5S CAPABILITIES FOR INTERNET STARTUP - CASES FROM UBER, GRAB, AND DIDI

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Abstract - This paper aims to introduce the new concept of 5s capabilities to simplify the elements of dynamic capabilities (Teece, Pisano, and Shuen 1997) to better fit the business study for an internet startup firm. Using Uber as our primary example, we investigated the common keywords from 34 chosen articles, to test the relevance of each keyword to the proposed 5s capabilities (System, street, speed, skip, and spread). Using word frequency analysis, 25 common keywords were selected, and the finding shows that the majority of the research is highly relevant to the capability of street, representing the marketing strategy for Uber's global and localization.

Keywords - Dynamic Capabilities, Ridership, Sharing Economy, Startup, Uber.

I. INTRODUCTION

Uber, once an iconic name and representative for the Sharing Economy in 2009, had a chance to shake taxi industries and promoted the idea of car sharing around the world. However, after ten years of business development, the giant that once dominated the market had faced numerous challenges around the world. In many different regions, Uber's rivalries, such as GRAB in South East Asia and Didi in China, have taken over the local market and even acquired Uber's business division in these regions, led Uber no choice but to exit or pivot to another direction. How did GRAB and Didi successfully take the lead? Moreover, what should Uber do in order to pivot in the right direction?

Under the notion of dynamic capabilities (Teece, Pisano, and Shuen 1997), a firm needs to focus on its ability to build, integrate, and re-configure both internal and external competencies to adjust to rapid market change, which is always dynamic and volatile. The dynamic capabilities have been used in many research as a theory base for business strategy. However, we believe there is a missing link due to today's fast-changing technology and internet popularity. An internet startup, or firm that does business heavily though the internet and online software system, will need to pay more attention to the user experience of the system and the right business model for localization as well the speed of market penetration in order to create a network effect for its targeted market.

Hence, to simplify the process of dynamic capabilities to fit the internet startup better, we proposed a new 5s capabilities, which include: System, speed, street, skip, and spread. With the new 5s capabilities, our study will investigate the business strategies of Uber and its rivalry GRAB, Didi, and how these three global transportation network giants do throughout their business development.

II. THEORETICAL BACKGROUND

The three significant elements of dynamic capabilities are Sense, Seize, and Transform. First of all, a firm needs to sense and identify new market opportunities through technological innovation and continuous technology development. Second, when entering a new market, a firm needs to anticipate competitor reactions and defend its intellectual property, hence developing a strategy to seize, design, and refine the right business model. Third, a firm needs to transform and realign its company structure and culture continuously, to align existing capabilities, or invest in additional capabilities. From the case of Uber, it began its startup stage by focusing on one central service, which is vehicle sharing. However, as Uber expands to other regions, it encounters numerous challenges, including the law forbidden non-taxi-registered car to operate using Uber's service. Furthermore, when Uber entered China and South East Asia, it had to deal with the rising challenges from Didi and GRAB. As a result, Uber lost in both regions, which made Didi and GRAB the dominant player in Asia. Under the notion of Dynamic Capabilities, we simplify the components of Sense, seize, and transform into a new 5s capabilities.

2.1. System

System refers to technology being used in internet startup or internet-base companies, which cover different services such as SaaS (Software as a service), PaaS (Platform as a service), IaaS (Infrastructure as a service),DaaS (Data as a Service) and in transportation's case, a MaaS (Mobility as a service). Many internet companies developed these services to make a profit. According to Statista (2019), 7 out of the top 10 companies by market value in the world are technology companies, and 5 of them (Amazon, Alphabet, Facebook, Alibaba, and Tencent) are internet firms. New technology can

create new opportunities to solve new problems but would require the right system to reach out to the needs of target audiences.

2.2. Street

Street refers to the business strategy for localization. There is much literature about localization or location-specificity. Ghemawat (2003) states that international business should pay more attention to market imperfections involving location-specificity rather than business/usage-specificity. Ionel et al. (2016) also point that geographic features of the area, such as distance, accessibility, size, or complex features of the land, are essential criteria for specific business operations. In addition to anticipate competitor reactions and defend intellectual property during the stage of SEIZE under dynamic capabilities, when a firm expands to a new market or start its service in a particular market, understanding the law regulation, the culture, sources, politics, user preference, and needs in that region are also necessary for localization and local business strategy.

2.3. Speed

Speed refers to the speed of market penetration, and when can the system reach the stage of network effects for exponential growth. According to Maícas and Sese (2011), the definition of network effects is that the utility of the user is driven not only by the product itself but more importantly, by the network that surrounds that product so that the more extensive the network, the higher the utility derived from consuming the product. Many startups strive to achieve network effects because it could bring exponential growth in user base, as well as generating more revenue, depends on the business model of the system(SaaS, IaaS, PaaS, DaaS, MaaS). In most cases, the business model of the system is either subscription base or through advertisement.

2.4. Skip

Skip refers to the stage when a firm needs to transform itself to realign management structure and culture. In another word, is to focus on what is necessary and skip what is unnecessary for current or future business objectives.

2.5. Spread

Spread refers to service or business expansion. A firm can align existing capabilities or invest in new capabilities after knowing which business direction to focus. In many cases, when a firm's system reaches the stage of network effects, its large user base can enable a firm to input more services into an existing system without having to start promoting from scratch.

With the new 5s capabilities, the framework is shown in Figure 1.

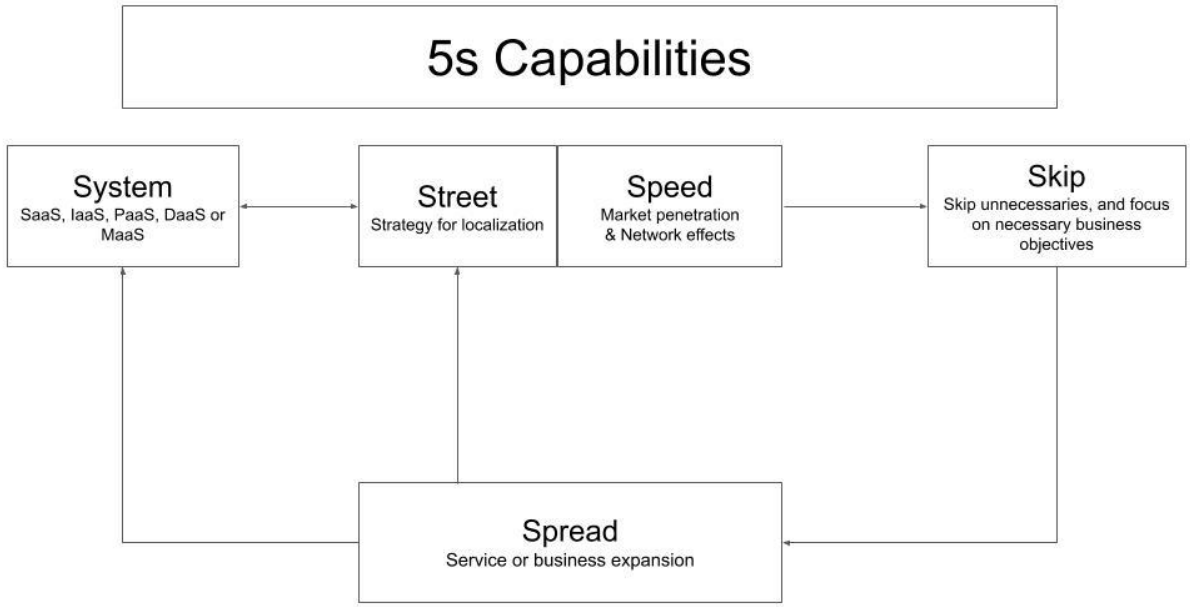


Figure 1. Conceptual framework of 5s Capabilities

III. METHODS AND DATA COLLECTION

The methodology of the systematic review is applied in this study, which involved searching and reviewing published papers on business strategy for Uber, GRAB, and Didi. The search strategy was broad-based, involving several combinations of terms in Google Scholar search engines and journal websites, including ScienceDirect, Emerald, and Academia. The search term met the following criteria: a) dealt with Uber, GRAB, or Didi. b) deal with business issues, growth, localization, or marketing perspective in a specific region. c) published as journal articles or research articles. With a focus on peer-reviewed articles, 34 articles relating to marketing strategy and business issues of Uber, GRAB, or Didi were

obtained, screen, and categorized. The screening process involved reading the title and the abstract. Base on the content of the abstract, each article is also assigned under the 5s category of system, street, speed, skip, spread, or a different combination of each.

The cluster analysis was conducted using query>word frequency function in Nvivo 11 (frequency query boxes restricted to 25 most frequent words with a minimum length of 4 letters and group by generalizations) to scan the abstract and content of the 34 articles. Several word result that does not correlate with the study were added to the "stop words list" function in Nvivo 11, and the new word results and cluster dendrogram were regenerated as shown in Figure 2. A circle graph with a similarity index value from -0.2 to 0.3 is also generated to display the connectivity and relevancy between each frequent keyword, as shown in Figure 3. These word frequency analyses helped to gain insight on the themes of researches regarding business issues of Uber, GRAB, or Didi and to test the occurrence rate of 5s capability in our chosen articles.

IV. RESULTS AND ANALYSIS

From the 34 articles, a total of 29%; n=10 papers are related to the 1st 5s capability of the system such as ride-hailing and ride-sourcing (Teo et al., 2018; Habib, 2019; Chen, 2017; Mohamed et al., 2019; Alemi et al., 2018), dynamic price (Jiao, 2018), platform (Pelzer et al.,2019; Nakamura et al., 2019; Chen et al., 2018), and transportation network (Wang and Mu, 2018), using Uber, LYFT, and GRAB as an example.

A overwhelming number of 94%; n=32 papers are related to the 2nd 5s capability of Street, in which the papers discuss local or global issues about Uber, Didi, or GRAB, such as their marketing strategy, dealing with legal and government restriction (Zhang, 2019), the impact they bring to the local taxi industry and consumer attitude (Berger et al., 2018; Young and Farber, 2019; Alemi et al., 2019; Ma et al., 2019; Valente et al., 2019), and social issues arose from the popularity of sharing economy (Jacquet, 2018; Chee, 2018; Cui and Aziz, 2019).

Regarding the 5s capability of speed, a less number of 18%; n=6 is related to Uber or GRAB's market penetration (Watanabe et al., 2017; Mei and Christopher, 2016), the history of Uber and its consequent evolution (Barot and Chhaniwai, 2018; Hook, 2016; Kim et al., 2018), and how sharing economy has changed the industrial structures in the application areas that the Internet-based platforms are addressing (Henten and Windekilde, 2016).

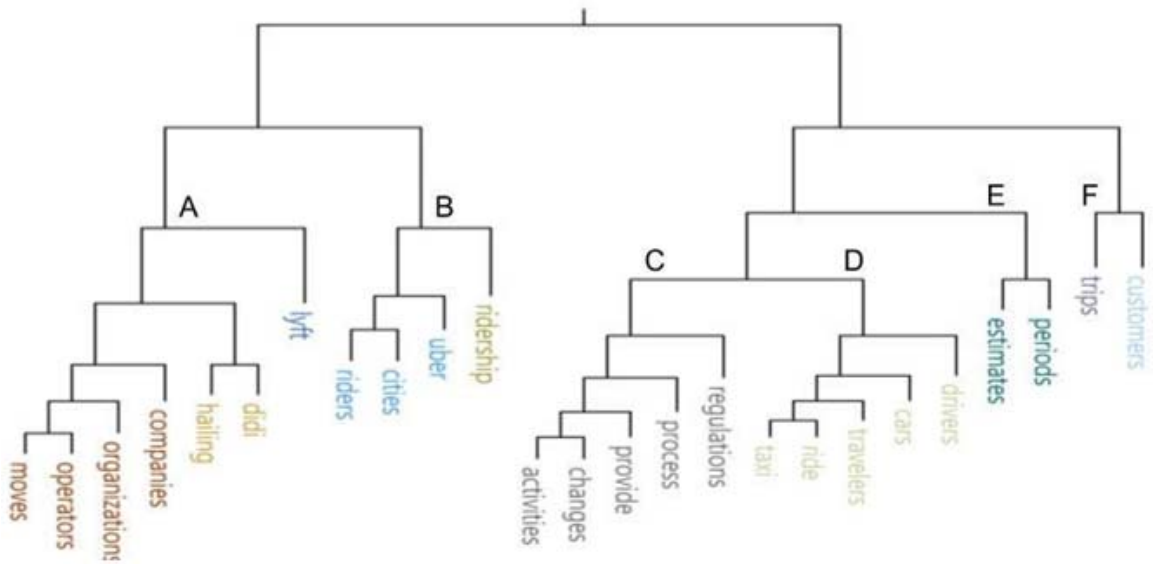


Figure 2. Cluster dendrogram on the 25 most frequent keywords

A total of 15%; n=5 is related to the 5s capability of the skip and what to focus on brand management. For example, a few articles focus on how Uber has repaired its brand and reputation back after the company terminates Travis Kalanick, co-founder and former CEO of Uber (Cook et al., 2018; Griffith et al., 2018). Other articles looked into what Uber should do to minimize the negative experiences of its customers (Sthapit and Björk, 2019).

Last, a total of 32%; n=11 articles are related to the 5s capability of spread, including how Uber or GRAB increased its geographical coverage (Kim et al., 2018), the success and failure in Uber's global expansion (Watanabe et al., 2017), and the effect of Ubernization to the public transit ridership, regulation, and society (Weber, 2019; Fan et al., 2019; Hall et al., 2018; Li et al., 2019; Ma and Long, 2020).

Figure 2 shows the 25 most frequent words (grouped by a generalization of similar keywords using query>word frequency function in Nvivo 11) from

the 34 articles. To better understand the relevancy of these keywords, we group them into six groups. Group B, D, & F represent a general knowledge of Ubernization and the concept of sharing economy that Uber has brought to society. Such knowledge can be seen at the beginning of all articles as scholars have to introduce Uber before analyzing a specific issue of UberS in their chosen interest. Group A is related to Uber as an organization but is also correlated to the 5s capability of street, as these keywords represent Uber's competition and its marketing operations for business growth. Several keywords in Group C are correlated with the 5s capabilities of skip and spread. The keyword "regulation" demonstrates the difficulties Uber faced in different regions, and the keywords "process, changes, and activities" represent similar keywords gathered from sentences in the 34 articles that describe actions Uber took to readjust its strategy. Group E is related to Uber's application to estimate and calculate the rider's cost, and no group is related to the 5s capability of speed.

V. DISCUSSION AND CONCLUSION

Our research brings in a new perspective of dynamic capabilities (Teece, Pisano, and Shuen 1997) and introduces the new 5s capabilities (system, street, speed, skip, and spread) for an Internet startup firm. Using Uber as an example, we adopted the viewpoint from 34 articles related to Uber to find the relevancy of each article and whether these articles and help justify the concept of the 5s capabilities. The result shows that the majority of the articles are highly relevant to the 5s capability of street, representing Uber's marketing strategy for global and localization. Some articles (29%~32%) are relevant to the 5s capability of system and spread, representing the viewpoint of e-hailing service, Ubernization, and the success /failure in Uber's global expansion. Fewer articles (15%~18%) are relevant to the 5s capabilities of speed and skip, representing the viewpoint of Uber's strategy for market penetration and for reaching a network effect, and what Uber had decided to skip and focus.

This paper is not without its limitation. First, the papers chosen for this research is highly related to Uber and less on Didi and GRAB due to the availability of the articles. To strengthen the concept of 5s capabilities, we believe for future study, more papers or non-research articles on Uber, GRAB, Didi, or LYFT can be incorporated to allow more in-depth analysis. Second, this paper uses word frequency to test the concept of the proposed 5s capabilities for internet startup firms. We believe for future research, more quantitative analysis with a variety of internet startup cases can also be incorporated to strengthen the idea of 5s capabilities.

After ten years of business development, the concept of sharing economy brought by Uber or Airbnb has both results in success or failure around the world. What would happen to the four giants of the transportation network company- Uber, Didi, GRAB, and LYFT can also be a potential area of research. It is intended that this study of Uber and the new concept of 5s capabilities will draw further attention to this area from both practitioners and researchers.

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