**Report for Assignment One**

RETL 613

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**Task A**

**The 8 Most Frequently Mentioned Brands**

According to the word\_freq.csv, the 8 most frequently mentioned brands are shown in Exhibit 1. According to the frequency, the 8 brands can be categorized into 3 main tiers. Tier 1 includes BMW and Acura, which are most frequently mentioned with a frequency over 2000. Tier 2 includes Audi, Infiniti and Honda, with a frequency of 1000-2000. Tier 3 includes Toyotad (typo), Nissan and Lexus, with a frequency of 400-500.

**Model Modification**

We first checked our original model for all the brand names and found that some brand names contain typos, which we modified afterwards. Then, in the word\_freq.csv, we primarily focused on the words that may exert a huge impact on the mentions of the top 8 mentioned brands and words that may alter the rank of the 8 brands shown in Exhibit 1. Also, we ignored those scarcely mentioned words (with the frequency <30) that may produce above-mentioned effect since they would not largely influence the top 8 brands and their rank.

Our main modifications can be exemplified as follows:

1. Typos: toyotad to toyota
2. Singularization: lexuses to lexus
3. Integration: bmwx to bmw, bmw7 o bmw
4. Reclassification: hondaacura to acura, audivolkswagen to audi

After modification, the top 8 frequently mentioned brands are shown in Exhibit 2.

The rank of all 8 brands remained the same and one main change was that toyota was elevated to Tier 2, with a modified frequency of 903.

**Lift Values & MDS Plot**

Given the 8 most frequently mentioned brand, we then calculated the lift values, which were extracted from the Lift\_Matrix.csv and shown in Exhibit 3 below.

Among all the lift values, the lift ratio between lexus & infiniti and nissan & infiniti is considerably higher than all the other values, reaching 3.28 and 3.24 respectively. This indicates a strong customers’ association within each of these two pairs. That is to say, for example, when talking about Lexus, a customer usually associates it with Infiniti and vice versa.

Furthermore, since the lift values concerning Infiniti with both Lexus and Nissan are high in general, there is still difference. As the lift value of lexus & infiniti is higher than that of nissan & infiniti, it indicates that when it comes to Infiniti, people associate it more with Lexus than Nissan.

Besides, the MDS plot can illustrate the relationship between these 8 brands more clearly and more straightforward. As is shown in Exhibit 4, the distance between point infiniti and point lexus is the closest among all the pairs, which is in accordance with the lift value indications.

**Chosen Brand -- Lexus**

As mentioned above, Lexus is strongly associated with Infiniti among reviewers, which means that they are directly compared when customers are making a decision or mentioning a topic. Since they are ‘comparable’, they must share something in common in a reviewer’s eyes. And this indicates potential strong competition between the two brands. Therefore, it’s crucial for Lexus to find ways to distinguish itself and gain an unreplaceable advantage over Infiniti in the competitive sedan market.

For a manager of Lexus, we would like to offer the following suggestions considering the missions and strategies of Lexus and Infiniti.

Over the years, Lexus has placed a significant emphasis on quality, reliability and customer service while Infiniti focuses more on performance and design. Therefore, one approach for Lexus to differentiate itself is to emphasize safety and security features in its sedans to win more customer satisfaction. For example, Lexus can highlight advanced safety technologies, crash test ratings, and safety-related accolades to assure consumers of their security. Besides, Lexus should devote to improving post-purchase services including warranty, maintenance, returns, feedback and surveys.

What’s more, to compete effectively with Infiniti, Lexus can also develop its distinctive vehicle line-ups such as hybrid vehicles to broaden its vehicle range further as Infiniti has a more limited lineup compared to Lexus. This strategy can help Lexus distinguish itself from Infiniti further.

**Task B**

**The 4 most frequently mentioned attributes**

We initially identified the four most frequently mentioned attributes: "price" (810 mentions), "engine" (616 mentions), "performance" (577 mentions), and "tires" (385 mentions) and made them each a category. We went on to identify more keywords highly associated with each of these four attributes. These keywords were categorized under their respective attributes. In the table (Exhibit 5), we provide a summary of the total mentions within each attribute category, as well as the individual mention counts for each keyword.

**Categorization**

*Price*

This category encompasses keywords reflecting various aspects of pricing and affordability, including "price," "prices," "costs," "expensive," "cheaper," "cheap," and "pricing." The keyword "price" and its plural form “prices” directly addresses the cost of a product. Customers often express concerns about products being labeled as "expensive" and, conversely, may desire "cheaper" options. "Pricing" references discussions about strategies, discounts, or promotional offers related to the cost of the product.

*Performance Attributes Category*

This category is dedicated to attributes related to the performance which includes keywords such as "performance," "performances," "fast," "faster," and "acceleration.". "Performance" directly addressing how well a product operates and its overall functionality which is determined together by power, gearbox, chassis, brake and control experience. "Fast" and the comparative form “fast” underscores customers' emphasis on the speed and power of the car's operation. "Acceleration" reflects discussions about acceleration rates, speed enhancements, and rapid performance.

*Engine Attributes Category*

"Engine" and its plural form “engines” refers to the core mechanical component responsible for generating power which encompasses specific discussions like engine model, type, displacement, failure rate, etc.

*Tires Attributes Category*

The "Tires" category includes keywords such as "tire," "tires," and "wheel." The quality and performance of tires can significantly impact safety and functionality. They may indicate discussions about the tread, tire brand, color, or comparisons between various brands' tires.

Exhibit 6 shows the four most frequently mentioned brands, bmw (3245 mentions), acura (2069 mentions), audi (1575 mentions) and infiniti (1111 mentions), and the lift values related to the four attribute categories.

**Chosen Brand – Infiniti**

*Price (Lift Value: 1.94622478, rank 1st):*

The strong association between Infiniti and Price, ranking first among the four attributes, signifies that price is a pivotal consideration in consumers' perception of Infiniti. This association could be attributed to several factors:

**Perceived Value:** Consumers may perceive Infiniti as offering great value for their price, indicating that they see the brand as providing high-quality vehicles at a reasonable cost.

**Price Segment:** It's possible that consumers associate Infiniti with a specific price segment. Infiniti's pricing may align with a particular market niche.

**Pricing Controversy:** Pricing might be a topic of controversy or debate among consumers. Some may consider Infiniti as reasonably priced, while others might have concerns about it being overpriced.

*Recommendations:*

**Market Research:** The brand team should conduct in-depth market research to better understand how consumers perceive the brand's pricing. This research can shed light on whether consumers view Infiniti as providing high value for its price, or if there are concerns about overpricing.

**Unique Selling Points (USPs):** In marketing campaigns, Infiniti should emphasize its unique selling points that set the brand apart within its price range like Lexus. This can include highlighting performance, innovative technology, distinctive design, or any other features that justify the pricing.

**Comparison with Lexus:** Given the frequent association between Infiniti and Lexus, both being Japanese car brands in the middle to high-end category, Infiniti should conduct competitive analysis. This analysis should help identify opportunities for differentiation and collaboration in marketing strategies.

*Engine (Lift Value: 1.649692676, rank 1nd)*

This suggests that engines are a focal point of consumer interest. It indicates that the engine is a significant consideration or that Infiniti is perceived with competitive advantage in this area by consumers. Infiniti might be recognized for delivering high-quality and high-performing engines, associate Infiniti with innovative technologies and engineering solutions that enhance performance or perceived as an innovator in engine technology. There may be an existing community of enthusiasts who are passionate about Infiniti's vehicles and are willing to dig into the technical details of the engines. Leveraging this community can foster brand loyalty and advocacy.

*Recommendations:*

**Highlight engine functionality in marketing:** Highlight the horsepower, torque, acceleration, and other key performance metrics to attract performance-oriented consumers. Also Showcase any innovative engine technologies your products incorporate, such as turbocharging, hybrid powertrains, or efficient fuel management. Explain how these technologies benefit consumers. Conduct competitive analysis to understand how the engines compare to those of your competitors. Identify areas where your engines outperform others and use this information in marketing materials.

**Expand Engine Options:** Consider producing cars with a broader selection of engine choices to cater to a wider range of customer preferences and needs. Offering a diverse range of engines allows Infiniti to cater to a broader spectrum of consumer preferences. Some customers prioritize high-performance engines, seeking thrilling acceleration and power. Others may value fuel efficiency, looking for engines that reduce their environmental footprint and operating costs.

**Ensure quality and reliability:** Ensure that the engines are built for durability and reliability and highlight this in marketing. Consumers value engines that last and require minimal maintenance. Offer comprehensive maintenance and service plans for the engines. This can give consumers peace of mind and ensure that engines perform optimally throughout their lifecycle.

*Performance (Lift Value: 1.74011308, rank 2nd)*

This suggests that a significant portion of the consumer base highly values and prioritizes performance in their vehicles. They are looking for powerful engines, responsive handling, and an exhilarating driving experience. It may indicate that Infiniti has already built a reputation for performance excellence. Consumers may be particularly interested in specific performance features, such as acceleration, top speed, handling, and braking capabilities. This highlights the importance of emphasizing these attributes in the marketing efforts.

*Recommendations:*

**Amplify Performance in Marketing**: Build marketing campaigns that prominently feature the high-performance aspects of your vehicles. Use multimedia, including videos and interactive experiences, to demonstrate the excitement of driving an Infiniti car

**Invest into Engineering**: Continue to invest in research and development to enhance the performance of your vehicles. Develop new technologies and systems that set Infiniti apart in terms of acceleration, handling, and overall driving dynamics..

**Model Expansion**: Consider expanding the product line with additional performance-specific models or trims, catering to the needs of enthusiasts who seek even more power and exhilaration.

**Unique Events:** Foster a strong community of performance enthusiasts through social media, forums, and events. Engage with these customers, listen to their feedback, and offer exclusive experiences like track days or driving courses.

*Tires (Lift Value: 1.23227323, rank 3rd)*

The lift value for Infiniti's association with tires is relatively modest. This suggests that when consumers think about Infiniti, the topic of tires comes up slightly more than what would be expected by chance. It may indicate a certain level of expectation in terms of tire quality, longevity, or brand association specific to Infiniti vehicles.

*Recommendation:*

We should investigate if there are areas to improve tire quality or performance tailored to Infiniti vehicles, highlight any unique tire technologies, partnerships, or features in promotional campaigns. Engage with customers to get feedback on tire satisfaction to ensure expectations are met.

**Task C**

**Aspirational Brand**

An aspirational brand is a brand that consumers aspire to own or be affiliated with because it represents certain desirable qualities, status, or lifestyle. Such brands are typically associated with luxury, exclusivity, premium quality, or a distinct image that people want to emulate or be associated with. By owning or using products from an aspirational brand, consumers often feel they can elevate their own personal status or project a specific desired image (Veti, 2023).

Relating to the automotive industry, an aspirational brand refers to an automobile manufacturer or series that is particularly popular because it symbolizes success, luxury, performance or advanced technology (Cooke, 2006). These brands offer more than just transportation, but an identity and experience

**C-D Map**

The C-D Map, also known as the Centrality-Distinctiveness Map, aids companies in determining a market position, making resource allocation and brand strategy decisions, tracking performance against competitors, and evaluating strategy effectiveness​. Through C-D Maps, brands are categorized as Unconventional, Aspirational, Peripheral, or Mainstream, based on their centrality and distinctiveness levels. The map's utilization extends to formulating and optimizing brand strategies by comparing a brand's position to others in the same category (Cope, 2017).

The metrics on this map are divided into two axes, “centrality” and “distinctiveness.” Centrality measures how representative a brand is within its category, while distinctiveness measures how a brand stands out from others in the category. These metrics are typically obtained through surveys where respondents rank brands on a scale of 0-10 for both centrality and distinctiveness (Cope, 2017). The data collected is then plotted on the C-D Map, facilitating a comparative analysis of brands in a given market.

**Metric Demonstration**

The overall strategy in our model involves understanding the brand's aspirational qualities by defining the metrics of “aspirational brand” with top mentioned keywords. This requires us to identify keywords with high frequency and are representative for the definition of the metrics. This strategy is employed to run the lift analysis and obtain meaningful results. By identifying these aspirational attributes through keyword analysis and lift metrics, we can gain deeper insights into what customers value most and how the brand is perceived in the market with data. Exhibit 7 shows clearly how we do the categorization as is explained in detail in the following text.

*Centrality*

We define “centrality” with the highly mentioned keywords classic, reliable, reliability, safe and safety and rename them “classic” in the model file to calculate lift. The words collectively form the brand's "centrality" because they represent the core qualities and characteristics that most customers seek fundamentally.

**Classic:** The term "classic" suggests that the brand is associated with timeless and enduring qualities. A classic brand is one that has a long-standing presence and is consistently trusted and valued by customers. It represents stability and a traditional appeal, which are central characteristics that define the brand's identity.

**Reliable and Reliability:** "Reliable" and "reliability" are closely related terms that indicate the brand's consistency in delivering dependable and trustworthy products or services. These attributes are central because customers highly value reliability when choosing a brand. Consistency in quality and performance is a key factor that influences customers' trust and loyalty.

**Safe and Safety:** "Safe" and "safety" represent the brand's commitment to providing products or services that prioritize consumer safety. Safety is a fundamental and non-negotiable aspect in the automotive industry. Ensuring the safety of customers is a central aspect of a brand's identity and builds trust among consumers.

*Distinctiveness*

We define “distinctiveness” with the keywords luxury, premium and special under the category named “premium”. These terms are defined as "distinctiveness" because they represent attributes that make the brand stand out from its competitors. They convey a sense of exclusivity, quality, and uniqueness that differentiates the brand in the minds of consumers. "Distinctiveness" is crucial for building brand recognition and attracting customers who are seeking something special and different from the norm.

**Luxury:** The term "luxury" indicates that the brand is associated with high-end, exclusive, and opulent qualities that go beyond what is considered standard or ordinary. Customers view luxury as something rare and superior, which makes it distinctive. A luxury brand stands out because it offers unique and exceptional products or experiences that are not easily found elsewhere.

**Premium:** "Premium" suggests that the brand's offerings are of higher quality and value compared to standard or mainstream options. Premium products or services often come with added features, better materials, or superior performance.

**Special:** "Special" implies uniqueness and exclusivity. A brand that offers "special" features or experiences goes beyond the ordinary and provides something that is one-of-a-kind or tailored to a specific set of customers.

**Determination and Explanation**

We determine that Infiniti is the aspirational brand.

From Exhibit 8, the lift of Infiniti and classic is 1.3046 and the lift of infiniti and premium is 2.6529. Since “classic” represents “centrality” and “premium” represents “distinctiveness”, “centrality” means it is a mainstream brand and “distinctiveness” means we could set a higher price for the brand. We need the aspirational brand to maintain a high lift value with classic while maintaining a high lift value with premium. Compared with the strength of the relationship between other brands to centrality and distinctiveness, infinity has a greater association with centrality and distinctiveness.

From Exhibit 8, we can see Audi has the highest lift with premium which is 2.723, but it has a lower lift with classic which is 1.004. BMW has the lowest lift with its brand and premium which is 1.7008, but the higher lift with its brand and classic which is 1.5159. Compared with BMW and Audi, Infiniti has a higher lift value with classic and a higher lift value with premium.

We then plotted each brand’s lift value with premium and with classic in an X-Y coordinate (Exhibit 9), using lift value with premium as x-coordinate and lift value with classic as y-coordinate. Given the C-D Map Matrix (Cope, 2017), we can identify the plot on the most top-right corner as the aspirational brand, which is Infiniti based on our analysis.

This result may seem anti-intuitive because neither BMW or Audi, both of which are intuitively considered car pioneers and have their own brand identities, is picked as the most aspirational brand among the top 4 car brands.

One explanation is that distinctiveness comes at the cost of centrality (Cope, 2017). Research shows that, although brands with higher distinctiveness achieve lower volumes of sales, they can nonetheless command higher prices. Also, boosting centrality leads to higher sales volumes, which decreases the distinctiveness of a brand’s products. In our case, BMW focuses more on centrality and Audi focuses more on distinctiveness, while Infiniti strike a balance between these two metrics.

Therefore, strategically speaking, for the continuous success of any brand, it’s more important to keep the balance between distinctiveness and centrality.

**Appendix**

**Exhibit 1 The original version of the 8 most frequently mentioned brands**

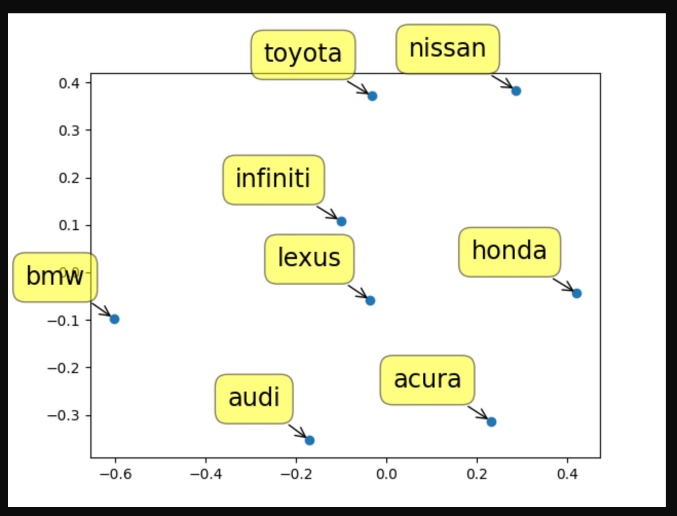
|  |  |  |  |
| --- | --- | --- | --- |
| **Rank** | **Brand** | **Mentions** | **Tier** |
| **1** | bmw | 3245 | 1 |
| **2** | acura | 2069 | 1 |
| **3** | audi | 1575 | 2 |
| **4** | infiniti | 1111 | 2 |
| **5** | honda | 1035 | 2 |
| **6** | toyotad | 471 | 3 |
| **7** | nissan | 470 | 3 |
| **8** | lexus | 407 | 3 |

**Exhibit 2 The modified version of the 8 most frequently mentioned brands**

|  |  |  |  |
| --- | --- | --- | --- |
| **Rank** | **Brand** | **Mentions** | **Tier** |
| **1** | bmw | 3296 | 1 |
| **2** | acura | 2227 | 1 |
| **3** | audi | 1761 | 2 |
| **4** | infiniti | 1265 | 2 |
| **5** | honda | 1035 | 2 |
| **6** | toyota | 903 | 2 |
| **7** | nissan | 470 | 3 |
| **8** | lexus | 411 | 3 |

**Exhibit 3 The Lift Value Matrix of the top 8 brands**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **audi** | **bmw** | **honda** | **infiniti** | **lexus** | **nissan** | **toyota** |
| **acura** | 2.1327 | 1.2411 | 2.8510 | 2.1612 | 2.2897 | 1.3948 | 1.4244 |
| **audi** |  | 1.7253 | 1.5342 | 2.0416 | 2.6770 | 1.1096 | 1.7505 |
| **bmw** |  |  | 1.1569 | 1.4984 | 1.6700 | 1.0104 | 1.4099 |
| **honda** |  |  |  | 1.4668 | 1.8836 | 2.0533 | 2.0050 |
| **infiniti** |  |  |  |  | 3.2802 | 3.2430 | 1.8290 |
| **lexus** |  |  |  |  |  | 1.8598 | 2.3095 |
| **nissan** |  |  |  |  |  |  | 2.2439 |

**Exhibit 4 The MDS Plot of the top 8 brands**

**Exhibit 5 The 4 Attributes and their Mentions**

|  |  |
| --- | --- |
| **Attributes** | **Mentions** |
| **price\_category** | **1920** |
| **price** | 810 |
| cost | 320 |
| expensive | 226 |
| costs | 152 |
| prices | 151 |
| cheaper | 99 |
| cheap | 87 |
| pricing | 75 |
| **engine\_category** | **773** |
| **engine** | 616 |
| engines | 157 |
| **performance\_category** | **1229** |
| **performance** | 577 |
| speed | 283 |
| fast | 148 |
| faster | 126 |
| acceleration | 95 |
| **tire\_category** | **644** |
| **tires** | 385 |
| wheel | 162 |
| tire | 97 |

**Exhibit 6 Lift Values of brands and attributes**

|  |  |  |
| --- | --- | --- |
| **Brand** | **Attribute** | **Lift Value** |
| **audi** | tires | 1.4673 |
| **bmw** | tires | 1.4038 |
| **infiniti** | tires | 1.2323 |
| **acura** | tires | 1.1967 |
|  |  |  |
| **audi** | performance | 2.2438 |
| **infiniti** | performance | 1.7401 |
| **acura** | performance | 1.6869 |
| **bmw** | performance | 1.5592 |
|  |  |  |
| **infiniti** | engine | 1.6497 |
| **audi** | engine | 1.5967 |
| **bmw** | engine | 1.5591 |
| **acura** | engine | 1.4513 |
|  |  |  |
| **infiniti** | price | 1.9462 |
| **audi** | price | 1.7937 |
| **bmw** | price | 1.6073 |
| **acura** | price | 1.4323 |

**Exhibit 7 C-D Metrics Demonstration**

|  |  |  |
| --- | --- | --- |
| Centrality | classic | classic |
|  | classic | reliable |
|  | classic | reliability |
|  | classic | safe |
|  | classic | safety |
| Distinctiveness | premium | luxury |
|  | premium | premium |
|  | premium | special |

**Exhibit 8 Lift Values of brands and metrics**

|  |  |  |
| --- | --- | --- |
| **Brand** | **Metric** | **Lift Value** |
| **audi** | premium | 2.7231 |
| **infiniti** | premium | 2.6529 |
| **acura** | premium | 1.8805 |
| **bmw** | premium | 1.7007 |
|  |  |  |
| **bmw** | classic | 1.5159 |
| **infiniti** | classic | 1.3046 |
| **audi** | classic | 1.0043 |
| **acura** | classic | 0.7183 |

**Exhibit 9 X-Y coordinate of brands (coordinates based on lift values)**

图表

描述已自动生成

**References**

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