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人們眼中的創新事物：以 Uber 台灣為例
Innovation as in the eyes of its beholders:
A case study on Uber adoption in Taiwan

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If there is anyone that I would want to owe it all to, it has to be God. I would never have the intelligence to write up even the tiniest part of this thesis in English if it was not God leading me and accompanying me all the way through. From major tasks like collecting data, which I gathered 337 responses in mere two weeks, to minor problems like getting rid of unwanted lines while producing tables, God had heard my pleas and helped me time and again. It is not a perfect research as there were insignificant results which met me by surprise, but God knows that I have come up with my best with His help. I now leave the rest to whoever wants to investigate people's relationship with innovation adoption for further researches.

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The accomplishment of one thing is the fruit of many helping hands. My thanks go to all the people who had lent that helping hand to make the thesis a mission that became possible.

Abstract

There were over 170K startup companies introducing innovative products and services worldwide as of April 2019. Not all of them can survive long enough to carve their names, and many failed. Statistics showed that over 70 percent of new companies failed because they ignored people in their product designs or marketing strategies. Therefore, the study aims to find out the relationship between people and innovation adoption. Five Factor Model of personality and perceived attributes of innovation, one of the major concepts of Diffusion of Innovation, were employed to examine if there are links between the different personality traits and how people perceive the attributes of an innovation. Using Uber as a case study, the research used mixed methods combining quantitative and qualitative tools for data collection. The results concluded that an innovation's attributes, including compatibility, trialability, and complexity, would influence innovation adoption. Also, different personality traits would perceive innovation attributes differently. Finally, people's need should be addressed if an innovative product or service seeks to survive in the market.

摘要

截至 2019 年 4 月為止，超過 17 萬家的新創公司分散在全球各地，販售他們的創新產品與服務。其中許多還未能讓人所熟知，就關門大吉。數據顯示，新創公司活不下去，百分之 70 的原因在於忽略人的因素。該研究以 Uber 為個案，企圖找出人與創新採納之間的關聯。研究從五大人格特質（Five Factor Model of personality）出發，檢視不同個性的人對一件創新事物是否有不同的觀感（perception），以及人格特質是否影響他們對於新事物的採用。研究以質、量化方式並行。分析後發現，創新事物的屬性如相容性、可試用性、複雜性能影響新事物的採用與否。不同的人格則有可能使人們對創新事物的觀感不同。研究也發現人們的需求對於創新事物的採納似乎也具影響力。

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Chapter 1 Introduction

According to PitchBook, a financial data and software company, there are currently over 170K new startup companies, backed by venture capitals, worldwide as of April 2019 (What you can research, 2019). All of them provide innovative products and services that stand a chance to change people's way of life. Fundraising platform Kickstarter, online course provider Udemy, and sharing economy champions Uber and Airbnb are some of the well-known brands. However, startups face a high-level of uncertainty (Schmitt, Rosing, Zhang, & Leatherbee, 2017), and their innovative products do have high rates of failure (Griffith, 2014).

1.1 Businesses fail because "people" are missing

CB Insights, a US-based consulting firm, analyzed 101 startup companies on why their businesses failed. The results showed that 42 percent of the respondents said their products "have no market need," 17 percent viewed their products as "user un-friendly," while another 14 percent admitted that they "ignored customers" (The Top 20 Reasons, 2018). In conclusion, up to 73 percent of the reasons why a startup company fails can be attributed to people,

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be it consumers or clients. If people perceive a product in a positive way and choose to adopt it, there is a market. If not, there is no market.

Therefore, to focus on product innovation itself without considering the people factor would not solve the problem of why an innovation does not spread well. And Diffusion of Innovations (DOI), as proposed by Rogers in 1962 (Rogers, 1983), has been commented as "heavily pro-innovation (Larsen, 2001)."

Based on the above observation, the thesis argues that to know why an innovation is eventually adopted, one has to look into people's differences, such as personality traits, and whether they perceive an innovation in a favorable light. This research selects Uber as a case study because it is an internationally well-known brand and has a presence in Taiwan, which makes it accessible in collecting local data.

1.2 Uber as an innovation: its initial success and challenges

Uber Technologies Inc. was established in 2009 in San Francisco, with the notion of sharing rides that connects independent drivers and customers (Min, So and Jeong, 2018). Uber, initially called UberCab (Wirtz &Tang, 2016), taps into a void in the city where street taxis are difficult to hail, fail to arrive on time,

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and are poorly maintained. But with Uber, all passengers need to do is download the APP, register, enter a credit card number, then all set. After that, passengers can get their Uber services just with a push of a button. Locations of the cabs can be tracked on GPS, so passengers know exactly where they are. People who take Uber cars reportedly have an enjoyable experience because it arrives on time and offers a quicker payment transfer (Ng, 2016). As of 2016, Uber had accumulated 40 million monthly active riders worldwide (Kokalitcheva, 2016).

Nevertheless, Uber was not short of problems at home in the US. Uber drivers-- individuals that offer "shared rides" -- do not need to acquire taxi licenses, and this incurred hostility from local taxi drivers, who comply with every government rule. The company then changed its name from UberCab to Uber (Wirts et al., 2016) to bypass some of the regulations.

Uber's success led to its expansion overseas, including the UK, France, Germany, South Africa, India, China, and Taiwan. While growth can be seen in those markets, Uber is confronted with the same challenges that it faces in the US: antagonism from local taxi drivers. Protests have been seen in France, Germany, and India (Wirts et al., 2016).

In Taiwan, Uber's most successful North Asian market (Li & Cheng, 2019),

the same old problems occurred. To ease animosity, Uber Taiwan launched

cooperation with local taxi companies and initiated a campaign called "Win

Together #No one should lose" (Uber Taiwan, 2019), making it clear that Uber

works hand-in-hand with Taiwan's transportation industries. However, the

strong opposition from local taxi drivers still caused the Taiwan government to

propose amending Article No. 130-1 of the Transportation Management

Regulations. The amendment, which had been dubbed the "Uber clause,"

required Uber to charge passengers by the hour, instead of by meters. Uber,

on the other hand, refused to accept the amendment, saying it deprived drivers

and rental companies of business opportunities (Shan, 2019). The controversy

later drew reactions from the American Institute in Taiwan, the de facto

embassy of the US to the country, saying that Taiwan was "unfriendly for

innovators (Lee, 2019)."

After rounds of negotiations, the government introduced a multipurpose taxi

service program that would issue commercial licenses for non-traditional, ride-

hailing service drivers and encouraged Uber drivers to join in. A multipurpose

taxi service is defined as one in which the driver is not legally required to use a

yellow taxi. The fares are metered. However, passengers must contact the

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drivers through apps. At the time of this writing, over 800 Uber drivers had obtained their commercial licenses to drive non-traditional types of taxis (Hundreds in Taipei, 2019).

1.3 Research base and framework

Uber has provided a good many materials for research in the academic world.

Some scholars discussed Uber as an economic topic for its role in the sharing economy. Others viewed it as a government regulation issue (Min et al., 2018) because just like Airbnb and Amazon Go, a cashless store introduced by Amazon, innovations often find themselves way ahead of government regulations. And when there is a law, it does not necessarily work in favor of the innovation. Airbnb is now subject to a law that regulates short-term rental in the US (Daniels, 2018) that could hamper its development, whereas a San Francisco official is seeking to ban Amazon Go from operating locally (Ioannou, 2019).

Still other researchers recognized individuals as pivotal to Uber usage, not the innovation itself. Min et al., (2018) argued that however innovative such as Uber is, its adoption hinges on people and their perception towards it. They

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examined how respondents perceive relative advantage, complexity, compatibility, and observability, four of the innovation characteristics proposed by Rogers (1995) through perceived ease of use (PEOU) and perceived usefulness (PU), the two major constructs of Technology Acceptance Model (Davis, 1986). The result is that PEOU and PU would affect how people see those attributes of innovations.

Following this line of thought, the thesis proposes that people are the determinant on whether an innovation can survive, adoption-wise. This study proposes the following questions:

RQ 1. How would the PAI of Uber influence its usage in Taiwan?

RQ 2. How would personality traits affect their Uber usage?

RQ 3. How would personality traits affect people to perceive Uber's attributes?

This study first examines the interplay among personality traits, perceived attributes of innovations (PAI), and innovation adoption, hypothesizing that personality alone can influence innovation adoption and PAI. Then the research discusses the methodology used to test the hypotheses, evaluates the results and points out limitations and further discussion concerning the topic.

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Chapter 2 Literature Review

In investigating the personality factor in the innovation adoption as in the case of Uber usage Taiwan, the thesis employs the Five Factor Model (FFM) of personality (McCrae & Costa, 1999) and PAI, firstly introduced by Rogers in 1962 (Rogers, 1983). The purpose of this research is to provide new startups with an idea about what influence people's decision to use an innovative product? Is this adoption behavior based on the perceived attributes of a new product? Or is the behavior the result of potential consumers' personality difference? By choosing Uber as a case on the innovation adoption in Taiwan, the research seeks to find out the answers to those questions.

2.1.1 Perceived attributes of innovation

DOI has been one of the major theories in examining the spreading process of how an innovation finds its way from early adopters to the majority of people. Rogers (1995) suggested that PAI, or perceived characteristics of innovation that he had used interchangeably in his discussion of the diffusion theory, are important in explaining the diffusion of an innovation.

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In *Diffusion of Innovations Fourth Edition* (1995), Rogers maintained that

the five PAI are relative advantage, compatibility, complexity, trialability, and

observability, and each is associated with the rest four and yet are conceptually

different. Relative advantage is the degree to which an innovation is perceived

as being better than the idea it supersedes (p. 212). Compatibility is the degree

to which an innovation is perceived as consistent with the existing values, past

experiences, and needs of potential adopters. This includes compatible or

incompatible (1) with sociocultural values and beliefs, (2) with previously

introduced ideas, or (3) with client needs for the innovation (p. 224). Complexity

is the degree to which an innovation is perceived as relatively difficult to

understand and use (p. 242). Trialability is the degree to which an innovation

may be experimented with on a limited basis (p. 243). Observability is the

degree to which the results of an innovation are visible to others (p. 244).

The classic five PAI have later been extended and combined with PEOU

and PU, evolving into eight perceived characteristics of innovation that would

include voluntariness, image, relative advantage, compatibility, ease of use,

trialability, result demonstrability, and visibility (Moore & Benbasat,1991).

2.1.2 PAI and innovation adoption

Although the five classic PAI captured the essence of how innovation can be viewed. Not all five elements have an equal influence in terms of innovation adoption. In a research on the use of e-appointment scheduling (EAS) services in a primary health care clinic in Australia, it was found out that only perceived relative advantages, complexity, compatibility, and trialability were related to the adoption of the EAS services (Zhang, Yu, Yan, & Spil, 2015).

While studying user adoption of Amazon Go, Kras (2018) identified relative advantage, compatibility, and complexity as having direct relationships with innovation adoption, concluding that compatibility and relative advantage were positively related to adoption whereas complexity was negatively related to adoption.

Van Slyke, Belanger, and Comunale (2004) also recognized relative advantage, compatibility, and complexity as the most relevant variables in terms of innovation adoption in the diffusion researches. Besides, Yi, Fiedler, and Park (2006) indicated that relative advantage, complexity, and compatibility are "the only innovation characteristics consistently related to innovation adoption and implementation."

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In addition to the three key variables concerning innovation adoptions, trialability is considered appropriate when non-adopters of innovation are considered (Min et al., 2018). Since the thesis aims to research both users and non-users of an innovation, trialability is added in as a variable as a result.

Because observability has been broken into two concepts, its discussion would involve implications on result demonstrability and visibility, making the study on observability alone complicated. The thesis excludes observability for clarity reason.

Hence, the research focuses on relative advantage, compatibility, complexity, and trialability, all of which are as perceived, and proposes that

H1: The perceived relative advantage of Uber is positively related to its usage.

H2: The perceived compatibility of Uber is positively related to its usage.

H3: The perceived trialability of Uber is positively related to its usage.

H4: The perceived complexity of Uber is negatively related to its usage.

2.2.1 Personality traits

An innovation is an idea, practice, or object that is perceived to be new by an individual (Flight, D'Souza, & Allaway, 2011). In other words, the perception of innovations stems from the eyes and minds of their beholders. To develop

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an innovative product without investigating people's mind would leave a crucial part of innovation adoption unattended.

The FFM of personality has been known as offering a parsimonious taxonomy, while many other studies in applied psychology tend to provide exhaustive examinations that led to hundreds of personality traits (Barnett, Pearson, Pearson, & Kellermanns, 2015). The FFM labels neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness as major personality traits of individuals. A brief view of the five personality traits is as below:

Table 1. FFM personality traits & characteristics

Personality traits	Characteristics
Extraversion	• Energetic[g]
	• Risk-taking[a]
	• Assertive[e]
	• Confident[d]
Agreeableness	• Altruistic[e]
	• Cooperative[e]
	• Tend to trust[e]
	• Modest[e]
Conscientiousness	• Deliberate[b]
	• Diligent[g]
	• Persevering[c]
	• Achievement-oriented[g]
Neuroticism	• Moody[h]
	• Fearful[a]
	• Anxious[b]
	• Stressed[i]

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(Continued from Table 1)

Openness to experience	• Imaginative[g]
	• Curious[g]
	• Willing to learn[f]
	• Variety-seeking[a]

[a]Anic (2007). [b]Aslan & Cheung-Blunden (2012). [c]Ciavarella, Buchholtz, Riordan, Gatewood, & Stokes (2003). [d]Kolb & Griffith (2009). [e]Lahti, Räikkönen, Lemola, Lahti, Heinonen, Kajantie, Pesonen, Osmond, Barker, & Eriksson (2013). [f]Matzler & Mueller (2011). [g]McCrae et al. (1999). [h]Michikyan, Subrahmanyam, & Dennis (2014). [i]Moutafi, Furnham, & Tsaousis (2005).

2.2.2 Personality traits and innovation adoption

Studies on early adopters suggest that personality traits might explain the reason why some people adopt innovations earlier than others. For example, those who adopt early tend to have higher aspirations for education and have greater rationality than later adopters, which can be related to conscientiousness and openness to experience (Cisternas-Godoy, 2016).

Barnett et al., (2015) tested direct relationships between the Big Five personality traits and technology use of a web-based classroom technological system and discovered that conscientiousness demonstrated a positive association with the actual use of technology, while agreeableness had "no relationship" with the actual use of technology. Their results on neuroticism showed that the more emotional people are, the less likely they are to adopt new technology. Another research on the adoption behavior of computer-based

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learning identified openness to experience, conscientiousness, and extraversion as having strong significance over adoption (Khan, Iahad and Miskon, 2014).

On the contrary to the three personality traits – openness to experience, conscientiousness and extraversion – that were often associated positively with innovation adoption, neuroticism showed a negative relationship with adoption. Aside from the research by Barnett et al. (2015), a study on e-book adoption discovered that people with the trait of neuroticism, which is linked with fearful and anxious towards innovations, seemed to avoid using the electronic format of publications. Rather, they were more comfortable with traditional printed books (Bansal, 2011). Another study on the adoption of Google glasses also showed that neurotic people were more nervous and worrying than those whose emotions were relatively stable. In general, neurotic individuals were less likely to adopt smart glasses (Rauschnabel, Brem, & Ivens, 2015).

Following this line of discussion, the thesis chooses to include conscientiousness, openness to experience, extraversion, and neuroticism as key constructs in measuring personality traits' relationships with Uber usage. Hypotheses concerning personality and the usage are as below:

H5: The more conscientious people are, the more they are going to use Uber.

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H6: The more open to experience people are, the more they are going to use Uber.

H7: The more extraverted people are, the more they are going to use Uber.

H8: The more neurotic people are, the less they are going to use Uber.

2.2.3 Personality traits and PAI

The thesis argues that people are the true determinant of innovation adoption, as opposed to the innovation-oriented diffusion theories, and seeks to explore further whether personality differences would lead to divisive perceptions of those PAI.

Relative advantage

Relative advantage is the extent to which an innovation is perceived as being better than its precursor (Linton & Walsh, 2013) and is referred to as the benefit of adopting the new technology when compared to its cost (Mohr, Sengupta, & Slater, 2009).

It takes diligent efforts and deliberation to compare and decide whether an innovation is indeed better than the previous ones. Therefore, the thesis predicts that

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H9: The more conscientious people are, the more they find out the relative advantage of Uber.

People who are open to experience tend to seek variety and are intellectually curious. They are willing to think about new ideas and unconventional values. Open people also tend to hold a positive attitude towards learning new things (Matzler et al., 2011). Relative advantage is gained through the comparison between at least two products, whereas variety-seeking means to prefer having more than one choice. Therefore, it can be predicted that it takes less effort for variety-seeking people to find out and distinguish a product's relative advantage among an array of competing ones. The thesis suggests that

H10: The more open to experience people are, the more they find out the relative advantage of Uber.

Extraversion is linked to being active and risk-taking (Anic, 2007). Extraverts work quickly, tend to lack patience, and have relatively short attention spans (Lynch & Chernatony, 2007). Relative advantage is usually found in an innovation that improves the efficiency of work or reduces the operational cost (Chen & Zhang, 2016). Therefore, it can be inferred that extraverts tend to recognize the relative advantage more easily than other

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people. Their lack-of-patience nature will propel them to constantly on the lookout for more efficient, cost- and time-saving options. The research hypothesizes that

H11: The more extraverted people are, the more they find out the relative advantage of Uber.

Neuroticism, anxiety, and fearfulness have been linked together (Panitz, Sperl, Hennig, Klucken, Hermann, & Mueller, 2018) in the context of innovation literature. Previous studies mentioned in section 2.2.2 have indicated a negative link between neuroticism and innovation adoption. Hence, the research predicts a negative relationship between neuroticism and of relative advantage. The thesis hypothesizes that

H12: The more neurotic people are, the less they find out the relative advantage of Uber.

Compatibility

Compatibility has been defined as closely linked to relative advantage in innovation studies. While relative advantage is the incremental benefit to be gained by using one innovation over its alternatives, compatibility is the extent to which an innovation is compatible with the user's prior experiences (Davis, 2003).

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Because compatibility is a closely-knit construct with relative advantage, the thesis proposes that relationships between the four personality traits and relative advantage might also exist in the case of compatibility. The study hypothesizes that

H13: The more conscientious people are, the more they perceive Uber as compatible with existing products.

H14: The more open to experience people are, the more they perceive Uber as compatible with existing products.

H15: The more extraverted people are, the more they perceive Uber as compatible with existing products.

H16: The more neurotic people are, the less they perceive Uber as compatible with existing products.

Trialability

Trialability is whether an innovation offers the possibility to be trialed and experimented before adoption (Sanson-Fisher, 2004). In the context of Uber usage, which combines APP and riding experience, conscientious consumers are the group of people who are more likely to go to the extra mile to install the APP, register an account and then get experimental rides. The diligent nature of conscientious people might help them perceive Uber as more trialable than

those who don't bother to research the product at all. Hence, the thesis suggests that

H17: The more conscientious people are, the more they perceive Uber as trialable.

Trialability involves experiment with new things. Openness to experience has curiosity and broad-minded as two of its major characteristics (Ciavarella et al., 2003). People who are curious and broad-minded are more open to experimenting with innovations. The thesis argues that

H18: The more open to experience people are, the more they perceive Uber as trialable.

Trialability, which is associated with the experiment, can also be attractive to extraverted potential consumers as they are active (Ciavarella et al., 2003). Willing to take actions to experiment with an innovation may help them find out the trialability more easily. The thesis proposes that

H19: The more extraverted people are, the more they perceive Uber as trialable.

Neuroticism is characterized as anxious, having phobias, worrisome, and stressful (Ahmad, Ganaie, & Suhial, 2015), it is not difficult to figure out that neurotic people, due to their phobias towards new inventions, may not be bold enough to try out new products, thus not being able to find out whether a new

product is trialable. The thesis suggests a negative relationship between neuroticism and trialability, indicating that

H20: The more neurotic people are, the less they perceive Uber as trialable.

Complexity

Complexity is the perceived difficulties that people may encounter when seeking to understand and use technology (Shihab, Meilatinova, Hidayanto, & Herkules, 2017).

While conscientious people may also find an innovation complex, they are less likely to become troubled by it. Rather, due to their persevering nature (Ciavarella et al., 2003) they are likely to wade through difficulties and complexity as they investigate the new product. In light of this, the thesis suggests a negative relationship between conscientiousness and complexity and hypothesizes that

H21: The more conscientious people are, the less they are daunted by the complexity of Uber.

Complexity of an innovative product can be perceived as less of an issue for people who are curious and have an appetite to learn, which are important properties of openness to experience. Despite they may also perceive an innovation as complex, their positive attitude towards learning (Matzler et al.,

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2011) would not allow them to become intimidated by the complexity. Therefore, the thesis hypothesizes that

H22: The more open to experience people are, the less they are daunted by the complexity of Uber.

Extraversion is linked to assertiveness (Ciavarella et al., 2003). Assertive people are confident (Kolb et al., 2009). Though they may see an innovation as complex, they are less likely to feel intimidated by it. The study proposes that

H23: The more extraverted people are, the less they are daunted by the complexity of Uber.

Anxious, neurotic people (Aslan et al., 2012) and easily stressed (Moutafi et al., 2005) may find investigating, trialing or using an innovation a stressful thing to do, thus perceiving it as more complex than people who are comparatively less neurotic. Hence, the thesis proposes that

H24: The more neurotic people are, the more they are daunted by the complexity of Uber.

Demographics and innovation adoption: H25 & 26

In the innovation adoption case of Uber, gender difference emerged to be a factor predicting adoption behavior. A study on Uber adoption in Bangladesh

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and Pakistan discovered that women were more likely to take Uber than men because Uber showed a better safety record than other local taxi services. Uber also allowed passengers to designate their preferred drivers, so women can choose female drivers as they want, thus leading more women to be willing to use Uber compared with men (Zafar & Rahman, 2018).

Therefore, the thesis would like to find out whether gender also plays a role in Uber usage in Taiwan and hypothesizes that

H25: Gender difference will influence Uber usage.

Also, a study on ride-hailing services (such as Uber) in California showed that people with higher income are more likely to use the services than individuals with lower or medium-income level (Alemi, Circella, Handy, & Mokhtarian, 2018)

The thesis wants to test if Taiwan is the same in terms of the relationship between Uber usage and income level and predicts that

H26: The higher the monthly disposable income, the more they will use Uber.

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The research structure is shown below, and a full list of hypotheses is in Table 2.
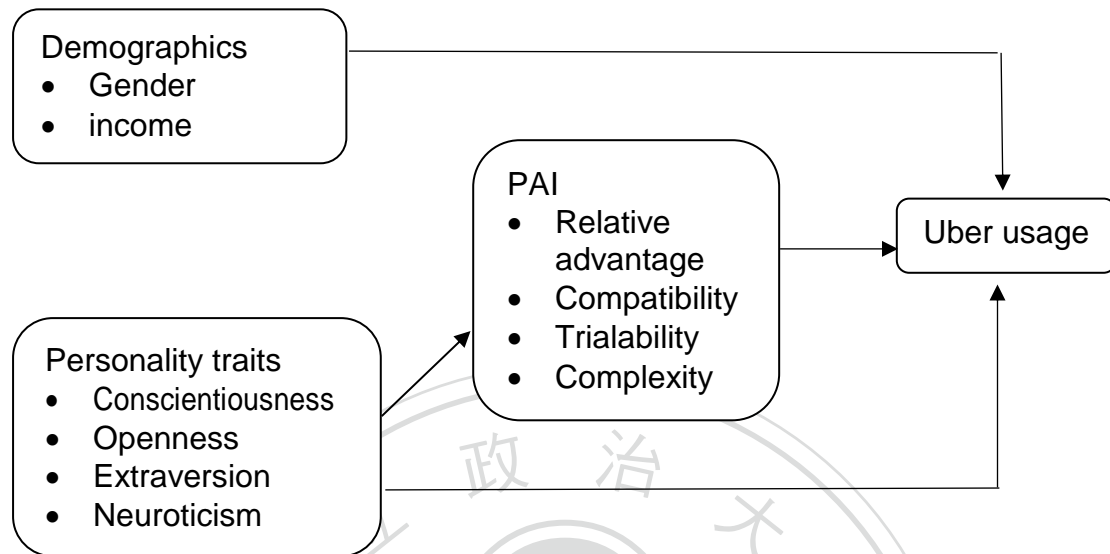
Table 2. List of hypotheses

PAI and innovation adoption
H1: The perceived relative advantage of Uber is positively related to its adoption.
H2: The perceived compatibility of Uber is positively related to its adoption.
H3: The perceived trialability of Uber is positively related to its adoption.
H4: The perceived complexity of Uber is negatively related to its adoption.
Personality traits and innovation adoption
H5: The more conscientious people are, the more they are going to use Uber.
H6: The more open to experience people are, the more they are going to use Uber.
H7: The more extraverted people are, the more they are going to use Uber.
H8: The more neurotic people are, the less they are going to use Uber.
Personality traits and PAI-- Relative advantage
H9: The more conscientious people are, the more they find out the relative advantage of Uber.
H10: The more open to experience people are, the more they find out the relative advantage of Uber.
H11: The more extraverted people are, the more they find out the relative advantage of Uber.
H12: The more neurotic people are, the less they find out the relative advantage of Uber.

(Continued from Table 2)

Compatibility

H13: The more conscientious people are, the more they perceive Uber as compatible with existing products.

H14: The more open to experience people are, the more they perceive Uber as compatible with existing products.

H15: The more extraverted people are, the more they perceive Uber as compatible with existing products.

H16: The more neurotic people are, the less they perceive Uber as compatible with existing products.

Trialability

H17: The more conscientious people are, the more they perceive Uber as trialable.

H18: The more open to experience people are, the more they perceive Uber as trialable.

H19: The more extraverted people are, the more they perceive Uber as trialable.

H20: The more neurotic people are, the less they perceive Uber as trialable.

Neuroticism

H21: The more conscientious people are, the less they are daunted by the complexity of Uber.

H22: The more open to experience people are, the less they are daunted by the complexity of Uber.

H23: The more extraverted people are, the less they are daunted by the complexity of Uber.

H24: The more neurotic people are, the more they are daunted by the complexity of Uber.

Demographics and Uber usage

H25: Gender difference will influence Uber usage.

H26: The higher the monthly disposable income, the higher the chances they will use Uber.

Chapter 3 Methodology

This research was conducted through mixed methods, combining a closed-ended quantitative survey and open-ended, structured qualitative interviews. This allowed the study to gain a better understanding of the research topic, as personality, or the human mind, is a complex issue to comprehend.

3.1 Data collection and sample

In the quantitative part, an online survey was conducted using snowball sampling, meaning that the questionnaires were first distributed to the author's contacts then spread out to the networks of those contacts. In addition to snowballing, the survey was also posted on social media, such as online graduate student communities on Facebook. A total of 337 questionnaires were collected. All questionnaires were filled out completely, and no missing data was found.

In the qualitative part, the author selected four participants, two had used Uber before the in-depth interviews, and two had never tried. Two of them were

graduate students at National Chengchi University, both of whom heard about

Uber and are Uber users. The third interviewee had a research background in

transportation issues. The fourth one was a cram school teacher. They were

given open-ended questions corresponding to research hypotheses. Questions

are listed in appendix 1.

3.2 Measures

This research drew on three ready-made measurement scales, built for

personality traits and PAI, respectively. Modification of those scales was being

made to fit the research purpose of the thesis.

3.2.1 Personality traits

The FFM of personality developed for itself the "Big Five Inventory," whose

copyright was held by Berkeley Personality Lab (The Big Five Inventory, 2007).

The Lab offered several language versions of the personality test in the form of

the 5-point Likert scale and allowed academic use for free. The thesis took

advantage of the Chinese version of the scale then altered it into a

measurement tool to evaluate the personality traits of Uber users, including

conscientiousness, openness to experience, extraversion, and neuroticism.

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3.2.2 PAI

Two existing scales previously developed for PAI-related researches were employed to form the thesis' measurement part that tested respondents' perceptions towards the attributes of Uber.

To obtain better knowledge about consumer product and marketing management, Flight et al. (2011) developed a comprehensive 43-item scale that measured 15 unique innovation characteristics, with the help of data collected from 628 respondents.

Moore et al. (1991), on the other hand, investigated users' adoption of Personal Work Stations and created a 38-item measurement instrument that comprised eight PAI, based on Rogers' classic five (1995). They added voluntariness, image, and ease of use while replacing observability with visibility and result demonstrability.

Based on the three measurement scales, this research formed a 39-item scale that measures Uber usage behavior, personality traits, and PAI. And since Uber usage is a continuous behavior, it was measured by frequency of use over the past year. The response category included "never," "1-5 times," "6-10 times," "11-15 times," "more than 15 times." Personality traits and PAI were measured by the 5-point Likert scale, ranging from 1 (strongly disagree)

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to 5 (strongly agree). Each construct of personality trait and PAI was measured

with four questions.

Chapter 4 Results

This chapter details the quantitative and qualitative results of the research. The first section provides a demographic overview of the respondents. The second section presents the measurement validation detailing the reliability of constructs used to test the proposed relationships. The third section examines hypotheses employing multiple linear regression analysis, with the support of qualitative interviews.

4.1 Demographic profile

Of all 337 responses collected, non-Uber users accounted for 43.3 percent of the sampled population, whereas Uber users took up the rest 56.7 percent. The majority of users reported that they took Uber 1-5 times over the past year (31.5 percent). Most of the Uber adopters spent less than NT$500 using the service over the same period (19 percent). Female respondents constituted 72.1 percent of the sample, while male respondents accounted for 27.9 percent. Some 49 percent of the total respondents were aged 21-39 years old, although people between 40-59 years old also took up 43.3 percent of the total sample.

Up to 73.9 percent of the respondents said they live in Taipei. About half of the

people (50.4 percent) owned a bachelor's degree or equivalent, while those

who owned a master's degree or above also accounted for 31.2 percent of the

total population. Almost half of the respondents (49.6 percent) reported that

over NT$30,000 is at their disposal per month. Another 22.6 percent said

NT$10,001- NT$20,000, 16.3 percent of them said NT$10,000 and below, and

11.6 percent estimated their monthly disposable income to be NT$20,001-

NT$29,999. Table 3 details the demographic results.

Table 3. Demographic profile

	Respondents	Percentage
Gender		
Male	94	27.9
Female	243	72.1
Age		
20 and below	8	2.4
21-39	165	49
40-59	146	43.3
60 and above	18	5.3
Educational Level		
Junior high school and below	2	0.6
Senior high school or equivalent	59	17.5
University or equivalent	170	50.4
Graduate school	105	31.2
Others	1	0.3
Monthly disposable income		
NT$10,000 and below	55	16.3
NT$10,001- NT$20,000	76	22.6
NT$20,001- NT$29,999	39	11.6
NT$30,000 and above	167	49.6
Residence		
Taipei	249	73.9
Taichung	20	5.9
Kaohsiung	26	7.7
Others	42	12.5

Note: The total percentage of monthly disposable income became 101 percent due to rounding.

4.2 Measurement Validation

Validation of the measurements was evaluated based on individual indicator reliability and construct reliability. Factor analysis was used to check the loading value of each indicator. An indicator can be viewed as part of a construct when its loading value is ≥.707, but values between .4 and .7 are allowed if it helps improve content validity (Sánchez & Sahuquillo, 2016). In this research of Uber usage, three items concerning openness to experience, compatibility, and trialability had loading values below .5 and were removed to enhance indicators' validity.

Construct reliability was assessed employing Cronbach's Alpha. All Cronbach coefficient alpha values, except conscientiousness, were higher than the threshold of .7. Konduri, Gupchup, Borrego, and Worley-Louis (2006) pointed out that a reliability coefficient of .7 is considered acceptable, but reliabilities of .5 to .7 can also be sufficiently reliable.

Table 4. Measurement Validation

Constructs and indicators	Factor Loading	Cronbach's Alpha
Conscientiousness		.641
Deliberate	.529	
Diligent	.774	
Persevering	.779	
Achievement-oriented	.680	

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(Continued from Table 4)

Openness to experience		.738
Imaginative	.769	
Curious	.856	
Willing to learn	.805	
Extraversion		.763
Energetic	.695	
Risk-taking	.674	
Assertive	.831	
Confident	.855	
Neuroticism		.793
Moody	.787	
Fearful	.592	
Anxious	.886	
Stressed	.868	
Relative Advantage		.780
Time-saving	.797	
Cost-saving	.740	
Efficiency-improving	.877	
Self-image enhancing	.689	
Compatibility		.865
Acceptable in society	.785	
Compatible with existing lifestyle	.945	
Compatible with the lifestyle longed for	.931	
Trialability		.876
Can be trialed for free	.875	
Offers lots of opportunities to try	.895	
Can be fully trialed	.915	
Complexity		.877
Difficult to use	.862	
Takes a long time to learn	.886	
Requires previous knowledge to learn	.782	
Difficult in design	.887	

4.3 Data analysis

Multiple linear regression analysis was employed to analyze the data for two main reasons. Firstly, personality trait is not mutually exclusive as everybody owns more than one trait. Secondly, the decision of Uber usage is more of an aggregate result after all viewing and reviewing all attributes of an innovation. An adoption behavior is hardly the consequence of evaluating only one PAI. Therefore, to investigate whether personality differences and PAI lead to the usage of Uber and whether these personality traits lead to divisive perceptions towards the attributes of Uber, multiple regression serves as an appropriate analyzing tool.

The 26 proposed hypotheses were divided and tested in groups, as shown in this section. Bivariate correlations were first conducted to each group before the multiple regression analysis. The results were shown as below. To save space, in Table 5 Uber usage is abbreviated as Uber, conscientiousness as CN, extraversion as EV, openness to experience as OP, neuroticism as NR, relative advantage as RA, compatibility as CP, trialability as TR, and complexity as CX.

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Table 5. PAI, personality traits and Uber usage correlations

		Uber	CN	EV	OP	NR	RA	CP	TR	CX
Uber	Pearson Correlation	1	.172**	.120*	.256**	-.168**	.441**	.616**	.588**	-.468**
	Sig. (2-tailed)		.002	.027	.000	.002	.000	.000	.000	.000
	N	337	337	337	337	337	337	337	337	337
CN	Pearson Correlation	.172**	1	.444**	.534**	-.025	.285**	.149**	.293**	-.187**
	Sig. (2-tailed)	.002		.000	.000	.643	.000	.006	.000	.001
	N	337	337	337	337	337	337	337	337	337
EV	Pearson Correlation	.120*	.444**	1	.433**	.011	.195**	.208**	.291**	-.127*
	Sig. (2-tailed)	.027	.000		.000	.838	.000	.000	.000	.019
	N	337	337	337	337	337	337	337	337	337
OP	Pearson Correlation	.256**	.534**	.433**	1	-.281**	.207**	.232**	.340**	-.206**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000
	N	337	337	337	337	337	337	337	337	337
NR	Pearson Correlation	-.168**	-.025	.011	-.281**	1	.054	-.064	-.072	.189**
	Sig. (2-tailed)	.002	.643	.838	.000		.326	.239	.189	.000
	N	337	337	337	337	337	337	337	337	337
RA	Pearson Correlation	.441**	.285**	.195**	.207**	.054	1	.657**	.624**	-.351**
	Sig. (2-tailed)	.000	.000	.000	.000	.326		.000	.000	.000
	N	337	337	337	337	337	337	337	337	337
CP	Pearson Correlation	.616**	.149**	.208**	.232**	-.064	.657**	1	.774**	-.527**
	Sig. (2-tailed)	.000	.006	.000	.000	.239	.000		.000	.000
	N	337	337	337	337	337	337	337	337	337
TR	Pearson Correlation	.588**	.293**	.291**	.340**	-.072	.624**	.774**	1	-.518**
	Sig. (2-tailed)	.000	.000	.000	.000	.189	.000	.000		.000
	N	337	337	337	337	337	337	337	337	337
CX	Pearson Correlation	-.468**	-.187**	-.127*	-.206**	.189**	-.351**	-.527**	-.518**	1
	Sig. (2-tailed)	.000	.001	.019	.000	.000	.000	.000	.000	
	N	337	337	337	337	337	337	337	337	337

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

4.3.1 PAI, personality traits, and Uber usage: H1—H8

Hypotheses 1 to 8 tested about PAI and personality traits' relationships with Uber usage. Together, the eight variables of PAI and personality explained 43.2 percent of the variance in Uber usage, with an adjusted R Square value at .432.

Three of the four variables, namely compatibility, trialability, and complexity, were found to be significant in predicting the usage of Uber in Taiwan. Compatibility was positively related to Uber usage (β = .349, p < .001). Trialability was positively related to its usage, with β=.216, p <.05. Complexity was negatively related to its usage, with β = -.138, p < .05.

The statistically supported hypotheses meant that perceptions towards the perceived compatibility and trialability of Uber were positively related to its usage, whereas complexity was negatively related to Uber usage.

Concerning the relationship between compatibility and Uber usage, D.L., a researcher on Taiwan's transportation regulations and a non-Uber user, commented:

> People who are already accustomed to dialing 55688 (a ride-hailing service provided by Taiwan Taxi) might think that Uber is as convenient as 55688, and therefore, are willing to use Uber.

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The statement of "as convenient as" can be seen as a claim that supported the perceived compatibility of Uber.

Personality-wise, quantitative, and qualitative analyses produced mixed results. Quantitative results showed that no relationships were found between the four personality traits and the usage behavior of Uber (Table 6). However, in-depth interview suggested that extraversion is likely to be linked positively with Uber usage.

Rendering her thoughts as to the kind of people who would use Uber, L.K., an Uber user and a graduate student, said:

> I think it must be extraverts who are more likely to use Uber. Since there are still some disputes about Uber, if you are not comfortable enough, you wouldn't use it. There are conflicts about licenses and with other taxi drivers. Also, extraverted people are those who are comfortable with sharing personal information with Uber and other taxi companies. You have to share with them your information like credit card numbers. So, it has to be risk-taking people or something like that.

Table 6. PAI, personality traits, and Uber usage: H1—H8

	Hypotheses	Coeff.(β)	t-value	Sig.	Supported
H1	Relative advantage	.029	.505	.614	No
H2	Compatibility	.349	4.781	.000	Yes
H3	Trialability	.216	3.038	.003	Yes
H4	Complexity	-.138	-2.724	.007	Yes
H5	Conscientiousness	.018	.343	.732	No
H6	Openness to experience	-.073	-1.518	.130	No
H7	Extraversion	.064	1.185	.237	No
H8	Neuroticism	-.087	-1.939	.053	No

a. Adjusted R square = .432
b. Dependent variable: Uber usage

4.3.2 Personality traits and relative advantage: H9—H12

Hypotheses 9, 10, 11, and 12 propose possible relationships between the four featured personality traits and the perceived relative advantage of Uber.

In total, the four personality traits (conscientiousness, openness to experience, extraversion, and neuroticism) explained 8.5 percent of the variance in how people perceived the relative advantage of Uber, with an adjusted R Square value of .085. Of the four traits tested, conscientiousness was found to be significantly related to relative advantage, with β =.211, $p <$ .05. Therefore, hypothesis 9 was statistically proven valid: The more conscientious people are, the more they find out the relative advantage of Uber. Table 7 details the results.

Table 7. Personality traits and relative advantage: H9—H12

	Hypotheses	Coeff. (β)	t-value	Sig.	Supported
H9	Conscientiousness	.211	3.259	.001	Yes
H10	Openness to experience	.060	.986	.325	No
H11	Extraversion	.092	1.326	.174	No
H12	Neuroticism	.084	1.521	.129	No

a. Adjusted R square = .085
b. Dependent variable: relative advantage

Speaking of why conscientious people can recognize that there are relative advantages about Uber, D.L. commented:

People who are fussy and attend to details are more likely to find out the relative advantage of Uber when compared with local taxis.

Attention to details, as noted by the interviewee, is a common property shared by conscientious people. This means that conscientious people are more likely to discover the relative advantage of Uber.

4.3.3 Personality traits and compatibility: H13—H16

Hypotheses 13, 14, 15, and 16 predict possible relationships between personality traits and the perceived compatibility of Uber. The explanatory power of personality traits to predict the variance in the compatibility of Uber was 5.7 percent, as the adjusted R Square value was at .057. Two of the four personality traits were significantly related to the compatibility of Uber.

Openness to experience was positively related to the compatibility of Uber (β = .136, p < .05), and extraversion was also positively related to compatibility, with β=.170, p <.05. Hypotheses 14 and 15 were supported, showing that the more open to experience or extraverted people are, the more they can perceive Uber as compatible with existing products in the market, for instance, local taxis. Table 8 details the results of the hypotheses.

Table 8: Personality traits and compatibility: H13—H16

	Hypotheses	Coeff. (β)	t-value	Sig.	Supported
H13	Conscientiousness	-.003	-.042	.967	No
H14	Openness to experience	.136	2.201	.028	Yes
H15	Extraversion	.170	2.469	.014	Yes
H16	Neuroticism	-.018	-.322	.748	No

a. Adjusted R square = .057
b. Dependent variable: compatibility

A positive relationship was also found between openness to experience and compatibility as Uber user, L.K, pointed out:

Tech-savvy people will find about the compatibility of Uber. Because they are willing to learn about technology, feel comfortable using it and thus can tell about the compatibility of Uber more easily than other people.

A willingness to learn new stuff has been associated as one of the important characteristics of openness to experience (Matzler e. al., 2011).

4.3.4 Personality traits and trialability: H17—H20

Hypotheses 17, 18, 19, and 20 suggest personality traits' possible relationships with the perceived trialability of Uber. Personality traits accounted for 13.9 percent of the variance in the trialability of Uber, with an adjusted R Square value at .139. Two of the four personality traits were shown to be significantly related to the PAI. Openness to experience was positively related to the trialability of Uber (β = .148, $p < .05$). Extraversion was also positively related to trialability, with β=.212, $p <.05$.

Thus, Hypotheses 18 and 19 were quantitively supported, meaning the more open to experience or extraverted people are, the more they can view Uber as trialable as an innovation. Table 9 details the results of the hypotheses.

Table 9: Personality traits and trialability: H17—H20

	Hypotheses	Coeff. (β)	t-value	Sig.	Supported
H17	Conscientiousness	.114	1.812	.071	No
H18	Openness to experience	.148	2.516	.012	Yes
H19	Extraversion	.212	3.228	.001	Yes
H20	Neuroticism	-.011	-.202	.840	No

a. Adjusted R square = .139
b. Dependent variable: trialability

Openness to experience and perceived trialability was also found to be positively related as T.T., a graduate student and an Uber user, commented:

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> The first time I tried Uber was not out of necessity. I was just interested in it.
>
> Just curious. I later found out that it was kind of convenient, and then I grew
>
> to have a preference of it over other taxi services.

Curiosity is linked to the personality trait of openness to experience (McCrae

et al., 1999).

4.3.5 Personality traits and complexity: H21—H24

Hypotheses 21, 22, 23, and 24 suggest the possible relationships between

personality traits and the perceived complexity of Uber. Personality traits

explained 6.4 percent of the variance in the complexity of Uber, with an adjusted

R Square at .064.

Of all the personality traits, neuroticism was found to be significantly related

to the PAI, with β = -.165, p < .05. Hypothesis 24, which predicts that

neuroticism is positively related to the complexity of Uber, was proven valid.

The result showed that the more neurotic people are, the more they perceive

the complexity of Uber as too daunting to cope with. It meant that neurotic

people were more likely to see installing mobile APPs, registering an account,

getting acquaintances with the GPS, then finally hailing a car as too

complicated to adopt. The statistical result was also consistent with a qualitative

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interview, in which an interviewee mentioned that being timid can hold people

back from using Uber. K.J., a non-Uber user, commented:

I think timid people may hold a reserved attitude toward Uber adoption.

Timid is also one of the characteristics of neuroticism (Hurley, 2010). Table

10 details the results of the hypotheses.

Table 10: Personality traits and complexity: H21—H24

	Hypotheses	Coeff. (β)	t-value	Sig.	Supported
H21	Conscientiousness	-.124	-1.897	.059	No
H22	Openness to experience	-.041	-.675	.500	No
H23	Extraversion	-.075	-1.097	.273	No
H24	Neuroticism	.165	2.951	.003	Yes

    a. Adjusted R square = .064
    b. Dependent variable: complexity

4.3.6 Demographics and Uber usage: H25 & H26

Hypotheses 25 and 26 suggest that gender and monthly disposable

income may also influence people's decision to use Uber. Demographics

explained 4.6 percent of the variance in Uber usage, with an adjusted R Square

value at .046. Both gender and monthly disposable income were shown to be

significantly related to Uber usage. Gender difference influenced Uber usage

($β = -.194$, $p < .001$), with male respondents (coded as 1) being the majority of

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users. Monthly disposable income was also positively related to Uber usage,

with β=.116, p <.05. Table 11 details the results of the hypotheses.

Table 11: Demographics and Uber usage: H25 & H26

	Hypotheses	Coeff. (β)	t-value	Sig.	Supported
H25	Gender	-.194	-3.633	.000	Yes
H26	Monthly disposable income	.116	2.179	.030	Yes

a. Adjusted R square = .046
b. Dependent variable: Uber usage

A qualitative interview with a female non-Uber user explained the gender

difference in Uber usage. K.J., a cram school teacher and Non-Uber user, said:

I would consider credibility and safety issues. Whether the use of Uber is

protected by the government is very important. For women, safety is the

primary concern. In the early days, it was unsafe for females to take taxis,

especially after Peng Wan-ru (彭婉如, a prominent women movement figure

in Taiwan) was killed while taking a taxi ride. It was terrifying. It is better for

women to choose a taxi company that has earned government approval. But

as to Uber, I would ask: what it is? With doubts in my mind, I would not take

risks and use Uber.

An interview also supports a positive relationship between monthly

disposable income and Uber usage. D.L., the non-Uber user, commented:

People who are highly paid may use Uber more. Uber drivers would wait for

you like private car chauffeurs, and not turn away and just leave if you are

late.

4.4 Qualitative results

Most of the qualitative results were consistent with quantitative analysis,

and there are two things worth mentioning. Firstly, while multiple regression

analysis did not show relationships between personality traits and Uber usage,

a qualitative interview suggested that extraverted people were more likely to

take Uber. Secondly, albeit not addressed in hypotheses, interviewees pointed

out the needs of various kinds as a motivation to use Uber.

K.J., a non-Uber user, said:

It's not necessarily about personality traits; it's more about necessity. Let's

say people who live in a rural area and have a certain need for transportation.

It might not be possible for them to grab a taxi on the roadside and go, and

this is where Uber comes to mind.

She also mentioned the need for privacy as a motivation to use Uber:

People with a greater need for privacy might find out the differences (the

relative advantage and compatibility) between an Uber and existing products

since they are always searching for transportation tools that better protect

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their privacy. Take Han Bing, daughter of Kaohsiung mayor. One day she

was caught off guard and taken pictures by a stranger as she got off a taxi.

She might want to find an alternative way to transport, rather than taking the

local taxis.

T.T., an Uber adopter, commented:

Those people who have a constant need to travel by taxi or the alike would

notice the relative advantage/compatibility of Uber. People who only take a

taxi once in a while would not recognize the differences between the two. My

mother, for example, is now an Uber user as she grew older and no longer

rides a motorcycle. She noticed that Uber offers a lot of discounts, and she

can tell which one saves more money.

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Chapter 5 Discussion

The purpose of this study is to investigate the roles of personality traits in Uber usage and the perception of innovation attributes. The thesis hypothesizes that people have the final say in using an innovation. Multiple linear regression analysis and qualitative interviews were used to test the 26 proposed relationships, and results were detailed in Chapter 4.

5.1 Summary of findings

The first finding is that the adjusted R-square values explaining the variance in Uber usage and PAI were low as presented in Chapter 4. Chatterjee, Singh, Goyal, and Gupta (2015) explained the low R-squared values and adjusted R-squared values, arguing that human behaviors are hard to predict. They pointed out that if the R-square values are low but have statistically significant predictors, one can still draw important conclusions based on the data results.

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5.1.1 PAI and innovation adoption

When all four PAI (relative advantage, compatibility, trialability, and complexity) were counted in as independent variables in multiple regression analysis, all were predictors to the dependent variable of Uber usage, except relative advantage ($\beta = .029$, $p > .05$).

The reason that relative advantage failed to predict a relationship with innovation adoption can be explained by Tornatzky and Klein (1982), who claimed that relative advantage is a reduplicative notion to compatibility (Lin & Li, 2014). This could mean that for those people who have a habit of using mobile phones for various functions, Uber is just another taxi service with APPs and is no different from other products, for example, Taiwan Taxi, one of the leading cab services in Taiwan. As a result, the relative advantage of Uber was not being distinguished as an attribute.

5.1.2 Personality traits and innovation adoption

The results in Chapter 4 showed mixed results as qualitative analysis disproved all hypotheses concerning personality traits and Uber usage, while qualitative interview said that extraversion might be linked to innovation adoption. Hence, there is no concrete conclusion as to whether personality

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traits have, or do not have an influence on innovation adoption, and this requires more researches.

5.1.3 Personality traits and PAI

Relative Advantage

Of all personality traits, only conscientiousness was found to be positively associated with the perceived relative advantage of Uber ($β$ =.211, $p < .05$), meaning that the more conscientious people are, the more they can find out the relative advantage of Uber.

Therefore, conscientiousness may predict a positive relationship with relative advantage. Open people's ability to find out the relative advantage of an innovation as cited in previous literature could be enlarged. The same thing happened to their extraverted counterparts. Also, neurotic people's inability to find out relative advantage was over-emphasized as the negative relationship between neuroticism and relative advantage was not significant ($β$ =084, $p > .05$).

Compatibility & Trialability

As expected, both openness to experience and extraversion were positively associated with the trialability of an innovation, meaning that people

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who are curious, broad-minded, assertive and confident are more likely to perceive Uber as compatible with existing taxi services. They are also more likely to view an innovation as trialable in the case of an innovation.

There was no relationship found between conscientiousness and relative advantage (β = -.003, p > .05). The "fussy and attend to details" comment provided by non-Uber user D.L. in Chapter 4 may help explain the result. It is possible that conscientious people are so good at attending to details that they found only what is different (such as relative advantage) and failed to perceive the two as compatible with each other.

Neuroticism's negative relationships with compatibility and trialability were not significant. Standardized beta coefficient between neuroticism and compatibility has a value of -.018, p > .05, while the value between neuroticism and trialability is -.011, p > .05. The findings suggested that just because people are fearful, phobias, and easily worried does not mean they lack the abilities to perceive an innovation as something compatible with previous products. Also, being neurotic does not mean they cannot see a new product as trialable.

Complexity

Of the four personality traits tested, only neuroticism is significantly related to complexity (β =.165, $p < .05$), suggesting that the more neurotic people are, the more they perceive the complexity of an innovation as daunting.

Although conscientiousness, openness to experience, and extraversion did show negative standardized beta coefficient values, none of these was significant enough to prove a negative relationship with the complexity ($p > .05$). This meant that those personality traits' capabilities to overcome the perceived complexity might be highly stressed in previous studies, and people do feel daunted sometimes no matter how conscientious, open, or extraverted they are.

5.1.4 Demographics and Uber usage

Both demographic variables of gender and monthly disposable income were proven to influence Uber usage. But, contradicting to the literature in Chapter 2 where Zafar et al., (2018) discovered that more women adopted Uber due to the company's better safety records in Bangladesh and Pakistan, this study in Taiwan showed male respondents used more Uber than women did. Therefore, the gender issue of Uber adoption should be taken into the social context, and not to be generalized universally.

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5.2 Other findings

5.2.1 Hierarchical regression analysis results

To gain a comprehensive view of the variables' influences on Uber usage, a

hierarchical regression analysis was conducted, and the results were displayed

in Table 12.

Table 12: Hierarchical multiple regression results on Uber usage

	Coeff. (β)	t-value	Sig.
Model 1			
Conscientiousness	.065	.996	.320
Openness to experience	.013	.218	.827
Extraversion	.183	2.670	.008
Neuroticism	-.116	-2.068	.039
Model 2			
Conscientiousness	.018	.343	.732
Openness to experience	-.073	-1.518	.130
(Continued from Table 12)			
Extraversion	.064	1.185	.237
Neuroticism	-.087	-1.939	.053
Relative advantage	.029	.505	.614
Compatibility	.349	4.781	.000
Trialability	.216	3.038	.003
Complexity	-.138	-2.724	.007
Model 3			
Conscientiousness	.018	.337	.736
Openness to experience	-.073	-1.498	.135
Extraversion	.057	1.037	.300
Neuroticism	-.082	-1.824	.069
Relative advantage	.036	.622	.534
Compatibility	.349	4.744	.000
Trialability	.216	3.026	.003
Complexity	-.139	-2.741	.006
Gender	.018	.420	.675

Monthly disposable income	.047	1.118	.264

    a. (Model 1) Adjusted R square= .068

    b. (Model 2) Adjusted R square= .432

    c. (Model 3) Adjusted R square= .431

    d. Dependent variable: Uber usage

Model 1 in Table 12 showed that when the four personality traits were put together to test their relationship with Uber usage, personality in total explained 6.8 percent of the variance in Uber usage (adjusted R square = .068). Only extraversion (β =.183, $p < .05$) and neuroticism (β = -.116, $p < .05$) were significantly related to Uber usage.

Model 2 showed that when PAI were added in, the explanatory power was enhanced to 43.2 percent (adjusted R square = .432). The model indicated that not a single relationship was found between personalities and Uber usage. The only factors that predicted Uber usage were compatibility (β = .349, $p < .001$), trialability (β = .216, $p < .05$) and complexity (β = -.138, $p < .05$).

Model 3 showed that when demographic factors (gender and monthly disposable income) were also counted in, the explanatory power in variance of Uber usage was slightly lowered to 43.1 percent (adjusted R square = .431), weakened by the two demographic variables. In model 3, gender and monthly disposable income became non-significant using hierarchical regression. Compatibility (β = .349, $p < .001$), trialability (β = .216, $p < .05$) and complexity

(β = -.139, p < .05) remained significant in their relationships with Uber usage, with values almost unchanged.

On the one hand, compatibility, trialability, and complexity remained to be powerful predictors in both model 2 and 3. It suggested that no matter how innovative a new product is, potential consumers still evaluate the innovation according to how compatible it is with the existing products people have already been familiar with. They also put heavy emphasis on whether the new product can be fully trialed, meaning that people would not adopt an innovation just because it is cutting-edge or fashionable and that a trial process is still required. The fact that complexity remained a significant antecedent of innovation adoption pointed to the truth that ease of understanding is highly appreciated, regardless of how diligent or embracing new ideas a person can be.

On the other hand, relative advantage, conscientiousness, and openness to experience remained to be non-related to Uber usage in the entire hierarchical regression analysis. Relative advantage was the only PAI that was not associated with Uber usage throughout model 2 and 3, meaning that whether an innovation is perceived as being a better idea than its predecessors (Rogers, 1995) was less of a concern for people, at least in the case of Uber usage. People are more likely to adopt something new, if it is compatible with

their existing knowledge, can be tested and trialed, and is not too difficult to comprehend.

It is worth noting that the purpose of hierarchical regression analysis is to present the relative significance of variables (Luo, 2011), when they are compared side by side. Therefore, the results should not be interpreted as only certain independent variables can predict the dependent one. Rather, the results serve as a comparison of the constructs' influences on Uber usage.

5.2.2 Implications of Q29

The survey results of questionnaire Q29 contradicted the general assumption that Uber, amidst ongoing controversies in Taiwan, might not be deemed as socially acceptable. Q29 is one of the four questions designed to test a relationship between compatibility and Uber usage.

In Q29: "I consider taking Uber as socially acceptable," a whopping 75.1 percent of the respondents (N= 337) expressed that they "agree" and "strongly agree" with the statement (Figure 1). Two reasons can explain this. The first one is the Spiral of Silence (Noelle-Neumann, 1974), meaning that the true majority of people who viewed Uber as socially acceptable had been keeping silent when local taxi drivers were taking to the streets. But when people took

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a survey on the condition of anonymity, candid opinions appear. The second

explanation is demographic differences. This online survey is spread mostly to

the thesis author's social networks, including graduate students and work

contacts (medical professionals, professors, and opinion leaders in society)

built throughout her career as a reporter. Those respondents could be

independent thinkers who are not easily swayed by social conflicts against Uber,

and thus the high acceptance rate in Q29.

Figure 1. Survey Q29: I consider taking Uber as socially acceptable

Q29: 我覺得搭Uber這件事，是社會可接受的。

337 responses
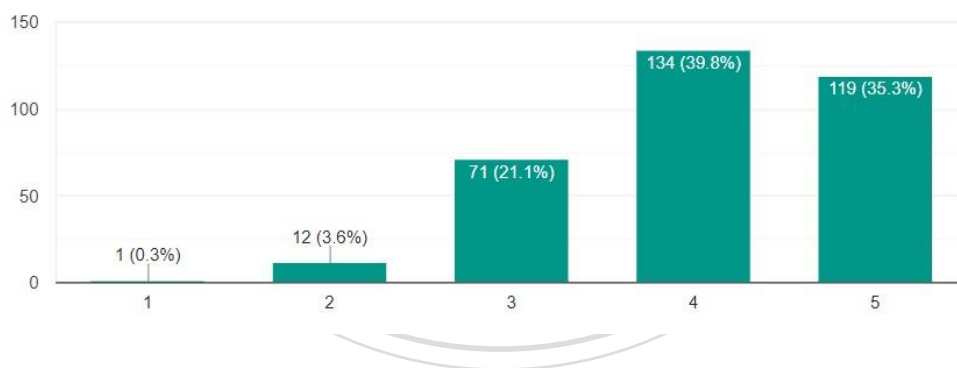
5.2 Limitations and further research

Although this research was conducted combining quantitative analysis and

qualitative interviews, limitations were found as there are still aspects left

unattended. First, despite proposing a long list of 26 hypotheses, none of them

addressed the importance of need that had been repeatedly brought up by

interviewees. As a result, the role of people's need was not tested, let alone being supported by statistical methods. Need, or demand, could have played a crucial part in this innovation adoption study, but now it became a limitation of the research. Therefore, future researches should address the need.

The second limitation is the low explanatory power of personality traits towards the variance of Uber usage and towards the PAI. Though the low adjusted R-square values were being justified by previous scholars, such as Chatterjee et al., (2015), the research left the author to wonder: If personality is weak in explaining innovation adoption behavior, what could be strong in explaining it, in addition to PAI? Further research can be done to resolve this matter.

The third limitation is sample bias, a major problem of online survey (Duda & Nobile, 2010). This study was not able to escape unscathed. Questionnaires of this research were first distributed to the author's work contacts, then spread out through a snowballing process. Therefore, the sampled populations could be highly homogenous and not representative enough in society. Demographic information showed that 31.2 percent of the respondents held a master's degree and above and that 49.6 percent of them had their monthly disposable income of over NT$30,000, which is unusual in a

society where many complained about getting 22K a month. Hence, the samples themselves became another limitation of this research.

The fourth limitation is the relatively low construct reliability of conscientiousness (Cronbach's Alpha = .641), due to the low factor loading of deliberate, one of the major properties that characterized conscientiousness. The indicator of deliberate was tested using survey question Q8: 做決定前會考慮很多面向. The question might have been perceived and understood differently by respondents, causing the low factor loading of the indicator, as well as the low Cronbach's alpha of conscientiousness. More accurate wording in survey questions might help avoid the problem in the future.

The fifth one is in survey Q29. The question asked about the social acceptability of Uber in Taiwan, which led to the high approval rate of over 75 percent. However, the question should ask about whether Uber is "legally accepted," rather than "socially accepted" since most of the debate in Taiwan lied in the area of laws and regulations. The results of this study could have been more consistent with the current social atmosphere, if Q29 asked about "legally accepted" instead.

Last but not least, not all innovations can be treated equally. Innovations exist in various areas of society, and each is unique. Therefore, relative

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advantage, which was not proven relevant to adoption behavior in this research, might be tested as significant in other adoption behaviors. Extraversion, which was tested by multiple regression to be the only personality trait positively related to Uber adoption, might not be a significant predictor in other innovation adoptions. Therefore, the generalizability of the case study is itself a limitation of this research.

Chapter 6 Conclusion

The research started with the observation that a majority of new businesses failed because they put so much emphasis on products that they overlooked the importance of people, their potential consumers. But the findings suggested that PAI are still major predictors of innovation adoption, compared with personality traits. And yet, this is not to say that people are not important. The study discovered that different personality traits might perceive an innovation differently. Also, people might exert influence on innovation adoption, when their needs are taken into account.

6.1 Different personality traits tend to view innovations in different ways

Contradicted to previous literature, personality traits were not related to innovation adoption in this study. However, different personality traits seemed to perceive innovation attributes in different ways.

Conscientious people were more likely to find out the relative advantage than those who are not. People of other personality traits, such as openness to

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experience, extraversion, and neuroticism, were less likely to recognize the relative advantage of a new product among existing ones. Compared with conscientious or neurotic people, those who were open to experience and extraverted are more able to perceive an innovation as compatible with other similar products than those who are not. Neurotic people tend to perceive the complexity of an innovation as too daunting to overcome, although people with other personality traits may also find the complexity intimidating.

6.2 Compatibility, trialability and complexity matter

According to this research, relative advantage was not a factor predicting innovation adoption. Compatibility, trialability, and complexity were tested to be major predictors of innovation adoption, even when compared with all personality traits and demographic differences.

Hence, people who want their innovation to be accepted should make their products compatible with those already available in the market. They need to make sure that potential consumers can fully trial the products, and that the products cannot be too complex to make people feel daunted.

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6.3 To need, or not to need, that is the question

The need to use an innovation was highlighted in the qualitative research of this study. In the case of Uber, the need was privacy or transportation. In the case of other innovations, the need could be something else. A product meeting the strong needs of potential consumers would cause them to adopt, regardless of their personality traits. Although the study had included personality and PAI in its discussion, it covered only the surface of innovation adoption research. The reasoning of the human mind in adoption behavior is much more complicated than what the research can offer, and this too deserves future research.
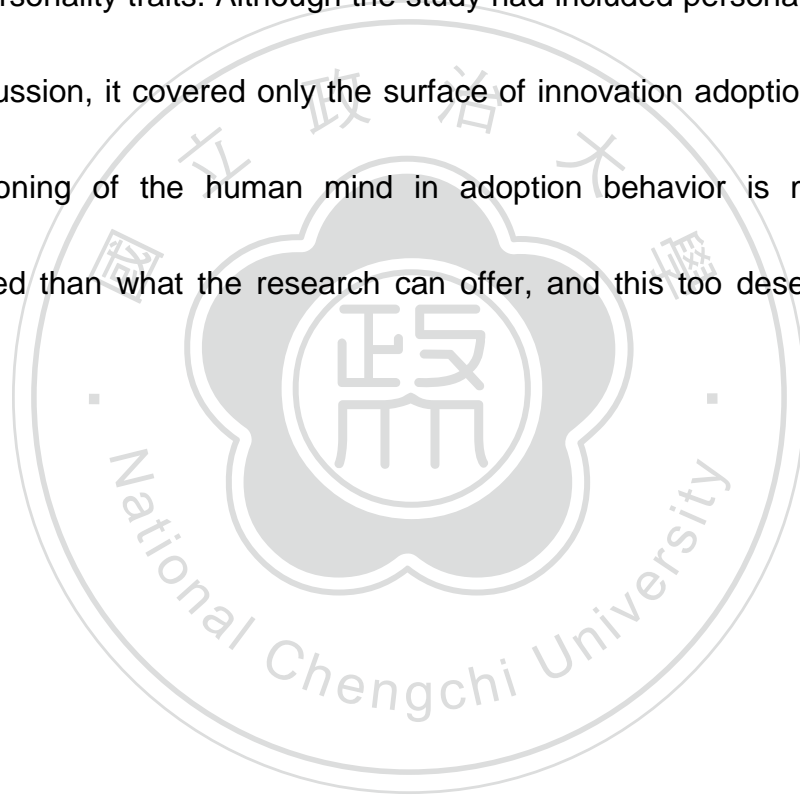
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人格特質與**Uber**使用問卷調查

你好，這是政治大學國際傳播英語碩士學位學程論文專題調查問卷，目的在探討Uber使用者與非使用者的相同、相異之處，及其對新創事物的看法。作答時間約5分鐘，回覆將全程保密，且只用於此份研究。謝謝!

* Required

一般資訊

1. **Q1**: 過去一年你搭乘過幾次**Uber**？ *
   Mark only one oval.

   ◯ 1) 0次
   ◯ 2) 1-5次
   ◯ 3) 6-10次
   ◯ 4) 11-15次
   ◯ 5) 15次以上

2. **Q2**: 過去一年你總共花費多少金額搭乘**Uber**？ *
   Mark only one oval.

   ◯ 1) 0元
   ◯ 2) 1-500元
   ◯ 3) 501-999元
   ◯ 4) 1000-1499元
   ◯ 5) 1500元以上

3. **Q3**: 性別 *
   Mark only one oval.

   ◯ 1) 男
   ◯ 2) 女

4. **Q4**: 年齡 *

   Mark only one oval.

   ◯ 1) 20歲及以下
   ◯ 2) 21-39歲
   ◯ 3) 40-59歲
   ◯ 4) 60歲及以上

5. **Q5:** 居住地 *

Mark only one oval.

( ) 1) 台北

( ) 2) 台中

( ) 3) 高雄

( ) 4) 其他

6. **Q6:** 最高學歷 *

Mark only one oval.

( ) 1) 國中及以下

( ) 2) 高中或五專

( ) 3) 三專、二技、四技、大學

( ) 4) 研究所

( ) 5) 其他

7. **Q7:** 每月可支配所得 *

Mark only one oval.

( ) 1) 新台幣10000元及以下

( ) 2) 新台幣10001~20000元

( ) 3) 新台幣20001~29999元

( ) 4) 新台幣30000元以上

我認為自己......

請選擇你是否同意以下敘述，1是「非常不同意」、2是「不同意」、3是「不確定」、4是「同意」、5是「非常同意」。

8. **Q8:** 做決定前會考慮很多面向 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	( )	( )	( )	( )	( )	非常同意

9. **Q9:** 個性勤快 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	( )	( )	( )	( )	( )	非常同意

10. **Q10:** 很堅忍 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	( )	( )	( )	( )	( )	非常同意

11. **Q11:** 能理解落落長的產品操作手冊 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

12. **Q12:** 對事物有很多想法 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

13. **Q13:** 對事物感到好奇 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

14. **Q14:** 覺得學習是個有趣的事 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

15. **Q15:** 購物時喜歡有多種選項 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

16. **Q16:** 每天都精神很好 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

17. **Q17:** 有冒險性格 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

18. **Q18:** 可以果斷的下決定 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

19. **Q19:** 有自信 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

20. **Q20:** 容易心情不好 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

21. **Q21:** 覺得外面的環境很危險 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

22. **Q22:** 容易擔憂 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

23. **Q23:** 容易感受到壓力 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

對Uber的看法

請選擇你是否同意以下敘述，1是「非常不同意」、2是「不同意」、3是「不確定」、4是「同意」、5是「非常同意」。

24. **Q24:** 搭**Uber**可能比搭小黃節省時間。 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

25. **Q25:** 搭**Uber**可能比小黃省錢。 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

26. **Q26:** 搭**Uber**或許能提升我的生活效率。 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

27. **Q27:** 使用**Uber**會讓別人認為我對科技很在行。 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

28. **Q28:** **Uber**在很多方面應該跟小黃差不多。 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

29. **Q29:** 我覺得搭**Uber**這件事,是社會可接受的。 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

30. **Q30:** 我覺得使用**Uber**符合我現有的生活模式。 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

31. **Q31:** 我覺得搭乘**Uber**符合我想要的生活方式。 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

32. **Q32:** 我知道怎麼試用**Uber**的各種服務。 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

33. **Q33:** 我覺得可以試用**Uber**的機會應該很多。 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

34. **Q34:** 我能夠充分測試**Uber**好不好用。 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

35. **Q35:** 試用**Uber**對我來說非常麻煩。 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

36. **Q36: Uber**的叫車流程好像很複雜。 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

37. **Q37:** 需要花一點時間,才能了解要怎麼用**Uber**。 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

38. **Q38:** 對手機懂多一點的人,才懂**Uber**要怎麼用。 *
Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

39. **Q39: 就概念來說，Uber**的設計很複雜。 *

Mark only one oval.

	1	2	3	4	5	
非常不同意	◯	◯	◯	◯	◯	非常同意

謝謝你！

感謝你撥出時間填寫此份問卷，為了答謝你的協助，敬請參加 7-11 商品卡的抽獎活動（每張價值新台幣500元）。

得獎名單將於7月15日揭曉。

如欲參加此項抽獎活動，請留下你的電子郵件信箱，以便通知得獎訊息。

非常感謝！

40. 電子郵件信箱

質化訪談問題

Q1: 你覺得 Uber 的一些特徵，例如說好不好用、叫車容不容易，或 APP 操作困不困難，會不會影響人們使用與否?

Q1: Would the characteristics of an innovation, for example, its convenience or ease of use, affect whether people will use this innovation?

Q2: 什麼樣的人比較願意使用 Uber？

Q2: What kind of people, personality wise, are more willing to use Uber?

Q3: 什麼樣的人比較容易發現 Uber 相對於小黃的優點？

Q4: 什麼樣的人比較容易發現 Uber 跟小黃的相容之處？

Q3、O4: What kind of people, personality-wise, would discover the relative advantage or compatibility of Uber more easily?

can tell which car service saves more money.

Q5: 什麼樣的人比較願意試用 Uber？

Q5: What kind of people, personality wise, are more willing to try out an innovation?

Q6: 什麼樣的人比較不容易因為 Uber 使用複雜，而打退堂鼓?

Q6: What kind of people, personality wise, are less likely to be intimidated by an innovation, because it is too difficult to understand?

質化訪談內容

Q1: 你覺得 Uber 的一些特徵，例如說好不好用、叫車容不容易，或 APP 操作困不困難，會不會影響人們使用與否?

Q1: Would the characteristics of an innovation, for example, its convenience or ease of use, affect whether people will use this innovation?

答:

非 Uber 使用者 D.L.:

會有影響。習慣 55688(台灣大車隊)的人，可能會因為覺得 Uber 在便利性上類似，進而比較容易使用。例如 55688 按兩鍵就能叫車，簡便很重要。

Non- Uber user, D.L.:

People who are accustomed to dialing 55688 (a taxi service provided by Taiwan taxi) might think Uber is as convenient as 55688, thus willing to adopt Uber. Convenient to use is very important.

非 Uber 使用者 K.J.:

也是便利性吧。安全與否也會有影響，像台灣大車隊，比較有信用，也比較安全，一般人可能會以安全性為主，還有政府的保障等等的，用起來可能會比較安心，女性部分來說。還是以安全為主，以前早期，女孩子搭計程車，彭婉如事件之後就覺得很可怕，女生搭計程車，還是要以政府比較肯定的，比較安心，去使用比較 ok。女生對 Uber 不是太了解，會想這是什麼？還是會有存疑的問號，也不會太冒然去使用，會先觀察看看。

Non- Uber user, K.J.:

The characteristics of Uber will influence whether or not I choose to adopt Uber. For example, I would consider credibility and safety issues. Whether the use of Uber is guaranteed by the government is very important. For women, safety is still the primarily concern. In the early days it was unsafe for females to take taxis, especially after Peng Wan-ru (彭婉如, a prominent women movement figure in Taiwan) was killed while taking a taxi ride. It is terrifying. It is better for women to choose a taxi company

that has earned government approval. But as to Uber, I would ask what it is? With doubts in my mind, I would not take risks and use Uber.

Q2: 什麼樣的人比較願意使用 Uber？

Q2: What kind of people, personality wise, are more willing to use Uber?

答:

非 Uber 使用者 D.L.:

明星、不想要曝光的人，因為司機最厲害的就是傳播八卦，像是我載到誰，然後無線電就直接講了，然後狗仔隊就直接跟在後面也有可能，Uber 感覺隱密性比較高。喜歡創新、喜歡新事物的人，體驗、試試看新的東西，時尚一點、時髦一點的人。高薪的人，因為 Uber 會等你，像你自己的私有司機一樣，不像一般計程車，你不來就走了，掰掰，。可以吸引高薪的人。

Non- Uber user, D.L.:

Personality-wise, those people who hold strong views about privacy would be more willing to use Uber, because people don't have to hail a cab on the side of a road. Those who like to experience new stuff and those who are fashion-seekers are also more willing to take Uber. People who are highly paid may also tend to use Uber. They would wait for you like a private car chauffeur, instead of leaving once you are late.

非 Uber 使用者 K.J.:

偏鄉的人比較會用得到，一般的計程車跑的地方都是為了賺錢，在偏鄉你又需要搭運輸工具、又沒有的時候，我覺得偏鄉的人比較會想到 Uber。我覺得個性如果比較保守的人，對於 Uber 可能會有一些保留吧。我不會想說是什麼樣子的人會去使用 Uber，因為除非它通過立法，或是大家都可以認可的話，我覺得不管什麼樣個性的人都可以去接受這樣的運輸工具，只要它是合法、安全，一般不管是什麼樣個性的人都可以。

Non- Uber user, K.J.:

It's not necessarily about personality traits, it's more about necessity. Let's say people who live in a rural area and have a certain need for transportation. It might be impossible for them to grab a taxi and go, and

this is where Uber comes to mind. In fact, as long as Uber can be regulated, people of any personality traits would use Uber, even the conservative ones.

Uber 使用者 L.K.:

我認為一定是外向的人。跟其他種類的人相比，他們心態比較開放，畢竟 Uber 在很多國家都是有爭議的。如果你心裡有疙瘩，就不會使用 Uber，尤其當你看到過去發生這麼多事情時。跟小黃之間也有爭端，特別是駕車證照上的爭議。喜歡冒險之類的人吧，會比較願意使用 Uber。不介意分享個資給車行公司的人也比較容易使用，因為你分享的不只是個資，還包括很多事情。必須要是相信車行(Uber)的人才會願意使用。

Uber user, L.K.:

I think it must be like extraverts. They tend to have an open mind, compared to other types of persons, because there are still some disputes about Uber in many countries. If you are not comfortable enough, you wouldn't take Uber, if you look at past incidents. There are conflicts about licenses, especially with taxi drivers. Risk-taking people, something like that. Also, those people who are comfortable with sharing info with car company. You have to share with them your information and many things. You have to trust the company.

Uber 使用者 T.T.:

第一是習慣使用 APP 的人，像我媽剛開始用時，她覺得很煩，因為不知道要怎麼定位地址，他們用手機打地址很慢的，但習慣使用智慧手機的人就會比較習慣。第二是想省錢的人，因為 Uber 有很多優惠，所以比較會想使用。再來因為要綁信用卡，所以對線上金融有概念，而且比較信任的人才會使用。

Uber user, T.T.:

Firstly, it has to be people who are used to using mobile APPs. For example, when my mother first used Uber, she found the whole process annoying. She didn't know how to locate the place where she wanted to go, and she typed addresses on the phone screen very slowly. But for

someone who has gotten used to smartphone, things would get easier. Secondly, people who want to save money are more likely to use Uber. Uber offers discounts and promotions on a constant basis, and people who want to save would be attracted to these offers. Finally, those people who are comfortable with Internet finance are more likely to adopt Uber, because people need to give away credit card numbers.

Q3: 什麼樣的人比較容易發現 Uber 相對於小黃的優點？
Q4: 什麼樣的人比較容易發現 Uber 跟小黃的相容之處？
Q3、O4: What kind of people, personality-wise, would discover the relative advantage or compatibility of Uber more easily?

答:

非 Uber 使用者 D.L.:

高社經地位的人比較容易去辨識這些(Uber、小黃)的差別，我覺得性格上大而化之的人不會發現 Uber 的相對優勢、或與小黃的相同之處，他覺得就是有工具可以用，不覺得有什麼不一樣，也不知道社會吵的爭議是什麼。社會地位高一點、學歷高一點的人，他會分辨相對優勢、相同點在哪?還有對交通運輸有興趣的人。另外性格龜毛、喜歡挑細節的人，他會分別得出來優勢、差別。

Non- Uber user, D.L.:

People with high socio-economic status, people who have a special interest in transportation, and people who are fussy and attend to details are more likely to find out the relative advantage and compatibility of Uber, when compared with local taxis. Casual people don't tend to recognize the differences between Uber and local taxis.

非 Uber 使用者 K.J.:

比較重視隱私權的人，比較會去發現這兩個有什麼不同，Uber 有什麼相對優勢，像是演藝圈明星、政治人物，我是看到韓國瑜的女兒韓冰，她那時就是因為自己叫計程車幫爸爸助選，就被計程車司機一直聊天，政治人物在安全、隱私的考量下，也許可能會發現 Uber 有相對優勢，如果有需要的話。

Non- Uber user, K.J.:

People with a higher need for privacy might find out the differences (the relative advantage and compatibility) between a new service and existing ones since they are always searching for transportation tools that protect their privacy more. Take Han Bing, daughter of Kaohsiung mayor, was once caught off guard and taken pictures by someone as she got off a taxi car. She might want to find an alternative way to transport, rather than taking the local taxis.

Uber 使用者 L.K.:

對科技比較有研究的人，比較容易分辨一項新科技的優異與相容之處。

Uber user, L.K.:

Tech-savvy people. They feel comfortable using technology and can tell relative advantage and compatibility more easily than other people.

Uber 使用者 T.T.:

會需要經常搭車的人，沒有這個需要的人，偶爾搭一次，不會去在意這些事情。但有經常需要，就很容易分辨兩者的差異，比如說我媽媽，現在年紀大了，不騎車了，出門都用 Uber，她會注意到 Uber 有很多優惠，如果經常使用，你會看到哪一家是比較便宜。

Uber user, T.T.:

Those people who have a constant need to travel by taxi would notice the relative advantage/compatibility of Uber. People who only take a taxi once in the while would not recognize the differences between the two. My mother, for example, is now an Uber user as she grew older and no longer rides a motorcycle. She noticed that Uber has lots of offers, and she can tell which car service saves more money.

Q5: 什麼樣的人比較願意試用 Uber？

Q5: What kind of people, personality wise, are more willing to try out an innovation?

答:

非 Uber 使用者 D.L.:

手機世代，然後就是 APP 的慣用者，沒有 APP 沒有辦法活下去的那種，不知道什麼叫舉手搭計程車，大拇指發達。重形象的人也會試用 Uber，我今天搭賓士來，我今天搭 BMW 來，愛面子、重形象就會試用。

Non- Uber user, D.L.:

The mobile phone generation, are more likely to try out Uber. People who have a habit of using APPs are also likely to give Uber a try. People who put great emphasis on their images may also want to try Uber. They may want to take Mercedes one day and BMW the other day.

非 Uber 使用者 K.J.:

我覺得是比較擅做計劃的人，可能會想試用 Uber，他需要周全的計畫，不喜歡隨興的隨走隨攔。喜歡作周全計畫的人喜歡定期的跟車商、車行合作，如果試用得好可能定期的配合下去，可能定期我就是要搭你們的車。有些人心態上比較保守、恐懼什麼的，沒有辦法接近陌生人的人，有憂鬱症或恐懼人群的人，每次都看到不一樣的司機，不熟悉的人，他會覺得又遇到新的人，這次要講什麼？我是想到有一些這樣子人格特質的人，會擔心，每次換計程車，每次不一樣的人，或許反而會考慮嘗試 Uber，他就不用每次適應新的司機。

Non- Uber user, K.J.:

I think that those who are good at planning ahead may want to try Uber more than other people. People who prefer things well-planned may not like to hail a taxi by the roadside. They are more likely to cooperate with certain taxi companies for a long period of time. In addition, people who are conservative, phobias, or having difficulty in facing strangers may also try Uber. They want to use only certain taxi services and not having to see new faces each time they take a taxi.

Uber 使用者 L.K.:

一定是以前用過類似服務的人才會願意去試用 Uber。如果你從來沒有用過，就會覺得去搭 Uber 也會很不習慣。像是我以前就用過 Uber，當我後來到美國出差時，公司要我在當地使用 Uber 通勤往返，我就在那裡使用 Uber 很自在。

Uber user, L.K.:

Must be people who are used to this type of services before. If you never use that, it would not be comfortable to use it. For example, I already used

Uber before, when I traveled to the US. The company asked me to use Uber for every single travel I had to make within the US. So I am comfortable to use it.

Uber 使用者 T.T.:

我第一次試用 Uber 不是因為需要，只是感興趣，就是很好奇。後來是覺得很好用的，就特別喜歡用。搭一般計程車，有時候跟司機說地址，他也不知道在哪裡，但是 Uber 它已經定位好，就這樣直接出發，我不用描述要怎麼走。

Uber user, T.T.:

The first time I tried Uber was not because of necessity, but because I was interested in it. Just curious. I later found out that it was kind of convenient, and then I grew to have a preference of it over other taxi services. Sometimes, you give an address to the driver and he still has no idea where it is. But with Uber, it would locate the destination for you. I don't even need to describe how to get there.

Q6: 什麼樣的人比較不容易因為 Uber 使用複雜，而打退堂鼓?
Q6: What kind of people, personality wise, are less likely to be intimidated by an innovation, because it is too difficult to understand?

答:

非 Uber 使用者 D.L.:

手機世代，對他們而言，註冊可能比招手還要容易。還有那種新事物狂人，一定要使用新事物，不用他就覺得不對勁，什麼東西最新都要用、要試，偏執狂。還有相挺新概念的人，比較容易無論如何都會用。

Non- Uber user, D.L.:

The mobile phone generation. They could find it easier to register an account online than raise their hand and stop a cab. People who are maniac about innovations may want to use it regardless of its complexity. They have to use or trial whatever is the latest. There are also a group of people who are not maniac but want to show support to new ideas no matter what.

Uber 使用者 L.K.:

保守的人比較容易因為 Uber 使用複雜而打退堂鼓，還有不太喜歡使用科技的人。注重隱私的人，可能也會打退堂鼓，因為要放這麼多個資在它的帳戶裡，實在太複雜了。

Uber user, L.K.:

Conservative people are more likely to be intimidated by the complexity of Uber. People who are not so happy to use technology are more likely to avoid using it. Also, people who have a high concern about privacy. You have to put your account number and everything. They might think it is too complicated to try.

Uber 使用者 T.T.:

都很習慣那些 APP 的人，你預期他們都會這麼複雜，習慣了就好，而且會知道其他 APP 有比較相似的模式，你把握了那個模式，就覺得沒那麼複雜，所以很習慣 APP 環境 eco-system 的人，比較不會因為複雜打退堂鼓。第二是很需要的人，必須每天都用，就很需要學，我媽開始很不願意，後來愈用愈喜歡，她比我知道還多，會一直一直在研究怎麼可以針對這個 APP 做最好的利用。

Uber user, T.T.:

People who are accustomed to using APPs would anticipate that they are complicated. Things will be fine once they get used to it. They also tend to find out that APPs work similarly. Once they get hold of how it works, Uber becomes less complicated. Therefore, people who are accustomed to the eco-system of mobile APPs are less likely to be daunted by the complexity of Uber. People who have an urgent need to transport are also less likely to give up just because it's complex. Initially, my mother was unwilling to use Uber, but now she knows better than me. She keeps finding ways to make the best use of Uber because she needs it.