a technical and marketing-oriented perspective. Research has investigated their effectiveness in improving website visibility, enhancing content discoverability, and supporting search engine marketing performance (Skiera et al., 2010; Erdmann et al., 2022; Sanjaya et al., 2025). Studies on search intent have similarly emphasized the importance of understanding user motivations to improve content relevance and user experience (Clay, 2023). These studies provide important insights into how organizations can leverage keyword strategies to achieve marketing objectives. However, they generally focus on organizational outcomes such as ranking performance, traffic acquisition, and content optimization rather than on the behavioral meanings embedded within the search queries themselves.

At the same time, entrepreneurship research increasingly recognizes that entrepreneurial cognition and opportunity recognition are shaped by digital technologies and online environments (Kraus et al., 2018; Nambisan et al., 2019). Opportunity recognition is no longer viewed solely as an internal cognitive process but also as an activity mediated by digital platforms that facilitate information acquisition, experimentation, and idea exploration. Digital interactions leave observable traces that can reveal how individuals evaluate opportunities, manage uncertainty, and formulate entrepreneurial aspirations. From this perspective, search engine queries represent a potentially valuable yet underutilized source of data for understanding entrepreneurial thinking in its earliest stages.

Despite growing interest in search behavior and digital entrepreneurship, limited attention has been given to the potential of long-tail keywords as indicators of entrepreneurial aspirations and opportunity recognition processes. Existing studies rarely investigate how keyword structures and semantic modifiers reflect the motivations, constraints, and expectations of individuals exploring entrepreneurial opportunities. Furthermore, research connecting digital trace data with entrepreneurship has largely focused on digital platforms, entrepreneurial ecosystems, innovation processes, and venture performance (Nambisan et al., 2018; Kraus et al., 2018; Nambisan et al., 2019), while the analysis of search engine queries as a source of

entrepreneurial insight remains relatively underexplored. Consequently, the behavioral and cognitive meanings embedded within entrepreneurship-related search queries remain insufficiently understood.

This study addresses this gap by shifting the focus from the technical optimization function of long-tail keywords toward their interpretive value as digital traces of entrepreneurial aspiration. Rather than examining keyword effectiveness for SEO purposes, this research investigates how keyword structures, semantic patterns, and co-occurrence relationships reveal how prospective entrepreneurs frame opportunities, manage perceived constraints, and express future-oriented aspirations. Accordingly, the novelty of this study lies in integrating long-tail keyword analysis with entrepreneurship research through the interpretation of search behavior as an indicator of entrepreneurial cognition and aspiration formation.

The keyword “*ide usaha*” (business ideas) was selected as the focal search term because it represents one of the most fundamental entry points in the entrepreneurial journey. Individuals who search for business ideas are typically engaged in the opportunity exploration stage, where they seek potential venture concepts before making resource commitments or formal business planning decisions. As a result, search queries derived from this keyword provide a suitable context for examining how entrepreneurial aspirations are articulated through digital search behavior. The modifiers attached to the base keyword often reflect concerns related to capital availability, target users, business models, operational flexibility, and expected outcomes, making them particularly useful for understanding entrepreneurial information needs.

Theoretically, this study draws upon perspectives from entrepreneurial cognition and digital entrepreneurship, which emphasize that entrepreneurial intentions and opportunity recognition emerge through iterative processes of information acquisition, evaluation, and sensemaking (Nambisan et al., 2019; Shepherd et al., 2019). In this context, long-tail keywords are conceptualized not merely as technical SEO elements but as linguistic representations of how prospective entrepreneurs articulate aspirations, constraints, and opportunity perceptions. Such an approach extends the application of digital trace data beyond conventional marketing analytics and contributes to the growing literature on digitally mediated entrepreneurial behavior.

Accordingly, this study aims to analyze long-tail keywords derived from the Indonesian search term “*ide usaha*,” map their structural and semantic characteristics, and examine how these keywords may serve as indicators of entrepreneurial aspirations and search intent. By combining keyword frequency analysis, thematic categorization, semantic interpretation, and co-occurrence network analysis, this research contributes to both entrepreneurship and digital behavior scholarship by demonstrating how search engine data can be utilized to explore early-stage entrepreneurial cognition and aspiration formation in the digital economy.

METHODOLOGY

Materials

The primary data source of this study consisted of long-tail keywords derived from the Indonesian search query “*ide usaha*” (business ideas) on Google Search. Data were collected during March 2026 using Google search suggestions, autocomplete recommendations, and related search features, which are commonly used in keyword research to identify user-generated search expressions and information needs. These search features were selected because they reflect actual search behavior and represent aggregated patterns of user interest generated through interactions with the search engine.

A total of 57 keyword phrases were initially retrieved through an automated scraping process conducted in Google Colab using Python. The raw dataset included keyword suggestions obtained from the primary query as well as semantically related keyword extensions suggested by Google Search. Since search

suggestion data may contain duplicate entries, formatting inconsistencies, and semantically irrelevant terms, a preprocessing stage was conducted prior to analysis.

The preprocessing procedure involved four stages. First, duplicate keywords were removed to avoid overrepresentation of repeated search expressions. Second, text normalization was performed by converting all keywords into lowercase format and standardizing spacing and punctuation. Third, non-informative stopwords that did not contribute to semantic interpretation were filtered. Fourth, keywords unrelated to entrepreneurial activities were excluded based on contextual relevance assessment. Following preprocessing, the final dataset consisted of 43 unique long-tail keywords that formed the empirical basis for all subsequent analyses.

The resulting dataset contained keyword phrases characterized by varying lengths, semantic modifiers, and thematic attributes associated with entrepreneurship. These keywords were subsequently analyzed to identify structural patterns, dominant entrepreneurial themes, aspiration dimensions, and semantic relationships among terms.

Methods

Research design

This study employed a quantitative exploratory approach to investigate how long-tail keywords derived from the Indonesian search term “*ide usaha*” reflect entrepreneurial aspirations and search intent. Exploratory research is appropriate when examining phenomena that remain insufficiently understood and when the objective is to identify patterns, relationships, and emerging conceptual insights rather than to test predetermined hypotheses (Creswell & Creswell, 2018; Saunders et al., 2019). In this study, search engine keyword data were analyzed as digital traces of user information-seeking behavior, providing insight into how prospective entrepreneurs explore business opportunities through online search activities.

The study adopted a search engine analysis approach using keyword data generated by Google Search. Following digital trace research, search queries were treated as naturally occurring behavioral data that capture spontaneous expressions of user interests, preferences, and informational needs (Salganik, 2019). Unlike survey-based methods, which rely on self-reported perceptions, search engine data offer an unobtrusive means of observing how individuals articulate entrepreneurial interests in real-world digital environments.

Data collection procedure

Data were collected from Google Search using the seed keyword “*ide usaha*” (business ideas). This keyword was selected because it represents an early-stage entrepreneurial information need commonly used by individuals seeking potential business opportunities before committing resources or developing formal business plans. Keyword data were obtained from Google autocomplete suggestions and related search features, which reflect aggregated user search behavior and commonly occurring query patterns (Jansen et al., 2009).

The data collection process was conducted during March 2026 using an automated scraping procedure implemented in Python through Google Colab. The initial dataset consisted of keyword suggestions generated from the seed keyword and its related search variations. All retrieved keywords were compiled into a structured dataset for subsequent preprocessing and analysis.

Data preprocessing

To improve data quality and analytical consistency, several preprocessing procedures were performed prior to analysis. First, duplicate keyword entries were removed to avoid redundancy. Second, text normalization was conducted by converting all keywords into lowercase format and standardizing textual structures. Third, stopwords and non-informative terms were filtered to improve semantic clarity.

Fourth, keywords unrelated to entrepreneurial activities were excluded based on contextual relevance assessment.

Consistent with established content analysis procedures (Krippendorff, 2019; Neuendorf, 2017), preprocessing was conducted to ensure that the final dataset contained only meaningful and analytically relevant entrepreneurial search expressions. After preprocessing, the dataset comprised 43 unique long-tail keywords that formed the basis of subsequent analyses.

Data analysis

The analytical framework consisted of four complementary stages:

1. Descriptive statistical analysis was conducted to examine the structural characteristics of the keyword dataset. Measures such as keyword length, mean word count, and distribution patterns were used to assess the level of specificity embedded within entrepreneurial search queries (Field, 2018).
2. Thematic categorization was performed to classify keywords into broader entrepreneurial themes based on semantic similarity. The categorization process focused on recurring dimensions such as capital requirements, target user groups, business models, online orientation, work settings, and opportunity-related expectations. This procedure enabled the transformation of textual search data into interpretable analytical categories (Krippendorff, 2019).
3. Frequency analysis was employed to identify dominant keyword modifiers appearing within the dataset. Modifier frequency was analyzed to determine which entrepreneurial concerns, constraints, and expectations were most frequently expressed by users. Following information behavior research, recurring search terms may indicate salient informational needs and priority considerations among users (Case & Given, 2016).
4. Co-occurrence network analysis was conducted using NetworkX to examine semantic relationships among words appearing within the same keyword phrase. In the network structure, words were represented as nodes, while co-occurring words were connected through edges. This approach enabled the identification of central concepts and semantic clusters that characterize entrepreneurial search behavior and reveal how different entrepreneurial considerations are interconnected (Jungherr, 2017).

To address the research objective, findings from thematic categorization, modifier frequency analysis, and co-occurrence network analysis were integrated to develop an aspiration mapping framework. Entrepreneurial aspirations were interpreted through recurring semantic patterns reflecting perceived opportunities, constraints, preferences, and expected outcomes expressed within search queries. However, consistent with digital trace research, these patterns were interpreted as indicative signals of entrepreneurial interest and aspiration rather than direct measures of entrepreneurial intention or entrepreneurial behavior (Salganik, 2019).

Analytical tools

All analyses were conducted using Python within the Google Colab environment. The pandas library was utilized for data management and preprocessing, NumPy for numerical operations, matplotlib and seaborn for data visualization, wordcloud for semantic frequency representation, and NetworkX for co-occurrence network construction. The use of Python-based analytical tools ensured transparency, replicability, and systematic processing of keyword data throughout the study.

RESULTS

Descriptive statistics of long-tail keywords

This section presents the descriptive statistical characteristics of the long-tail keywords derived from the Indonesian search query “*ide usaha*.” Descriptive analysis was conducted to examine the structural properties of the keyword dataset and to assess the level of specificity reflected in entrepreneurial search behavior. Keyword length is commonly used as an indicator of search query complexity because longer phrases typically contain additional contextual information that clarifies user intent and information needs (Jansen et al., 2009).

Based on the preprocessing procedure, a total of 43 unique long-tail keywords were retained for analysis. The dataset exhibited a mean keyword length of 4.63 words ($SD = 1.00$), with keyword lengths ranging from three to seven words. The median keyword length was five words, indicating that most search queries contained multiple modifiers extending beyond the core phrase “*ide usaha*.” These results suggest that users tend to formulate entrepreneurial searches using relatively specific expressions rather than broad or generic queries.

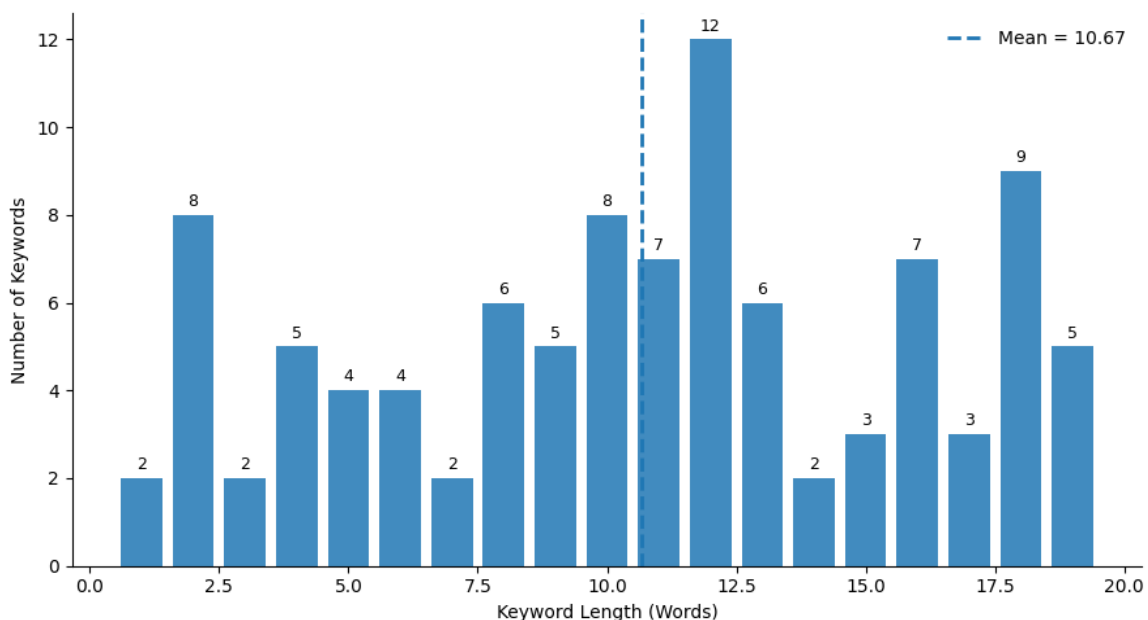


Figure 1. Distribution of long-tail keyword length

Figure 1 presents the distribution of keyword lengths within the dataset. The results show that the majority of keywords consist of four to five words, while shorter three-word phrases and longer six- to seven-word phrases appear less frequently. Furthermore, approximately 75% of the keywords contain five words or fewer, indicating that users commonly combine the primary entrepreneurial term with one or two additional qualifiers to refine their searches.

The observed keyword structures reveal that users rarely search for business ideas in isolation. Instead, they tend to incorporate contextual modifiers related to business conditions, target users, operational settings, or expected outcomes. This pattern indicates that entrepreneurial information-seeking behavior is characterized by a relatively high degree of specificity, where users seek information that aligns with particular circumstances and preferences rather than pursuing broad entrepreneurial knowledge.

Overall, the descriptive statistics demonstrate that long-tail keyword searches related to “*ide usaha*” are dominated by multi-word expressions that reflect focused and contextualized information needs. These findings provide an empirical foundation for subsequent analyses examining thematic patterns, keyword modifiers, aspiration dimensions, and semantic relationships embedded within entrepreneurial search queries.

Keyword categorization based on entrepreneurial themes

To obtain a more structured understanding of entrepreneurial search behavior, the long-tail keywords were categorized into thematic groups based on recurring semantic characteristics. The categorization process aimed to identify dominant entrepreneurial concerns reflected in search queries and to organize keyword patterns into interpretable analytical dimensions. Following content analysis procedures, keywords sharing similar contextual meanings were grouped into broader entrepreneurial themes (Krippendorff, 2019).

The analysis resulted in six major thematic categories: capital-related keywords, target group-specific keywords, business type keywords, online orientation keywords, location and work-setting keywords, and opportunity-oriented keywords. Figure 2 presents the distribution of keywords across these entrepreneurial themes.

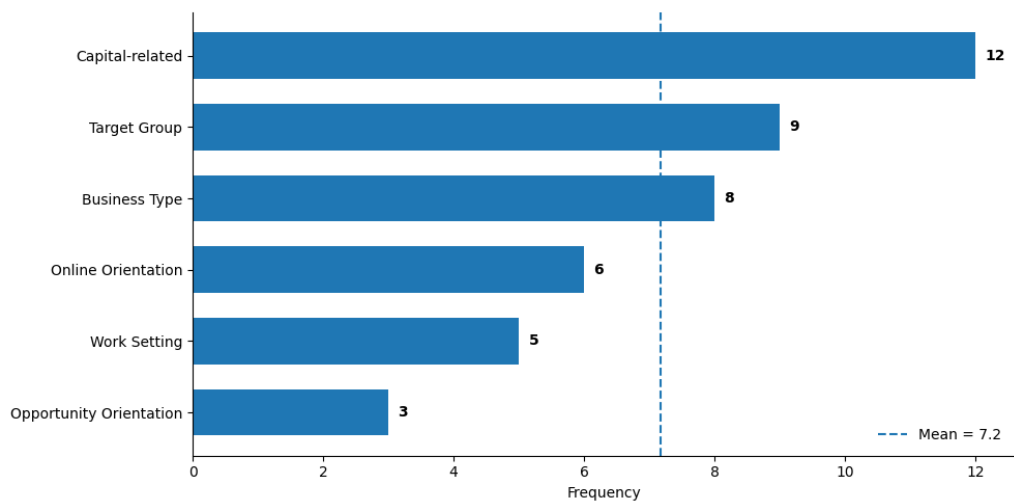


Figure 2. Entrepreneurial themes identified from long-tail keywords

The results indicate that capital-related keywords constitute the largest thematic category within the dataset. Examples include phrases containing modifiers such as *modal kecil* (small capital), *tanpa modal* (without capital), and *modal 1 juta* (one million rupiah capital). The prominence of this category suggests that financial considerations frequently accompany entrepreneurial information searches and form an important contextual element in business opportunity exploration.

The second dominant category consists of target group-specific keywords, including modifiers such as *pemula* (beginners), *ibu rumah tangga* (housewives), and *anak muda* (young people). These keywords indicate that users often frame entrepreneurial opportunities according to particular demographic or social identities. Rather than searching for generic business opportunities, users tend to seek business ideas that align with their personal circumstances and perceived capabilities.

Keywords related to business type and online orientation also appear frequently within the dataset. Examples include searches referring to online businesses, digital activities, trading, and home-based entrepreneurial models. These categories demonstrate that users commonly incorporate operational characteristics when refining entrepreneurial searches, suggesting a preference for business opportunities that fit specific modes of operation.

Another notable category concerns location and work-setting modifiers, such as *rumahan* (home-based) and *dari rumah* (from home). These keywords indicate that physical and operational contexts play an important role in entrepreneurial information-seeking behavior. Users frequently specify where and how a business can be operated, thereby narrowing the search toward opportunities compatible with their existing conditions.

Finally, opportunity-oriented keywords include modifiers such as *menjanjikan* (promising), *untung besar* (high profit), *jarang pesaing* (low competition), and *belum pernah ada* (never existed before). Unlike the previous categories, which primarily describe constraints or operational conditions, these keywords explicitly express desired outcomes and perceived opportunity characteristics. Their presence suggests that entrepreneurial searches frequently incorporate expectations regarding profitability, sustainability, and competitive advantage.

Frequency analysis of dominant keyword modifiers

This section examines the frequency distribution of dominant keyword modifiers embedded within long-tail search queries related to “*ide usaha*.” Keyword modifiers refer to additional words or phrases attached to the core search term that provide contextual information regarding user preferences, constraints, expectations, or operational conditions. Analyzing modifier frequency enables the identification of recurring themes that characterize entrepreneurial information-seeking behavior.

To facilitate analysis, recurring modifiers were extracted from the 43 unique long-tail keywords and aggregated based on semantic similarity. Figure 3 presents the frequency distribution of the most frequently occurring keyword modifiers identified within the dataset.

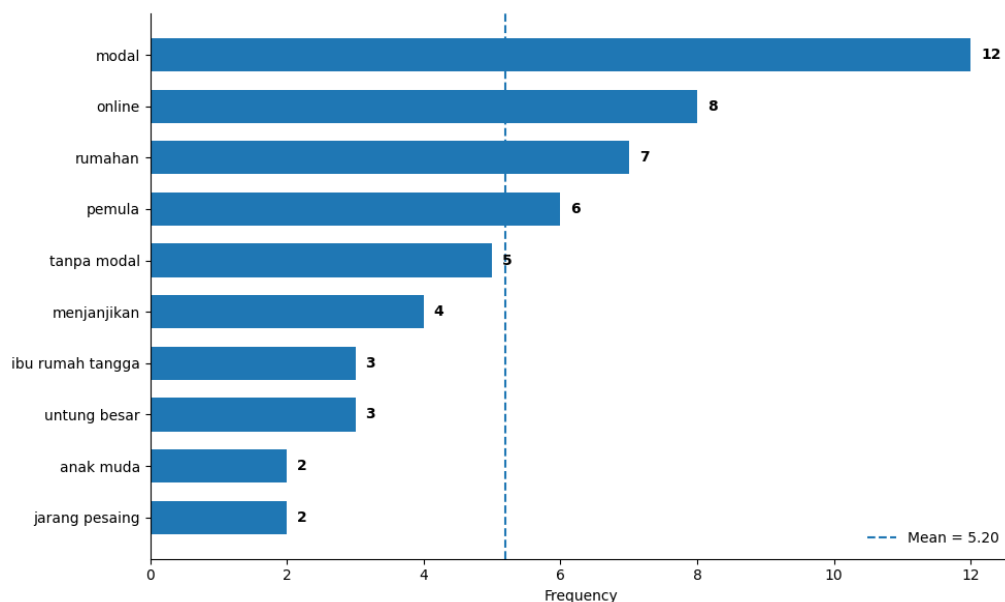


Figure 3. Dominant modifiers in entrepreneurial long-tail keywords

The results reveal that capital-related modifiers constitute the most frequently occurring group within the dataset. Terms such as *modal*, *modal kecil*, *tanpa modal*, and *modal 1 juta* appear repeatedly across multiple keyword combinations, indicating that financial considerations are a common feature of entrepreneurial search queries. The recurrence of these modifiers suggests that users frequently refine business opportunity searches by specifying available financial resources or desired capital requirements.

Modifiers associated with digital and home-based business models also appear prominently. Terms such as *online*, *rumahan*, and *dari rumah* are among the most frequently observed modifiers, indicating that users often incorporate operational flexibility and digital accessibility into their search criteria. These modifiers frequently co-occur with other qualifiers, suggesting that business ideas are commonly evaluated within specific operational contexts rather than as generic entrepreneurial opportunities.

In addition, user-oriented modifiers such as *pemula* frequently appear within the dataset. The presence of these terms indicates that many search queries are formulated with reference to perceived experience levels or personal circumstances. Rather than seeking universally applicable business opportunities, users tend to search for opportunities tailored to their individual conditions and capabilities.

Opportunity-oriented modifiers, including *menjanjikan*, *untung besar*, *jarang pesaing*, and *belum pernah ada*, appear less frequently than capital-related terms but remain notable components of the dataset. These modifiers explicitly describe desired characteristics of business opportunities and reflect expectations regarding profitability, market potential, and competitive positioning.

So, the frequency analysis demonstrates that entrepreneurial search queries are shaped by a combination of practical considerations and expected outcomes. The repeated appearance of modifiers related to capital, operational flexibility, user characteristics, and opportunity attributes indicates that prospective entrepreneurs employ search engines to evaluate business ideas within specific contextual parameters. These findings provide empirical evidence for understanding how entrepreneurial information needs are structured and refined through long-tail search behavior.

Consumer aspiration mapping through keyword semantics

This section explores how semantic patterns embedded within long-tail keywords may provide insights into entrepreneurial aspirations expressed through search behavior. Building upon the thematic categorization and modifier frequency analyses presented in the previous sections, aspiration mapping was conducted by examining recurring semantic modifiers and interpreting their potential relationship with entrepreneurial information needs. Consistent with digital trace research, search queries were treated as indicative signals of user interests and preferences rather than direct measures of entrepreneurial intention (Salganik, 2019).

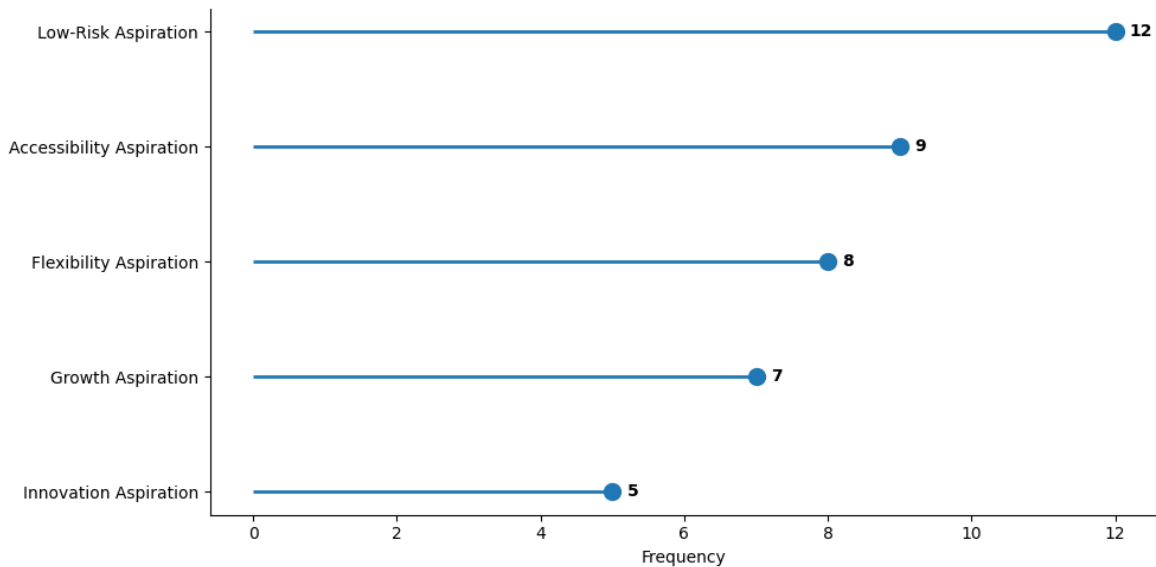


Figure 4. Entrepreneurial aspiration dimensions derived from keyword semantics

The semantic analysis suggests the presence of five recurring aspiration dimensions within the dataset: low-risk aspiration, accessibility aspiration, flexibility aspiration, growth aspiration, and innovation aspiration. These dimensions emerged from repeated patterns observed across multiple keyword combinations and represent broad interpretive categories derived from entrepreneurial search behavior.

The first dimension, low-risk aspiration, is associated with keywords containing capital-related modifiers such as *modal kecil*, *tanpa modal*, and *modal 1 juta*. The frequent occurrence of these modifiers suggests that users often seek business opportunities that can be pursued with limited financial exposure and relatively low entry barriers. Rather than indicating a specific entrepreneurial intention, these search patterns may reflect concerns regarding feasibility and resource availability during the opportunity exploration stage.

Accessibility aspiration appears in keywords referring to specific user groups, including *pemula*, *ibu rumah tangga*, and *anak muda*. The presence of these modifiers suggests that users frequently evaluate business opportunities in relation to their personal circumstances, experience levels, or social identities. Such search behavior may indicate a preference for entrepreneurial opportunities perceived as attainable and compatible with individual capabilities.

Flexibility aspiration is reflected in keywords associated with operational settings, including *rumahan*, *dari rumah*, and similar modifiers emphasizing location-independent or home-based business activities. These patterns suggest that users often seek entrepreneurial opportunities that can be adapted to existing responsibilities and personal constraints. The recurrence of these modifiers indicates that operational flexibility constitutes an important consideration in entrepreneurial information searches.

Growth aspiration is associated with modifiers such as *menjanjikan* and *untung besar*, which explicitly refer to expected business outcomes. Although these keywords do not necessarily indicate future entrepreneurial action, they suggest that users frequently incorporate expectations regarding profitability, sustainability, and economic potential when exploring business ideas.

Later on, innovation aspiration is reflected in modifiers such as *unik*, *belum pernah ada*, and *jarang pesaing*. These terms indicate that some users actively search for opportunities characterized by novelty, differentiation, or reduced competitive pressure. The presence of these modifiers suggests an interest in identifying business concepts that offer perceived competitive advantages or unique market positioning.

Co-occurrence network analysis of long-tail keywords

To further explore the semantic structure of entrepreneurial search behavior, a co-occurrence network analysis was conducted using the keyword dataset. Co-occurrence analysis examines the extent to which words appear together within the same keyword phrase and enables the identification of semantic relationships among recurring concepts. By visualizing these relationships as a network, it becomes possible to identify central concepts, highly connected terms, and thematic clusters embedded within entrepreneurial search queries (Jungherr, 2017).

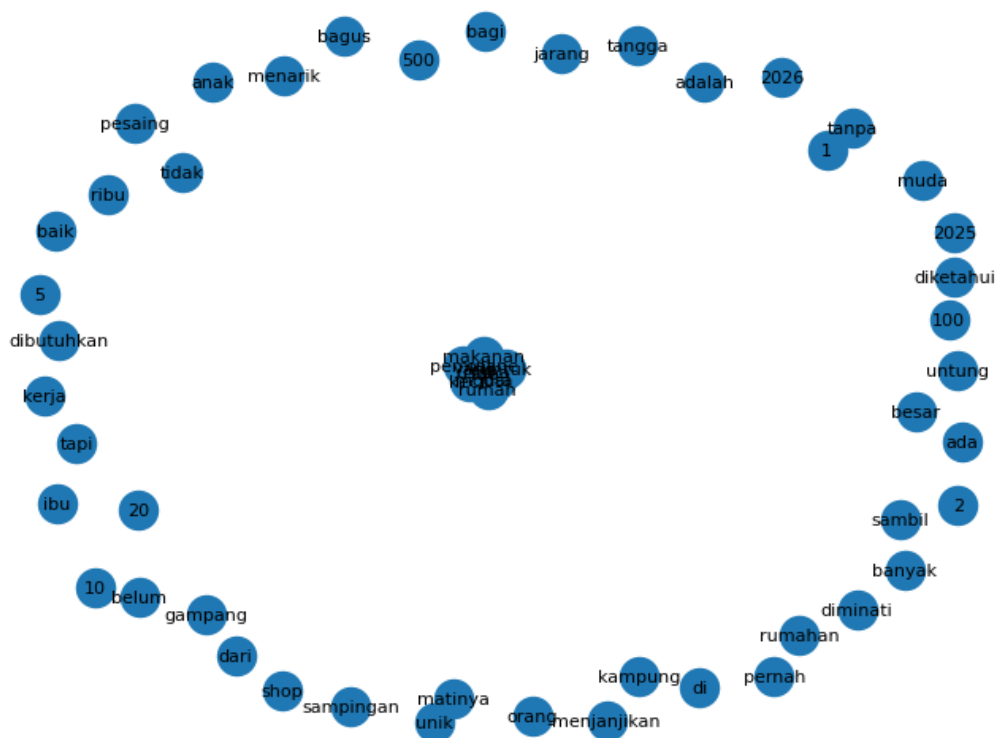


Figure 5. Co-occurrence network of long-tail keywords related to “Ide Usaha”

The resulting network reveals several interconnected clusters centered around the core keyword *usaha* (business). Among the most prominent nodes are *modal*, *online*, *rumahan*, *pemula*, and *menjanjikan*, indicating that these terms frequently co-occur with other entrepreneurial modifiers across the dataset. Their central positions within the network suggest that they represent recurring contextual dimensions in entrepreneurial information searches.

The term *modal* appears as one of the most connected nodes in the network, linking with various keyword combinations related to business feasibility and resource requirements. This pattern indicates that financial considerations are frequently integrated into entrepreneurial search behavior and often serve as a contextual filter when users evaluate business opportunities.

Similarly, *online* and *rumahan* occupy relatively central positions within the network and demonstrate strong connections with multiple keyword combinations. Their prominence suggests that operational flexibility and digitally enabled business models constitute important elements within entrepreneurial information searches. These findings align with the thematic patterns identified in the analysis, where online-oriented and home-based business opportunities emerged as recurring categories.

Another notable feature of the network is the presence of user-oriented terms such as *pemula*, which frequently connect with other entrepreneurial modifiers. These relationships indicate that users often search for business opportunities through the lens of personal circumstances, experience levels, or perceived capabilities. The co-occurrence patterns suggest that entrepreneurial information needs are commonly contextualized according to individual conditions rather than expressed as generic opportunity searches.

The network also reveals smaller clusters associated with opportunity-oriented modifiers such as *menjanjikan*, *untung besar*, and *jarang pesaing*. Although these nodes appear less frequently than capital-related terms, their connections indicate that expectations regarding profitability, sustainability, and competitive positioning remain important components of entrepreneurial search behavior.

Thus, the co-occurrence network demonstrates that entrepreneurial search queries are structured around interconnected considerations related to resources, operational flexibility, user characteristics, and opportunity expectations. The observed semantic relationships support previous findings from thematic categorization and modifier frequency analysis, suggesting that entrepreneurial information-seeking behavior is multidimensional and shaped by a combination of practical constraints and perceived opportunities. While these patterns should not be interpreted as direct evidence of entrepreneurial intention, they provide valuable insights into how individuals frame and evaluate business opportunities during the opportunity exploration stage.

DISCUSSION

The findings demonstrate that entrepreneurial search behavior is characterized by a relatively high level of specificity, as reflected by the predominance of four- to five-word keyword phrases. Rather than searching for generic business opportunities, users frequently combine the core term “*ide usaha*” with additional modifiers that refine search intent according to particular needs and circumstances. This finding supports information-seeking theory, which suggests that users formulate increasingly specific queries when attempting to reduce uncertainty and obtain contextually relevant information (Case & Given, 2016). The prevalence of long-tail keyword structures, therefore, indicates that entrepreneurial opportunity exploration is often accompanied by targeted information needs rather than broad exploratory searches.

A prominent finding of this study is the dominance of capital-related modifiers such as *modal kecil* and *tanpa modal*. These results suggest that resource considerations constitute a central element of entrepreneurial information-seeking behavior. From an entrepreneurial cognition perspective, individuals often evaluate opportunities through the lens of available resources and perceived feasibility (Mitchell et

al., 2007). The frequent appearance of capital-related keywords may therefore reflect users' efforts to identify business opportunities that align with existing financial constraints. This finding is also consistent with the digital entrepreneurship literature, which emphasizes that accessibility and resource efficiency are important drivers of entrepreneurial opportunity evaluation in digital environments (Nambisan et al., 2019).

The thematic and semantic analyses further reveal the importance of accessibility and flexibility considerations. Keywords such as *pemula*, *rumahan*, and *online* appeared repeatedly across the dataset and occupied relatively central positions within the co-occurrence network. These patterns suggest that users commonly seek entrepreneurial opportunities that are compatible with their experience levels, lifestyles, and operational preferences. Such findings align with previous studies indicating that digital technologies have lowered barriers to entrepreneurial entry by enabling individuals to pursue business activities with greater flexibility and reduced dependence on traditional organizational structures (Nambisan et al., 2018; Kraus et al., 2018).

Another notable finding concerns the presence of opportunity-oriented modifiers such as *menjanjikan*, *untung besar*, *jarang pesaing*, and *belum pernah ada*. Although these terms appeared less frequently than resource-related keywords, they indicate that users do not merely search for feasible opportunities but also evaluate potential business ideas based on expected outcomes and perceived competitive advantages. This observation is consistent with entrepreneurship research suggesting that opportunity recognition involves both feasibility assessment and attractiveness evaluation (Shepherd et al., 2019). The coexistence of resource-oriented and opportunity-oriented modifiers highlights the multidimensional nature of entrepreneurial search behavior.

The co-occurrence network analysis provides additional evidence that entrepreneurial information needs are interconnected rather than isolated. Central nodes such as *modal*, *online*, *rumahan*, and *pemula* formed semantic clusters linking resources, operational models, and user characteristics. These relationships suggest that prospective entrepreneurs often evaluate opportunities through multiple simultaneous considerations rather than a single criterion. Consistent with digital trace research, the observed keyword patterns may therefore be interpreted as indicators of entrepreneurial interests and aspirations expressed through search behavior (Salganik, 2019). However, these patterns should not be regarded as direct evidence of entrepreneurial intention, as search queries represent information-seeking activities rather than confirmed entrepreneurial actions.

CONCLUSION

This study examined long-tail keywords derived from the Indonesian search query "*ide usaha*" to explore their structural characteristics, thematic patterns, and semantic relationships within an entrepreneurial context. The findings reveal that entrepreneurial search behavior is dominated by relatively specific and contextualized search expressions, as reflected in the prevalence of four- to five-word keyword phrases. Thematic categorization identified several recurring dimensions, including capital-related considerations, target-user characteristics, business models, online orientation, work settings, and opportunity-related expectations. Furthermore, frequency and co-occurrence analyses showed that terms such as *modal*, *online*, *rumahan*, and *pemula* occupy central positions within the keyword structure, indicating their importance in entrepreneurial information-seeking behavior.

The study also demonstrates that long-tail keyword analysis can provide valuable insights into how individuals frame and evaluate business opportunities during the opportunity exploration stage. The semantic patterns observed in the dataset suggest that users frequently combine practical considerations, such as resource availability and operational flexibility, with expectations related to profitability, growth, and competitive advantage. While these patterns should not be interpreted as direct evidence of entrepreneurial intention, they may serve as useful indicators of entrepreneurial interests, preferences, and aspirations expressed through search behavior.

From a broader perspective, this research contributes to the growing literature on digital entrepreneurship and information behavior by demonstrating the potential of search engine data as a source of entrepreneurial insight. By moving beyond the conventional SEO-oriented perspective of long-tail keywords, the study highlights their value as digital traces that can help researchers better understand entrepreneurial opportunity exploration in online environments. Future research may expand this approach by examining multiple entrepreneurial search terms, larger datasets, different geographic contexts, or longitudinal search patterns to provide a more comprehensive understanding of entrepreneurial information-seeking behavior in the digital economy.

This study has several limitations. First, the analysis was based on long-tail keywords derived from a single seed query ("*ide usaha*"), which may not fully represent the diversity of entrepreneurial search behavior. Second, the dataset reflects search engine query patterns rather than actual entrepreneurial actions, making it impossible to directly infer entrepreneurial intention or business creation outcomes. Third, the study relied on cross-sectional keyword data collected during a specific period, which may not capture temporal changes in entrepreneurial interests. Therefore, the findings should be interpreted as indicative patterns of entrepreneurial information-seeking behavior rather than definitive evidence of entrepreneurial decision-making processes.

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