PARENTS INFLUENCE ON STUDENTS' CAR OWERSHIP INTENTION: A STUDY OF DISAGGREGATE PSYCHOLOGICAL FACTORS THAT INFLUENCE CAR PURCHASE INTENTION AMONG INDONESIAN STUDENTS

THESIS

In partial fulfilment of the requirements
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INSTITUT TEKNOLOGI BANDUNG

ABSTRACT

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Due to the COVID-19 pandemic, car sales in Indonesia have experienced a decrease. In response to the hit on the car industry in Indonesia, the government issued the policy of temporarily removing luxury goods sales tax incentives (or PPnBM) for cars, which in turn has an impact on gradually increasing car sales until first quarter of 2022. Nevertheless, the number of car sales increase is still below the highest total sales in the last five years in 2018. Moreover, the implementation of PPnBM incentives is not guaranteed to be implemented permanently.

Designing a marketing strategy to revive the automotive business ecosystem in this uncertain situation of COVID-19 is essential for car marketers to increase the demand for cars in Indonesia. In addition, targeting the student market as a future car sales major contributor is definitely potential because this generation covers the total dominant percentage of the Indonesian demographic, which will become a major player in the automotive market in the near future. Understanding car purchase intention among students is primarily in projecting car sales and demand that has to be explored further. However, a comprehensive literature review delineated by bibliometric analysis shows limited research on student car purchase intention, particularly the individual centric as popularly known to disaggregate level with psychological factors.

This study wants to fill the gap by examining psychological factors that influence student car purchase intention by considering factors from inner-circle relations such as parents' direct influence, perceived influence, attitudes toward cars and family relationships; in order to find strategic marketing for car marketers. These factors are considered as previous studies found that parents and their attitudes strongly influence students' car attitudes and purchase intentions. However, the actual influence of parents is not considered and investigated in their studies. This study employed a quantitative approach with a correlational study examining the relationship between parents' attitudes and the family relationship on student car attitudes and the relationship between parents' direct influence, students' attitudes, and perceived influence on student car purchase intention. This study used the multi-actor data to find out the actual relationship between significant others on

student behavior as previous car purchase studies had never been examined and neglected to study the substantial influence of others.

This study obtained 514 family datasets, including the father, the mother and the students, using a self-administered questionnaire by collecting the data directly. The descriptive analysis, principal component analysis (PCA), and partial lease square structural equation modelling (PLS-SEM) is used to analyze the data and test the hypotheses. The correlational study found that the father's attitudes of social and convenience and safety and usability have significant relationships with the father's direct influence. Meanwhile, the mother's direct influence is formed by the attitude of social and convenience and superior prestige. This study also found that parents' attitudes (from father and mother respectively) and cohesiveness in a family relationship is significantly correlated to students' attitudes toward cars. From the relationship, the mother can explain better the student's attitude than the father. Lastly, the student's car purchase intention is formed by the father's direct influence, the student's car attitudes, and the student's perceived influence.

This study process and the result contributes theoretically and practically. Theoretically, by theoretical development of significant-other influence studies, car purchase intention, and student decision-making process. In addition, the use of actual data when examining the influence of others. Practically, for automobile marketers, in terms of the ideal target for their marketing activities using advertisement. The advertisement concept can differ when it targets to the student and mother, and to father.

Keywords: Parents' influence, perceived influence, car attitude, student car purchase intention, Family relationship.

ABSTRAK

PENGARUH ORANG TUA PADA NIAT KEPEMILIKAN MOBIL SISWA: STUDI DISAGGREGATE FAKTOR PSIKOLOGI YANG MEMPENGARUHI NIAT MEMBELI MOBIL PADA SISWA DI INDONESIA

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Akibat pandemi COVID-19, penjualan mobil di Indonesia mengalami penurunan. Menyikapi pukulan terhadap industri mobil di Indonesia, pemerintah mengeluarkan kebijakan penghapusan sementara insentif pajak penjualan barang mewah (PPnBM) untuk mobil, yang pada gilirannya berdampak pada peningkatan penjualan mobil secara bertahap sampai kuartal pertama tahun 2022. Peningkatan penjualan mobil tersebut masih di bawah total penjualan tertinggi dalam lima tahun terakhir di 2018. Apalagi, penerapan insentif PPnBM tidak dijamin akan diterapkan secara permanen.

Merancang strategi pemasaran untuk menghidupkan kembali ekosistem bisnis otomotif dalam situasi COVID-19 yang tidak menentu ini penting bagi pemasar mobil untuk meningkatkan permintaan mobil di Indonesia. Selain itu, membidik pasar pelajar sebagai kontributor utama penjualan mobil masa depan tentu sangat potensial karena generasi ini mencakup total persentase dominan dari demografi Indonesia, yang akan menjadi pemain utama di pasar otomotif dalam waktu dekat. Pemahaman niat beli mobil di kalangan mahasiswa terutama dalam memproyeksikan penjualan dan permintaan mobil perlu digali lebih jauh. Namun demikian, tinjauan literatur komprehensif yang digambarkan dengan analisis bibliometrik menunjukkan bahwa penelitian masih terbatas dalam niat pembelian mobil siswa; secara khusus, yang fokus pada individu atau secara populer dikenal dissagregate level dengan faktor psikologis.

Penelitian ini ingin mengisi kesenjangan tersebut dengan mengkaji faktor-faktor psikologis yang mempengaruhi niat beli mobil mahasiswa dengan mempertimbangkan faktor-faktor dari hubungan lingkaran dekat seperti pengaruh langsung orang tua, pengaruh yang dipersepsikan siswa dari orang tua, sikap terhadap mobil, dan hubungan keluarga; guna menemukan pemasaran strategis untuk pemasar mobil. Faktor-faktor ini digunakan sebagaimana studi sebelumnya menemukan bahwa orang tua dan sikap mereka mempengaruhi sikap mobil siswa dan niat beli. Namun, pengaruh sebenarnya dari orang tua tidak dipertimbangkan dan diselidiki dalam penelitian-penelitan mereka. Penelitian ini menggunakan pendekatan kuantitatif dengan studi korelasional yang menguji hubungan antara sikap orang tua dan hubungan keluarga terhadap sikap mobil siswa, dan hubungan

antara pengaruh langsung orang tua, sikap siswa, dan pengaruh yang dirasakan terhadap niat beli mobil siswa. Penelitian ini menggunakan data multi-aktor untuk mengetahui hubungan aktual antara orang yang signifikan terhadap perilaku siswa karena studi pembelian mobil sebelumnya tidak pernah memeriksa dan mengabaikan untuk mempelajari pengaruh substansial dari orang lain.

Penelitian ini memperoleh 514 dataset keluarga termasuk ayah, ibu dan siswa menggunakan kuesioner dengan mengumpulkan data secara langsung pada responden. Analisis deskriptif, principal componen analysis (PCA) dan partial least square structural equation modelling (PLS-SEM) digunakan untuk menguji hipotesis. Studi korelasional menemukan bahwa sikap ayah tentang sosial dan kenyamanan, serta keamanan dan kegunaan memiliki hubungan yang signifikan dengan pengaruh langsung ayah. Sedangkan pengaruh langsung ibu dibentuk oleh sikap sosial dan kenyamanan serta gengsi yang unggul. Penelitian ini juga menemukan bahwa sikap orang tua (masing-masing dari ayah dan ibu) dan kekompakan dalam hubungan keluarga berkorelasi signifikan dengan sikap siswa terhadap mobil. Dari hubungan tersebut, ibu dapat menjelaskan sikap siswa lebih baik daripada ayah. Terakhir, niat beli mobil siswa dibentuk oleh pengaruh langsung ayah, sikap siswa terhadap mobil, dan pengaruh yang dirasakan siswa.

Studi ini memberikan kontribusi secara teoritis dan praktis dari proses studi dan hasil. Secara teoritis, dengan pengembangan teoritis studi pengaruh dari orang yang signifikan, niat beli mobil dan proses pengambilan keputusan siswa. Selain itu, penggunaan data aktual saat menguji pengaruh orang lain. Sementara untuk praktis, kontribusi bagi pemasar mobil dalam hal target ideal untuk kegiatan pemasaran mereka menggunakan iklan. Konsep iklan bisa berbeda ketika menargetkan siswa dan ibunya serta ayah.

Kata kunci: Pengaruh orang tua, pengaruh yang dirasakan, sikap mobil, niat beli mobil siswa, hubungan keluarga.

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July 1, 2022

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HALAMAN PERUNTUKAN

This thesis is dedicated to my beloved parents, sisters and family, supervisor and advisors, and friends who always support me.

STATEMENT OF AUTHORSHIP

I hereby declare that I am the sole author of this thesis and to the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made. I further declare that this thesis has not been previously submitted to obtain a degree at this or any other higher education institution.

Signature:

Bandung, July 1, 2022

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Muhamad Abdilah Ramdani

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I.1 Background

Over the last few years, the developing countries experienced a boom in demand for car ownership, considerably with income, rapid urbanization, and economic growth (Huang & Chao, 2021; Mou et al., 2020). In Southeast Asia, the rapid growth of car ownership can be seen in one of the trends in the upgrading process of motorcycle owners who purchase cars (Belgiawan et al., 2016). This condition can be seen in the context of Indonesia, as the largest automotive market for passenger cars in Southeast Asia (Statista Research Department, 2022b); the use of private vehicles has become the primary mode of people to mobility.

In the Indonesia capital city, Jakarta, the percentage of registered private vehicles increases every year (BPS, 2021). Although the government encourages the use of public transportation by improving infrastructure and integrating routes, the number of private vehicle users has not experienced a significant decline (Rachman et al., 2021). This situation is related to the benefits of using private cars in developing countries' urban areas, giving a person freedom to travel anytime and anywhere compared to public transportation (Luke, 2018). Moreover, social status by owning a car is one of the other consideration values where cars are still a priority to be chosen as a mode of travel in collectivist countries (Chng et al., 2019) such as Indonesia, which cannot be obtained from public transport modes. The trend and behavior of private car ownership in Indonesia considerably as the primary travel mode are led to a significant impact on car marketers to maximize the potential market of new car owners.

According to the Indonesian automotive industry associations, passenger car sales in Indonesia experienced an increase of 4 percent in 2018 (GAIKINDO, 2018). The number decreased by 10 percent in 2019 and significantly plunged in 2020 until it reached a reduction rate of 50 percent (GAIKINDO, 2019, 2020). The change in people’s consumption behavior and mobility restriction during the COVID-19 pandemic are indicated as the triggering factors for sluggish car sales in Indonesia.

In response to the recovery of the national automotive industry and excited the sales of private cars during the pandemic, the central government issued the policy of temporarily removing luxury goods sales tax incentives (or PPnBM) on March 1, 2021 (Indonesian Ministry of Industry, 2021). The regulation yields positive car sales, compared to the second quarter of 2020, in which the car sales volume was only 15.5 thousand units; in the second quarter of 2021, the car sales volume increased to 155.7 thousand units, which was 904 percent (GAIKINDO, 2021). The percentage growth of car sales outperforms the total motorcycle sales in the same period, which Indonesia Statistic Bureau (BPS) accounts for the rise of only about 268 percent (Putra, 2021). Moreover, the government extended the PPnBM removal for car sales in 2022 and exhibited an increase of 46 percent in the first quarter compared to 2021 (GAIKINDO, 2022). However, although the private car sales gradually increased, the passenger car sales per unit during the pandemic were still below the highest total sales in the last five years in 2018.

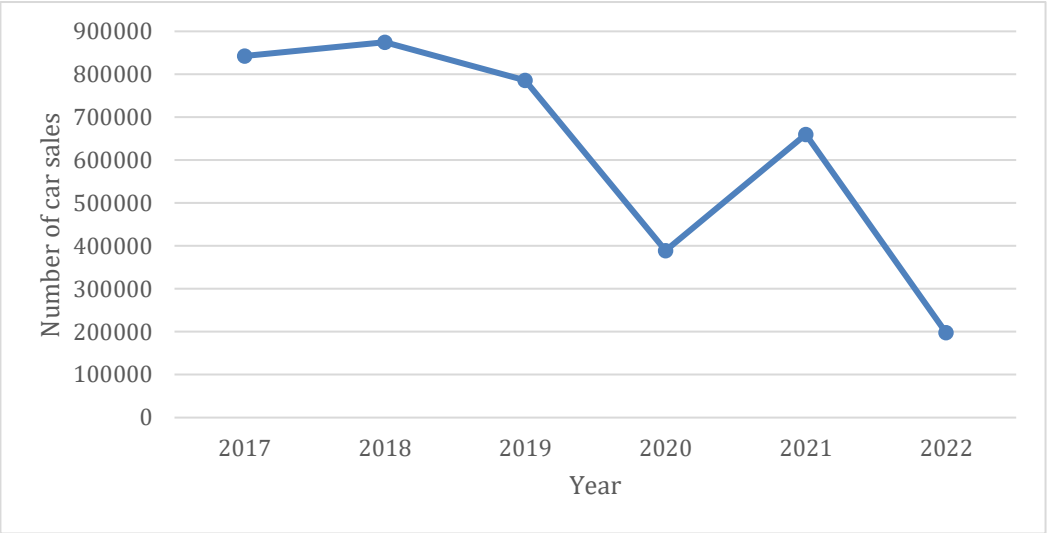

Figure I.1 Passenger car sales total in Indonesia (GAIKINDO, 2022)

Automotive is the most competitive industry worldwide (Kufelová & Raková, 2020). This indicates the current government's stimulus must be utilized optimally to restore the car sales ecosystem in Indonesia in the midst of the automotive market competition and the uncertain conditions of the pandemic. Moreover, it is not guaranteed that government will permanently implement PPnBM incentives.

Creating new marketing strategies to market automobile products is necessary for marketers to bolster their current car sales, particularly during pandemic situations. Also, to restore the competitive growth of the automotive industry to become a promising and growing industry. Understanding car purchase behavior is the precise issue to achieve these future goals in the current situation. As the purchase study can predict the motivation of people to own a car and then provide an overview of the demand for cars in the future, which is ultimately beneficial for the car industry ecosystem.

According to the purchase decision-making process model by Schiffman & Wisenblit (2019), the human mind and mental factors are the critical factors in predicting and explaining purchase behavior. This is in line with the theory of planned behavior by Ajzen (1991), which argues that human psychology plays a vital role in explaining human behavior from its intentions to its actuality. Accordingly, a study with psychological perspectives in understanding the driving factors of car purchases is essential to support formulating a marketing strategy for hiring potential market; considering the psychological factors play a role in the overall decision-making process. This is also in line with the literature review conducted in this study (in Chapter 2), which shows infrequent research on the influence of psychological factors on car purchase decisions. Moreover, targeting a study specifically to the students is critical as this group covered the majority of the Indonesian population (Gen Z; BPS, 2020), potentially the future new car purchaser. Not ignoring the reasons, studies on mobility intentions among adolescents are also very limited (Pojani et al., 2018). Thus, revealing significant factors of car purchase intention among students is essential to help the automobile industry recover and escalate car sales in the near future.

In the car purchase decisions, a study by Yang et al. (2012) explains that the influence of others plays a role in affecting car buyers' decisions to purchase. The study revealed that compared to experienced car drivers, first-time car buyers are more likely to seek information from others during their car purchasing process. Previous studies in human behavior and psychology have discussed the wide range of influences others which are related to the norms or beliefs of others, take a role in changing the behavior and decision-making of an individual. Particularly in

transportation behavior that has been incorporated in various fields of studies, such as commuting behavior (Jia & Fu, 2019; Muñoz et al., 2016; Verma et al., 2018), mode choice (Ababio-Donkor et al., 2020; Ermagun & Samimi, 2018; He & Giuliano, 2017; Mehdizadeh et al., 2018, 2020; Sarangi & Manoj, 2020; Scheiner et al., 2019), vehicle adoption (Jansson, Nordlund, et al., 2017; Li et al., 2020; Smith et al., 2017), and vehicle/car purchase intention (Belgiawan et al., 2017; Heinonen et al., 2021; Mou et al., 2020; Nishihara et al., 2017; Vögele et al., 2021).

The influence of others in transportation research, particularly car purchase decisions, is an exciting topic for further insight. It is because cars, as the high involvement product, require considerable effort before one decides to purchase. In addition, the consideration of car purchases because the car as the alternative mode for travel provides not only travel utility but also social status and independence (Steg, 2005). Accordingly, the practical strategic marketer can formulate this factor as being a new variable to boost their car sales, as the influence of others on car purchase decisions may be high as it ensures the value given by a car conforms to the norms in which the individual lives.

The Previous studies on car purchase intention have applied the influence of others (Asadi et al., 2021; Bhutto et al., 2022; Carley et al., 2013; Habich-Sobiegalla et al., 2018, 2019; Hamzah & Tanwir, 2021; Mou et al., 2020; Simsekoglu & Nayum, 2019), particularly in the case of students (Belgiawan et al., 2013, 2014, 2017; Pojani et al., 2018). However, those studies have failed to explain who the specific significant person most influenced one’s decision. Despite the fact that the study by Belgiawan et al. (2017) found that specific important people, i.e., parents influencing student car purchase intention, they only measured the students' perceived expectations rather than asking parents whether they actually influenced their child or not. Moreover, to the best of the author's knowledge, there is no study discussing the influence of others through examining the perspective of influencers, particularly in car purchase decisions. Therefore, extending research by asking parents directly whether they actually influence their children's car purchase intention is essential to draw a clear explanation of significant others’ influence on student car purchase decisions.

The closeness in a family relationship is also found as the driving factor that is significantly related to children's purchase decision process (Tinson et al., 2008). This can be seen from the studies by Nishihara et al. (2017) that found a family who has a closer bond has a direct impact on forming children's car attitudes, which implicates children's behavior toward a car. Moreover, the previous study still does not comprehensively validate that family information being calculated as a reliable source of information in consumption affects a child's psychological process of making a purchase decision. Thus, the relevance of this study that measuring family relationships through parents' role in children's purchase decisions for high involvement products such as a car is to confirm the decision-making process theory by Schiffman & Wisenblit (2019) that explains the family information is an input variable in purchasing.

Along with student perceived influence, parental influences, and relationships with families driving students' car purchase intentions, previous research has also revealed that the inner factors of student evaluation toward cars, such as providing independence and symbolic/affective values partially explain student car purchase intention (Belgiawan et al., 2014, 2017). Car as a status symbol also brings the main factor of car attitudes which implicates the intention to drive and purchase a car (Pojani et al., 2018). Students' attitudes toward cars as the driving factor of car purchases are partly impacted by their parents, as indicated by Nishihara et al. (2017), which revealed a significant relationship between parents' attitudes and their children's attitudes toward the car. It captured the strengthening of parents' figures playing an essential role in forming children's behavior toward cars. Although car attitudes are substantially discussed by previous research, comparing whether students' attitudes towards cars are more significantly related to car purchase intention than parents' influence is an interesting comparison of psychological factors in car purchase studies. Therefore, with these challenges in mind, students' purchase decisions influenced by psychological factors such as attitudes, perceived influence, parents' direct influence, and the role of cohesiveness in family relationships become an essential issue that scholars cannot ignore.

I.3 Problem statements

The automotive industry is the most significant contributor (based on manufacturing) to Indonesia's national economic growth, contributing 19.25 percent of the gross domestic product (GDP; Statista Research Department, 2022a). Thus, the government will quickly respond when the automotive industry is disrupted and threatened, especially during the current condition of the COVID-19 pandemic.

The government issued PPnBM incentives in response to the significant drop in car sales during the pandemic. The implementation has proven to have saved and recovered the ecosystem of Indonesia's car industry while increasing the performance of the automotive component industry sector (Kemenperin, 2022). Nevertheless, the policy is temporary and will be revoked at any time─ predicted not to take effect in the third quarter of 2022 (Kemenperin, 2022). Therefore, formulating a new marketing strategy to bolster car sales in the pandemic situation is critical, especially in determining factors of one's intention to purchase a car. Foremost, the context of student cases needs to be considered as an emphasis, as students are the potential market for future car purchases.

A number of studies have been conducted to explain student car purchases both in the level of aggregate (high context of household) and disaggregate (individual context; See. Belgiawan et al., 2013, 2014, 2017; Pojani et al., 2018). Based on a comprehensive literature review, the disaggregate psychological factors are infrequent in the student car purchase intention literature. In fact, the theory of consumer behavior related decision-making model (Schiffman & Wisenblit, 2019) explains that the psychological factor plays a significant role in purchase decision-making; thus, this study tries to fill this gap.

Prior studies that investigated car purchase intention through psychological disaggregate predictors widely applied and extended the TPB by incorporating subjective norms (perceived influence) and attitudes as the latent predictors. This is similar to a previous study by Belgiawan et al. (2017) that examines student car purchase intention by its factor of psychological contexts such as subjective social norms (influence of others) and attitudes toward cars. Their study found that

compared to other significant persons (family, sibling, colleague, etc.), parents are the most influential on student car purchase intentions in the Indonesia case rather than other samples in developed and developing countries. However, there is a gap since Belgiawan et al.'s (2017) study only measured student perceived influence and individual attitudes rather than assessing whether the attitudes and suggestions of parents actually influence a student's car purchase intention or not. Therefore, examining actual parents' suggestions along with students' perceived influence and attitudes toward cars is critical to provide a clear picture of the influence of others on student car purchase intention. In addition to predicting students' car purchasing intentions, parents also influence students' attitudes towards cars through their evaluation of cars (Nishihara et al., 2017). However, Nishihara et al. (2017) do not further examine the mechanism of parents' attitudes toward cars influencing parents' suggestions child's car purchase intention. The gaps motivate this study to find the determinant factors of parents' suggestions from parents' attitudes toward a car.

Moreover, as collectivist countries like Indonesia always consider family norms in purchasing high-involvement products, such as cars; the role of cohesiveness in family relationships in the student purchase motivation model is limited. Since Nishihara et al. (2017) provide evidence that the role of family relationships significantly influences on student car attitudes, confirming the finding from developing countries' lens is essential. In accordance with the problem occur practically and theoretically, therefore, by knowing the determinant factors of student car purchase intention from student and parents' psychology, car marketers can more easily formulate marketing strategies based on individuals and their significant others' perspectives so that it will benefit raise cars sale in the near future.

I.3 Research Questions

Following the importance of the study and the gap in research on the disaggregate with psychological factors that are deemed necessary to be filled, this study formulates three essential questions are as follows:

1. What are the determinant factors of parents in suggesting students to own a car?
2. Do parents' car attitudes and family relationships shape students' car attitudes?
3. What factors influence student car purchase intention?

I.4 Research objectives

In regard to the research questions, this study has three critical objectives, which are as follows:

1. To determine the factors that have relationship with parents' suggestion on students' car purchase intentions.
2. To examine whether family relationship and parents' car attitudes shape students' attitudes toward cars.
3. To examine factors that formulate students' car purchase intention.

I.5 Research approach and methods

The study area of this research was Greater Jakarta. As metropolitan cities with integrated and varied transportation modes, knowing the perception of car ownership presents an exciting sight. In addition, this study conduct focuses on adolescents aged 18 to 25 years who are the future family decision-maker in deciding the travel mode in mobility. Thus, it can describe how the demand for cars in the future. This study was classified into a quantitative approach that collect the data through cross-sectional survey that distribute the questionnaire randomly to the students and their parents. The 18 research assistants help the survey by first approaching the students and scheduling a data collection meeting with the parents. The collected data is analyzed by descriptive statistics and principal component analysis (PCA) in SPSS 26 and partial least square structural equation modeling (PLS-SEM) in SmartPLS 3.3.3.

I.6 Key assumptions and research limitations

This research influence of others and attitudes on students' car purchase intention focuses only on parents' influence and students' perceived influence of their parents. In addition, the family relationship that is the focus of this study is the harmonious relationship in shaping students' attitudes rather than conflict between family members. The car type asked of the respondents was not specified because the author assumes that the choice of students' first car is not limited, and the car's type is not the main focus of this study. Greater Jakarta was chosen and determined as the locus to collect the data. Greater Jakarta was chosen because the public transportation and mobility access are more integrated than other Indonesia big cities. In addition, the high population with multiculturalism (because of the migration from the Indonesian archipelago) is another reason for choosing greater Jakarta as the locus of this research because it can represent Indonesia as a whole.

I.7 Writing structure

This study organized into five chapters are as follow:

1. Chapter 1: Introduction

   This section describes the research background, importance, and problems that occurred to get a phenomenon to be investigated further as a study. Additionally, this chapter provides research questions and objectives, method, scope, and limitations.

2. Chapter II: Literature review

   This chapter explores previous studies on the influence of others and car purchase decisions using bibliometric analysis. Further, this chapter discusses the specific topic of the influence of others, family relationships and decision-making in the household, and the influence factors of car purchase intention. Finally, this chapter formed the hypotheses development which was captured into a conceptual model.

3. Chapter III: Research Methodology

   This chapter describes the approach, elements, and research design of this study. Moreover, this chapter explains the sampling and data collection

process, including the study location, respondent criteria, measurement development, and data analysis process.

4. Chapter IV: Result and Analysis

   This chapter describes the descriptive analysis, principal component analysis results, measurement model, and structure model. Further, the chapter discusses the analysis and interpretation of the findings.

5. Chapter V: Conclusion and Recommendation

   This chapter describes the conclusion follows theoretical and practical implications and opportunities for future research.

Chapter II Literature Review

This chapter begins with a comprehensive literature review on car purchasing and the psychological factors that influence car purchases using bibliographic analysis. The sub-sections follow discussions relating to the influence of others on one's behavior. This sub-section discusses theories associated with the influence of others, previous multidisciplinary studies of the influence of others, and specifically the influence of others in travel or mobility behavior. Next is an explanation related to family relationships and how decision-making in the household affects household members' decisions, as well as factors that influence car purchase intention. This section closes with the proposed research, hypotheses development, and theoretical framework

II.1 Introduction

The comprehensive literature review process was conducted in four consecutive phases, as presented in Figure II.1. The first phase begins by collecting previous papers on car purchases. This study uses rigorous and reputable journal databases in business studies, i.e., Scopus, ScienceDirect, and Emerald, which are widely recognized by previous studies (Murdayanti & Khan, 2021), to identify relevant documents. The applied search query includes a broad range of car purchase relate keywords such as “car purchase”, “car purchase intention”, and “car buying”. In addition, the search query also applies the keyword of psychological factors that influence car purchases that identify in the previous studies, which uses as references regarding the importance of this study from a theoretical point of view in the research background. The keywords used such as “influence of others”, “parents influence”, “parents direct influence”, “perceived influence”, “family relationship”, and “car attitudes” are searched separately from the journal databases. The keyword search sets to include title, abstract, and keywords, with no limited journal area and time published. In addition, only the article’s documents in English that considered for the review process.

According to the search result as presented in Tables II.1 and II.2, “car purchase” is the more frequently used keyword than the two others. Psychological factors such

as “influence of others”, “social influence”, “social norm”, and “family relationships” have been widely used by previous studies, which reached more than 20,000 articles found from three databases.

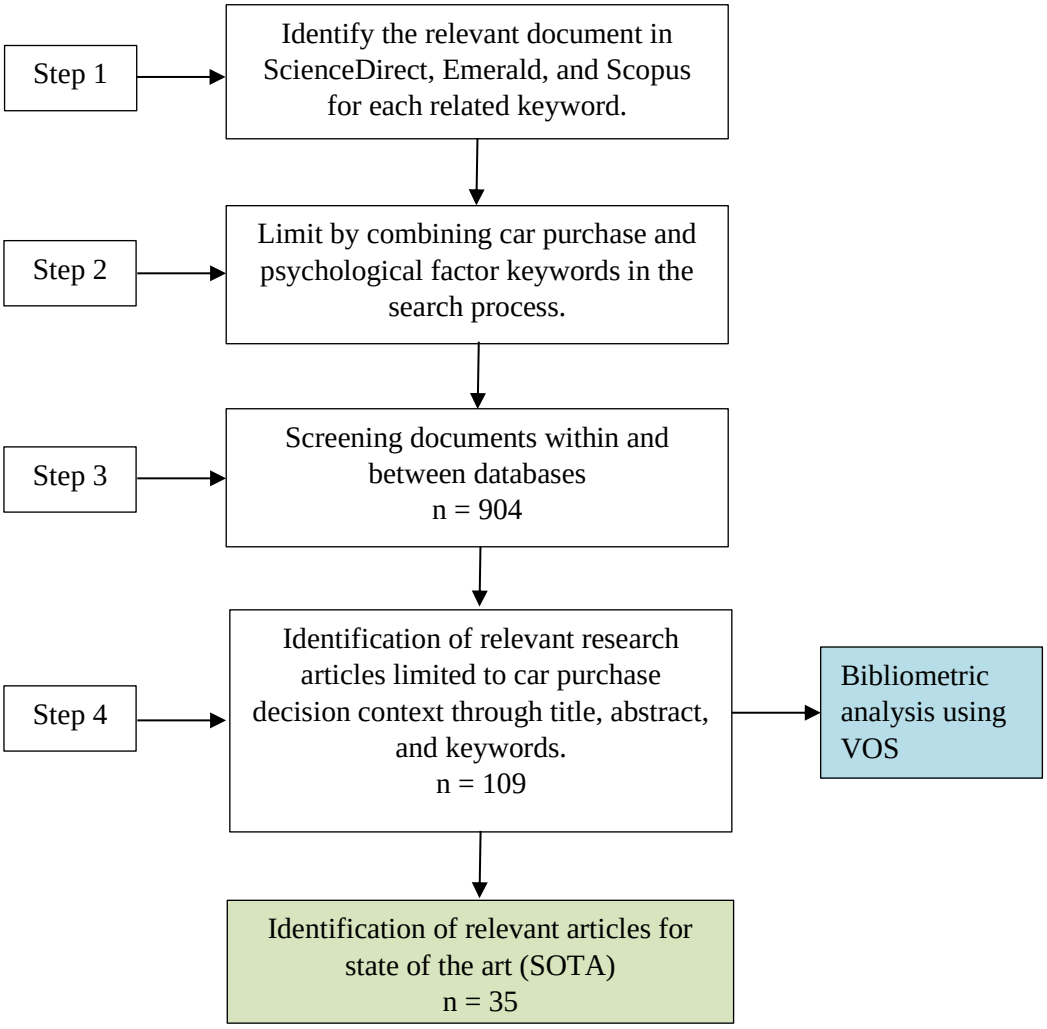

Figure II.1 Literature review process

Having initial obtained each of the total articles based on keywords, the second phase then combines keywords of car purchase and psychological factors in the research process to narrow the study related to individual factors influencing car purchase decisions. As presented in Table II.3, the psychological factor keywords show limited results when combined with the car purchase decision keywords. Additionally, there are no results for “influence of others”, “parents influence”, “family relationship”, and “perceived influence” in contexts related to car purchases in the Scopus database. In total, the query result led to 1111 in Science

Direct, 345 in Emerald, and 33 in Scopus. These articles then screen to detect and eliminate duplications using Mendeley's reference management software. The articles will automatically eliminate when it contains similar articles in the same folder. The screening process finally obtained 920 research articles from three databases which are 667 (ScienceDirect), 220 (Emerald), and 33 (Scopus), respectively. The final screening for each database shows studies related to factor influence car purchase is still limited worldwide.

In the third phase, these three data sets merge using the research information systems format (RIS) containing bibliographic information. Those the dataset then imported into Mendeley. The merging process revealed that some articles were similar, which decreased the number of articles to 904. Lastly, the fourth phase follows by conducting a screening process to identify relevant articles for car purchases. This phase reviews and analyzes the relevant topic based on the article title, keywords, and abstract. The abstract is read comprehensively by identifying the article's objective, method, variables, and results. About 88% of the article does not match the current study and are finally discarded from datasets. These articles, majorly related to car purchases implicated such as in the environmental context, do not discuss individual perceptions or evaluations or factors that influence car purchases. Finally, 109 articles were obtained and used for the next phase.

Table II.1 Search Results of car purchase decision from three article databases

Keywords	Science Direct	Emerald	Scopus	Total
"car purchase"	1320	247	208	1775
"car buying"	283	115	54	452
"car purchase intention"	17	30	8	55

Table II.2 Search Results of car psychological factors from three article databases

Keywords	Science Direct	Emerald	Scopus	Total
"influence of others"	77565	234	4521	82320
"social influence"	17608	6711	13164	37483
"social norm"	31276	7670	15765	54711
"parents influence"	1538	168	501	2207
"parents direct influence"	8	6	no result	14
"perceived influence"	1530	564	939	3033
"family relationship"	13283	1949	9075	24307
"car attitudes"	117	4	19	140

Table II.3 Search result of combination keywords of the car purchase decision and psychological factors

No	Keywords	ScienceDirect	Emerald	Scopus	Total
1	("car purchase intention" OR "car purchase" OR "car buying") AND "influence of others"	73	2	no result	75
2	("car purchase intention" OR "car purchase" OR "car buying") AND "social norm"	131	38	3	172
3	("car purchase intention" OR "car purchase" OR "car buying") AND "social influence"	74	25	1	100
4	("car purchase intention" OR "car purchase" OR "car buying") AND ("influence of others" OR "social influence" OR "social norm")	211	53	4	268
5	("car purchase intention" OR "car purchase" OR "car buying") AND "attitudes"	618	219	25	862
6	("car purchase intention" OR "car purchase" OR "car buying") AND "parents influence"	2	2	no result	4
7	("car purchase intention" OR "car purchase" OR "car buying") AND "family relationship"	2	2	no result	4
8	("car purchase intention" OR "car purchase" OR "car buying") AND "perceived influence"	0	4	no result	4
9	Total article (1 to 8)	1111	345	33	1489
10	Filtering the same article within database	667	220	33	920
11	Total research article from three databases	920			
12	Filtering the same article from three databases	904			
13	Checking appropriate titles, keywords, and abstracts in the research of car purchases factors	109			
14	Checking relevant articles for SOTA by identifying the objective, model, and result.	35			

A bibliographic analysis then followed to find out the development of research in the field of car purchase and to validate that the study of car purchase from the perspective of individual psychology is limited. The bibliographic analysis is an analysis to look back and describe what has been done, look for regularities, uncover the structure and theoretical basis of a field, and help develop predictions (Rauch, 2019). Through 109 articles from three journal databases after the screening process, the analysis will handle the collection of scientific literature to observe developments in the car purchase field. The bibliometric analysis in this study applied well-established software, namely VOS viewer. Each nodes presents a detected keyword, the node's size is the number of keyword occurrences, and the link shows the keywords that appear in the publication together. The mapping result from the VOS viewer, as presented in Figure II.2, shows that the discussion about the influence of others on car purchase intention is limited. There is no relation (or slight) between the influence of others or social norms or social influence, attitudes, car purchase intention, young adults and developing countries. This can be seen from the position of the node's point being quite far, and there is no link between these keywords.

Moreover, Figure II.3 shows the mapping of VOS viewer results for the topics discussed by period. From the illustration, car purchase intention, attitude, social influence, and developing countries are widely addressed from 2016 to 2018. Therefore, the comprehensive literature review process using bibliometric analysis confirmed that the research of car purchase intention from an individual psychological perspective is necessary to further current literature development. Mainly, find new sight by confirming parents' influence on the young children's car purchases.

Each of the 109 articles is then analysed by identifying the study's objectives, the constructs and model, methodology, analysis, and the results for developing state of the art (SOTA). There are 35 articles contain disaggregate with psychological factors on car purchase intention. This part will discuss further in sub-section 2.6 hypotheses development.

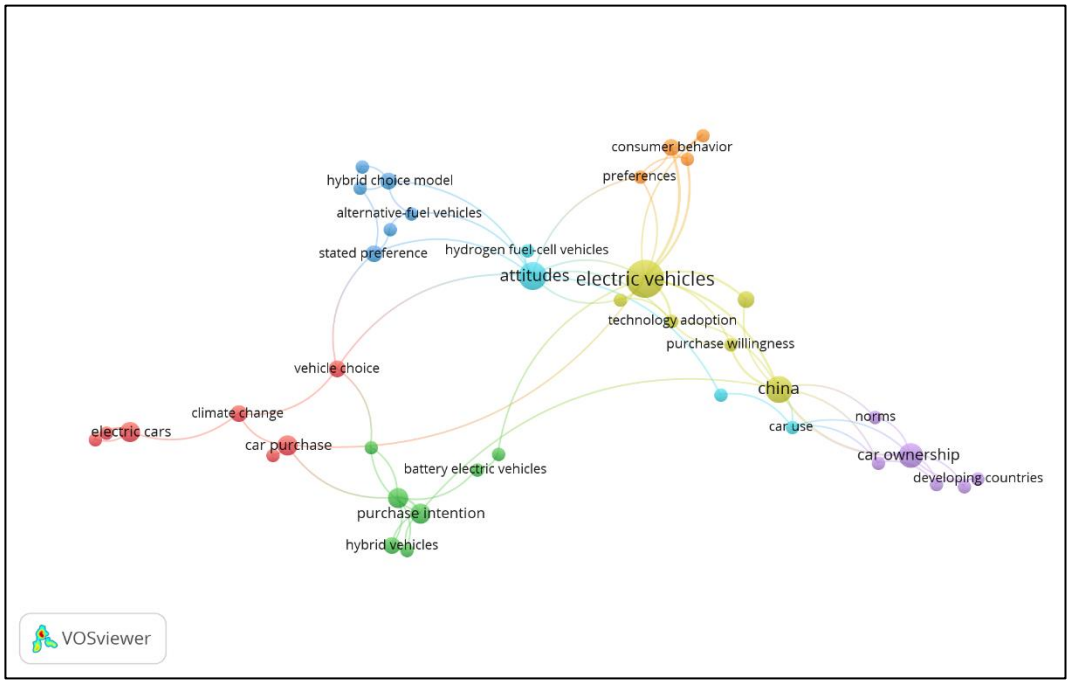

Figure II.2 Co-occurrence results of all keywords

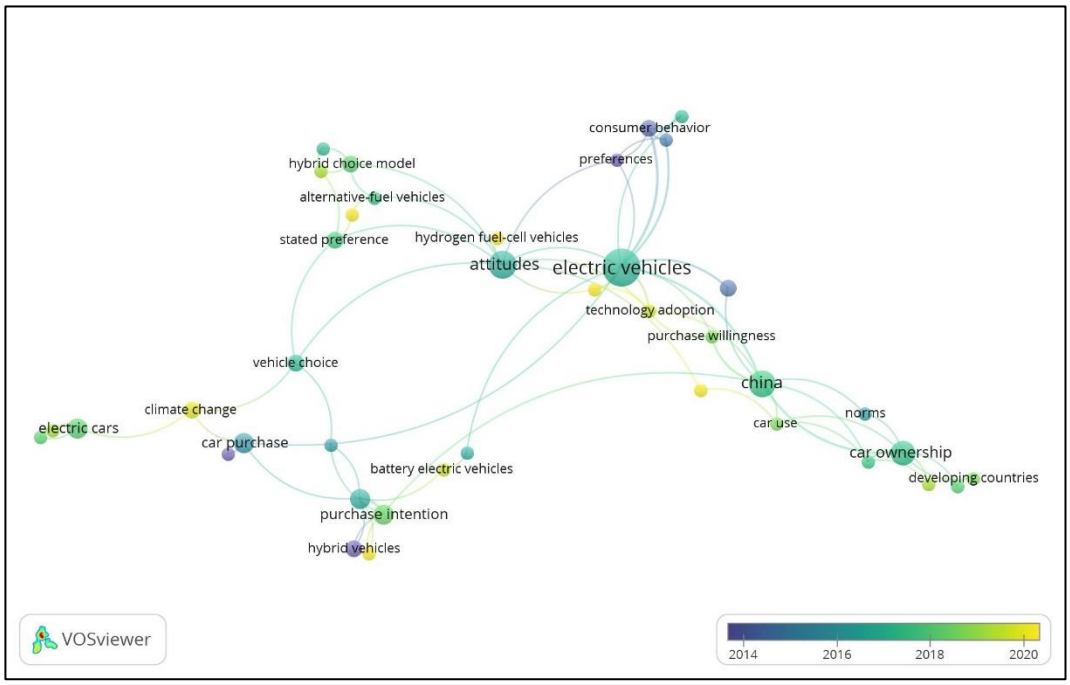

Figure II.3 Co-occurrence results of all keywords based on the study period

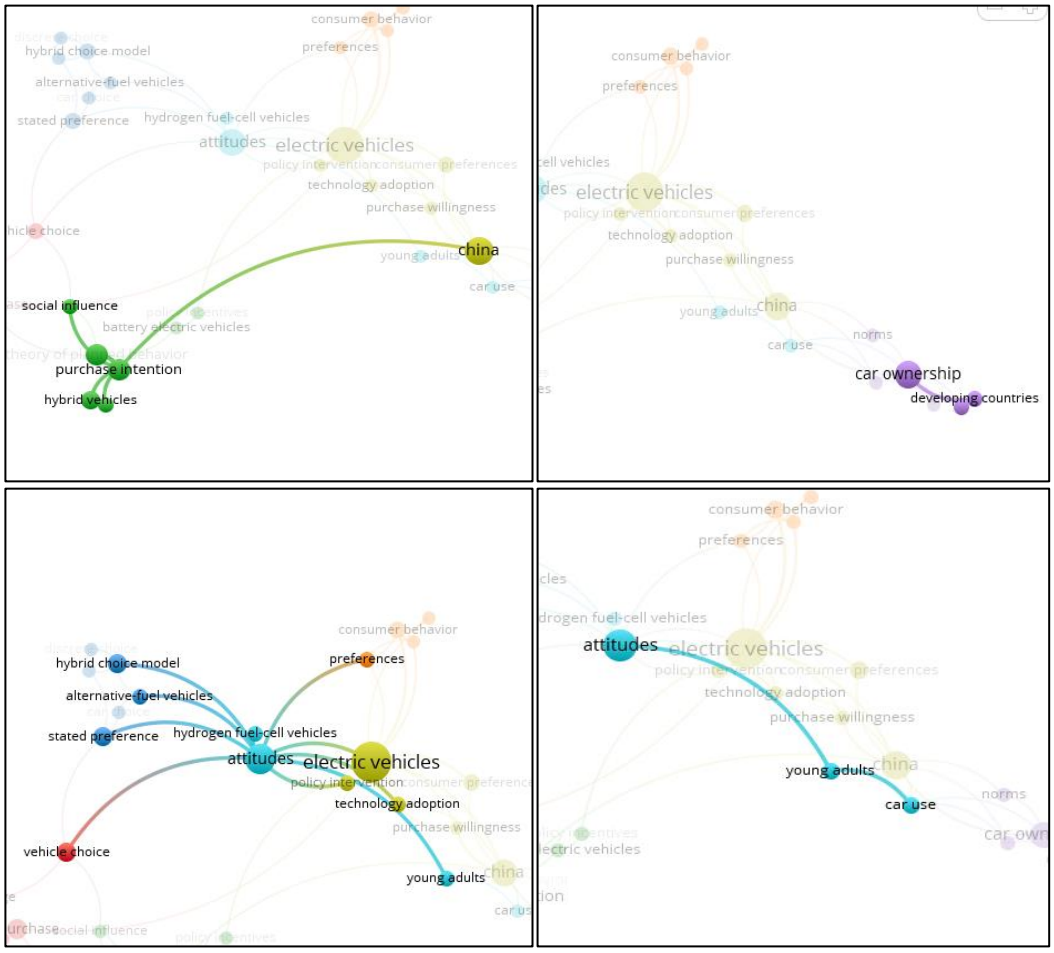

Figure II.4 Co-occurrence result of keyword relations for purchase intention, developing countries, attitudes, and young adults.

II.2 Influence of others on one's behavior

In this study, the influence of others divides into two terms: perceived influence and direct influence. From the perspective of this study, the perceived influence is related to the students' perception that parents expect them to purchase a car. Meanwhile, the direct influence is the actual suggestion from parents to encourage their children to purchase a car. Previous studies widely use the influence of others in the context of human decision behavior. However, most studies define the influence of others as the perceived influence of oneself rather than the direct influence of one on others. Due to limitations in the direct influence literature, especially how previous research defined this variable, this section will focus on discussing the development of theories relating to the influence of others that one perceives on others.

Since people are part of social members, the interaction of people on the network will remain a means of transmitting the information. Social network interaction has emerged as an essential point in sharing and exchanging knowledge and opinion, besides updating individual perceptions of choice or decisions among each other (Kim et al., 2017; Pike & Lubell, 2018). The interplay between people in the network influences one's decision-making process, where the role of others' influence in that network is significantly involved in the outcome of the choice (Kim et al., 2017). The outcomes intervention by others leads to one's behavior to match with the norm of belief of the significant people in the network (Cialdini & Goldstein, 2004).

Festinger (1954), a social psychologist, proposed a theory, namely the theory of social comparison, which discusses the process of conformity in a person's social network through identification. The theory centers on that human have the urge to evaluate their opinions and abilities by comparing themselves to others. The manifest of self-evaluation is acting as a person to belong to a group and associate with others who have ideas and abilities near their own (Festinger, 1954). The highlight related to the influence of others is from the driver or pressure toward conformity which comes from social influence. Festinger (1954) explains that when others like someone with ability scores equal to themself, the stability of their evaluation of their ability increases. In other words, the level of aspiration (what they consider a good performance) is less varied. Conversely, when someone's ability scored far above or far below others like themselves, these conditions from the social situation will influence the level of aspiration change to fluctuate.

The experiment in social psychology on whether the mere presence of others influences one behavior has formed the theory of social facilitation. In social facilitation theory, people show an increased level of performance as a result of the presence of another person. Zajonc describes that social facilitation is the level of human arousal resulting from the presence of others, which in turn, arousal increases the positive or negative dominant response (Platania & Moran, 2001). Triplett is credited as the origination of social facilitation theory, which in the first experiment, he investigates the presence of adolescents' peers on winding their fishing reels (Gaumer & LaFief, 2005). The finding shows that the presence of

others influences adolescents to wound their reels more quickly. Another social psychological theory that is related to the influence of others is the theory of social identity. Social identity theory is known as the person's sense or thought that is heavily influenced by their personal and group identity (Brewer, 1991). In this theory, people tend to classify themselves and others into some categories to identify their own identity and belongingness. According to Tajfel and Turner, the type (or group) with which a person is associated is called an "in-group", whereas, in a competing group, it is referred to as an "out-group" (Ambrose et al., 2018). The theory explicitly describes that one's behavior is influenced by the perception and approval of other members of one's group, which identifies as their in-group identity. For example, athletes are heavily influenced by other athletes, whereas drama club students will be highly influenced by other drama club members (Neighbors et al., 2013).

In the human decision theory, the influence of others on one's behavior has been discussed mainly by Ajzen (1991) in the theory of planned behavior (TPB). TPB is an extension of the theory of reasoned action (TRA) proposed in 1980 by Fishbein and Ajzen. The TPB is centered on predicting an individual's intention to engage in a particular behavior. This theory mentioned "subjective norm" as a behavioral intentions' antecedent together with attitude and perceived behavioral control in examining the role of external (outside oneself) and internal (inside oneself) influence on one's behavior. Subjective norm as the external factor on behavior refers to an individual's perception of other expectations in how he/she/them behaves particular behavior in questions (Ajzen, 1991). In other words, this condition comes from social pressure (usually from significant others) and internalized becomes motivation to or not to comply with the expectations. Subjective norm is considered as the construct to explain the influence of others. There are two ways subjective norms are distinct from other social norms constructs (Neighbors et al., 2013). First, there is focus on significant others as the reference group. Ajzen (1991) explains that subjective norms are usually obtained by individuals to rate the extent to which their "significant others" would approve or disapprove of performing the behavior in question. The significant others include parents, friends/peers, boyfriend/girlfriend, brothers/sisters, and other family

members. Second, focus on the perceiver's behavior rather than the behavior in general. The question centers on how one's belief their significant others approve or disapprove of their behavior. For example, "I think others about whom are close to me approved of my car purchase."

Related to the subjective norm by Ajzen (1991), previous research by Belgiawan et al. (2017) discusses how subjective social norms (SSN) influence a person's decision on particular behavior by analyzing data from developed and developing countries. Belgiawan et al. (2017) define SSN as "norms based on group expectations (what other people think a person should do)". The group expectations are mainly related to the inner circle of the reference group (significant others), which they define the inner circle as the support providers and recipients such as parents, partners, family, and close friends. SSN is constructed by asking respondents about their consent through questions, for example, "I believe that most of my acquaintances expect that I take the bus or train to work and shopping if the choice is between bus or train and my own car" (Belgiawan et al., 2017). This study concludes that SSN plays a role in a person's decision-making behavior.

Moreover, another previous research by Abou-Zeid et al. (2013) presents a review of the literature on how the behavior of others influences individual behavior. They identify the context of the influence of others that classifies it to the term "mass effects". The appellation is equal to the context of informational mass effect by Schmöcker et al. (2014). Abou-Zeid et al. (2013) define mass effects as a "positive influence to adjust one's choices to be in line with observed choices of others." This observation is related to the information about others' behavior that obtains directly or indirectly by perceiving the expectations of one's choice. Mass effects have been used through various literature terms, such as herd behavior, peer effect, conformity, fashion, and norming effects (Abou-Zeid et al., 2013).

In general-multidisciplinary studies on behavior outcomes by searching manually in the three databases with the keywords "social influence", "social norm", and "influence of others"; previous studies have found that the role of others' influence significantly impacts one's behavior and decision-making. This relation can be seen from the early studies on the issue of pro-environmental behavior. The studies show

that the role of important persons (family, closest friends, resident communities, work colleagues) is confirmed as the factor in how a person's decision to take protection through green action (Bai & Bai, 2020; Bergquist et al., 2020; Budovska et al., 2019; Czajkowski et al., 2019; Horne & Kennedy, 2017; S. H. Kim & Seock, 2019). For example, Bai & Bai's (2020) study explores the mechanism of personal and social norms on environment protection behavior and compares how these two variables impact the behavior. The result found that both norms influence behavior. Although personal norms take more influence, social pressure also plays a role in forming one behavior. Similarly, important persons are affecting one behavior toward food consumption (Stangherlin et al., 2018), especially the moment they select healthy food (Hang et al., 2019; Jun & Arendt, 2019) and eco-friendly food (Berger, 2019). Thus, when the important person strongly trusts certain organic food retailers, it drives one to purchase organic food from the retailer (Khare & Pandey, 2017). On the other hand, the important persons have not only influenced one behavior in pro-environment activities but also contributed to the use of digital learning apps (Rejón-Guardia et al., 2019) and to one in purchasing the luxury product (Jain, 2021).

Some studies have discussed that the specific "important person" significantly influences one's decision and behavior. For instance, in the study by Thürmer et al. (2020), the adolescent age group usually responds automatically to buying impulsively when their peers influence their behavior. Another study found an association between peer reading skills and children's reading performance, where peers had motivated children with low-level reading skills to improve their achievement (Cooc & Kim, 2016). Related to how peer influences one's behavior, in the family context, the presence of family plays a role in the patients' motivation to decide on surgery (Sloan et al., 2020) and cancer treatment (Wang et al., 2019). The positive perception of the family positively impacts patients' decision to undergo surgery. Their perception also gives the best support to emerging cancer survivors' confidence and courage during the treatment process. (Sloan et al., 2020; Wang et al., 2019). The last, study by Yang et al. (2017) stated that the perception of the family also affects, especially solo traveler constraints when traveling by themselves.

Moreover, as close family members, parents play a role in students' career paths and higher education choices. Parents' significant perception influences the student's decision to transition from baccalaureate to university (Olmos-Gómez et al., 2021). Although parents do not control what their children exactly to study at the university, they significantly influence children's self-confidence and self-efficacy during the study process. In the case of parents' attitudes toward adolescents' substance use, a previous study found that parents strongly influence young decision-making. Fite et al. (2018) found parents' negative perception of traditional tobacco; otherwise, they viewed e-cigarettes as not considered a damaging substance to use, directly impacting the young decision to choose. Parents' negative perception of traditional tobacco had the least likely impact on young uses of tobacco, and positively parents perceived e-cigarettes had the most potential impact on young uses e-cigarettes than traditional tobacco (Fite et al., 2018). Related to the smoking habit, the initiation of a person to smoke is indirectly influenced by the positive perception of parents toward smoking (Flay et al., 1994). This indicates that a person's decision on their final choice to smoke is related to the norm-accepted, and perspicuously their environment takes this behavior's role (Scalici & Schulz, 2017).

In the context of a person's decision to travel, several previous studies have discussed the relevant literature on parents' influence on a person's psychological behavior. In the case of travel behavior studies, parents' perceptions and attitudes have influenced children's mode choices, especially when they go to school (Scheiner et al., 2019). Based on this, mother perception plays a significant role in the children's decision to choose. In another case, the father often escorts the children using private mode if they house close to the campus and contrarily for the families who live far from campus (suggesting children use school buses, Sarangi & Manoj, 2020). Parents' working place distance can also determine this behavior to the child's travel school, where the closer of parents' working place to the school tend to parents escort their children to school (He & Giuliano, 2017). In another study, parents with higher education are reluctant to have their children go to campus by walking/cycling. Although the campus environment feels safe and

secure, the mother urges her children to use private vehicles (Sarangi & Manoj, 2020).

Similar to the topic above, comparative research on parents' cars choice vs public mode choice explains that in a city with a lack of walking and bicycling infrastructures, parents (significantly than mother, see in Mehdizadeh et al., 2018) is more encouraging their children to use private cars rather than use active mode or non-integrated public transportation to school travel because of convenience and safety (Ermagun & Samimi, 2018; Mehdizadeh et al., 2020). This situation tends to be implied by the mother's attitudes, particularly in securing her children. On the contrary, parents with a higher environment and healthy norms consider health outcomes when deciding on children's school travel (Mehdizadeh et al., 2018, 2020). Parents will determine their children to use public transportation mode when going to school as sustainability supported reason or urge to walk because of daily exercise that impacts the child's physical health and "green" campaign. Thus, the finding concludes the authors' assumption that mother and father significantly influence the final decision-making of children's mode choice (Mehdizadeh et al., 2020; see also Woldeamanuel, 2016).

II.3 Family relationships and decision-making process in the household

Family relationships play a central role in shaping individuals' behavior for their well-being (Thomas et al., 2017), precisely as a place to help consider all critical decisions throughout the life course. The previous study discusses a study focusing on measuring and describing interpersonal relationships among family members, which is named the family environment scale (FES; Lanz & Maino, 2014). Moos and Moos develop FES to measure an individual's perception of their family life with three factor solutions: quality of interpersonal relationships, personal growth, and the emphasis on system maintenance. The interpersonal relationship factor will be the focus of the discussion in this sub-chapter because these factors are related to the influence of parents on one's purchasing decisions.

Moos and Moos (1976) define the quality of interpersonal relationships among family members as "the extent to which family members feel that they belong to,

and are proud of, their family, the extent to which there is open expression within the family, and the degree to which conflictual interactions are characteristic of the family". According to Fok et al. (2014), the quality of interpersonal relationships among families has a three dimensions scale to measure the quality of an individual's family relationship function. The first dimension is cohesiveness, which defines the degree to which family members are concerned, committed, supported, and helpful to each other. Second is expressiveness, the degree to which family members are allowed and encouraged to express their feelings and act openly with one another. The last, conflict, is the extent to which anger, aggression, and conflictual interactions are expressed openly.

According to Xia et al. (2019), warmth and hostility are two affective qualities of family relationships that define warmth as the supportive form to build a family bond, nurture adolescents feeling of connectedness with parents, and help keep them engaged with their family. On the other hand, hostilities characterize by disharmonious coercive interactions in the family, formed by anger, swearing, and humiliation. The study of Xia et al. (2019) explores triadic family relationships (relationship between father-mother-adolescent) from previous studies that configure warmth and hostility and reveals five family relationship profiles. Each profile is defined as follows:

1. Cohesive families: the family relationship with a high level of warmth, closeness among family members, and level of hostility is low. This family relationship also can be characterized by harmony.
2. Distressed families: family relationships with low levels of warmth and affection, while hostility and unsupportive behavior are high. This family relationship tends to be characterized as a relationship that is not harmonious and tenuous.
3. Conflictual families: family relationships with a high degree of hostility; nevertheless, family members still have a moderate level of warmth and affection.
4. Disengaged families: family relationships with a low level of warmth and hostility among three family members. In this family relationship, adolescents tend not to have their sense of belonging and connectedness fulfilled. In

addition, family members are shown not to be close, and they tend to make independent decisions (without communicating with other family members).

5. Compensatory families: family relationships with a low level of interparental relation meanwhile the adolescents perceived a high level of warmth from both parents.

Previous studies found that family function systems and relations among each other intervene in adolescent decision behavior (see. Nishihara et al., 2017; M. Xia et al., 2019). The interrelation among family relationships variable and adolescent behavior is related to connectedness and closeness among family members, where adolescents will tend to listen to their family opinion on the decision in question. Among adolescent children's decisions and behavior influenced by family closeness, there is a role of family members who dominate the decisions of how adolescents should decide and behave. There are some theory and literature that explains how the family in the household conducts a decision-making process reflected by person-domination, which in turn influences the decisions of other family members.

A study by Niemczyk (2015) explains that there are four models in the family purchasing decision-making process. The first refers to the autonomic model, in which family members' purchasing decisions are made independently. Second, the patriarchal model refers to the family purchasing decisions made by the father (husband); the third model is the matriarchal model, where the purchasing decisions are made entirely by the mother (wife). The last partner/friendly model is the family purchase decision made by either some or all family members in the household. Moreover, another study related to family decision-making was developed by Schiffman & Wisenblit (2019) in consumer behavior. According to Schiffman & Wisenblit (2019), the dominant person in family consumption decision-making differs in four patterns. First, husband-dominated decisions related to the husband (father) have a more significant effect on family consumption rather than the wives (mothers); conversely with the second pattern, namely wives (mothers)-dominated decisions. The other pattern is joint decisions, which refer to the equal influence between husband (father) and wife (mother) on the family decision; and fourth, the

autonomic decisions are those husband or wife as the primary or only decision-maker in the family Schiffman & Wisenblit (2019).

Evidence for people's dominance in household decisions has already been discussed by comparing different husband-wife decision-making systems across countries. For example, in family purchase decision-making, jointly made decisions were characteristics of United States (US) families, whereas Singaporean families were more husband-dominated (Xia et al., 2006). In China, traditional norms place the husband in charge of household decisions, reflecting the husband mainly dominating the family decision (Carlsson et al., 2012), particularly in financial decisions for Chinese families in Malaysia (Yusof, 2015). A recent study has found that the Indonesian wife's role in energy efficiency more highly influences household decision-making than her husband (Permana et al., 2015). This correlates with controlling energy consumption because the wife may be more responsible for household expenses. Concerning the household decision-making on purchasing a car, the issue of automobile decisions in 1950 that more powerfully husband-dominated decisions than wife have been explained by Schiffman & Wisenblit (2019). This issue relates to the Japanese case in studying gender roles in Japanese families. Husband-dominated decisions are heavily associated with buying a new car and other automobile decisions than its wife (Varga et al., 2018).

The above studies on the person-dominated decisions in household decision-making clearly explain the pattern of parents' decisions, which in turn take a role in children's decisions and behavior of their purchase or choice. This condition is related to children that still live at their parents' house and are still being financed for their lives. For example, as a mother responsible for the family's food, the mother plays a role in purchasing children's food even though the child's preferences are also prioritized (Flax et al., 2021).

II.4 Influence Factors of Car Purchase Intention

Schiffman & Wisenblit (2019) divide behavior in purchasing decisions into two types, trial and repeat. The consumer's first-time purchase decision for a product or service is on a smaller scale than usual and without any commitment related to the

trial purchasing. Meanwhile, when the product or service meets expectations and consumers are willing to purchase it again with commitment and large quantities, it is associated with repeat purchasing. These two types of purchasing decisions cannot be a final decision before consumers have intentions to purchase the product. Adopting the definition of TPB by Ajzen (1991), an individual's behavioral intention is related to the individual trying to perform or not perform the behavior in question. Ajzen (1991) explains that behavioral intentions try to capture the motivational factors of individuals by examining how hard they are willing and how much effort they are planning into carrying out the behavior. Therefore, applying the definition from TPB to the car purchase intention, it can be defined as the consumer willingness to perform car purchases.

A growing body of literature has investigated factors influencing car purchase decisions, particularly the initial intention to own or purchase a car. The factors can be categorized into aggregate, disaggregate, and disaggregate with psychological factors (Nishihara et al., 2017). The aggregate factor uses an accumulative household decision at the different geographic scales such as inflation rate, traffic analysis zone in a country or region, and gross domestic product (GDP). The disaggregate factor explains car purchases based on smaller information units related to individual or household characteristics such as age, income, and gender. Meanwhile, the disaggregate with psychological factors describe car purchases based on individual perception and psychology. In this research, the factor influencing car purchase decisions is based on the third category, the disaggregate with psychological factors. Therefore, this section mainly focuses on explaining psychological factors, i.e., the influence of others and attitudes, on car purchase intention.

In the behavior context, Allport defined attitude as "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon an individual's response to all objects and situations with which it is related" (Aladwani, 2014). Meanwhile, Ajzen (1991) in TPB defined attitudes as “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question”. Thus, relating attitudes toward cars, the definition was referred to the degree to which an individual has a favorable or unfavorable

evaluation (based on experience) of a car. Steg (2005) distinguishes attitudes toward cars into three categories: symbolic and affective, instrumental, and independence. Based on her statistical analysis, symbolic and affective play a significant role in influencing individual car evaluation, particularly for young respondents. To verify the study by Steg (2005), Van and Fujii (2011) conducted research related to car attitude and its implication on behavior intention (Van et al., 2014) in six Asian countries, i.e., Japan, Thailand, China, Vietnam, Indonesia, and the Philippines. The statistical analysis resulted in three factors of attitude towards cars, namely symbolic affective (e.g., richness, luxuriousness, superiority, coolness), instrumental (e.g., usefulness, convenience, simplicity, friendliness), and social orderliness (e.g., environmental friendliness, safety, altruism, quietness). Among three factors, social orderliness is a factor that previous studies have never investigated, and this has become a new sight (Van et al., 2014; Van & Fujii, 2011).

Continue the study of specific attitudes toward cars, Belgiawan et al. (2014) conducted a comparative study in seven different countries (China, Indonesia, Japan, Lebanon, Netherlands, Taiwan, and the USA) and found four attitudinal factors which support previous studies by Steg (2005) and Van and Fujii (2011). These factors namely symbolic affective, independent, negative aspects, and social orderliness. Belgiawan et al. (2014) explain that in developed countries such as Utrecht and Japan, symbolic affective has the lowest rating, which means their perception of cars does not bring symbolic status compared to developing countries. Meanwhile, the independence factor of cars has the lowest rating for Indonesia and Taiwan, and the negative aspect factor has the highest rating for Beirut and Indonesia as the car gives an arrogant impression. Lastly, all the seven countries tend to consider social orderliness, such as a car that is not environmentally friendly. Among four factors of car attitudes, Belgiawan et al. (2014) found that symbolic affective is significant in motivating students to own a car in various countries, a similar result to the independence factor (except for Taiwan not significant).

Moreover, extending their study on the relationship between attitudes and motivation to purchase a car, Belgiawan et al. (2016) focus on a single country, Indonesia. The principal component analysis results distinguish car attitudes into five factors: symbolic/affective, arrogant prestige, independence, comfort, and

social/environmental care. Independence and arrogant prestige are two factors more explain students' car purchase decisions. Nishihara et al. (2017) and Belgiawan et al. (2017) extended Belgiawan et al.'s (2016) study to find new descriptions for the factors that shape student car attitudes. Using the principal component analysis to integrate correlated items, Nishihara et al. (2017) found three groups of car attitudes and named them usefulness, image, and environmental/safety. Meanwhile, a comparative study among developed and developing countries on car purchase intention by Belgiawan et al. (2017) distinguishes the two attitudinal factors of a car: symbolic affective and independence (freedom). They found that these two attitude factors described students' car purchase intentions.

A study by Luke (2018) on car purchase intention amongst adolescent students reveals a new attitude towards the car from Johannesburg, South Africa. Using principal components analysis, she found five factors of student evaluation toward a car. The first factor represents cars are a necessity. Second, cars allow broader travel options that describe students' perception that the current transport mode cannot fulfill their travel requirements. Third, cars are better than public modes─ as it provides accessibility, safety, and mobility, and a car is required to get a job. Fourth, the car reflects status and independence that are not found in public mode. Among these factors, cars allow broader travel options and cars better than public modes and require getting a job explained as the most factors influencing young people's car ownership motivation (Luke, 2018). The findings indicate that the determinant factors of car purchase intention are the benefits of the car over other modes. In addition, the study by Simsekoglu and Nayum (2019) distinguishes the evaluation of cars into three factors: environmental-economic attributes, instrumental attributes, and symbolic attributes. Their study found that environmental-economic and instrumental elements can form car purchase intention.

Previous research has attempted to identify the influence of others on individuals' intention to purchase a car in the future. These studies use different terminologies such as social influence/norm, subjective norm, and group influence (family, peer, neighbor). Oliver and Lee (2010) compared United States (US) and Korean consumers' intentions to purchase specific cars, such as hybrid cars, by

incorporating social value to describe the preferences. Social value in this study is related to individual perception of the important person's response to the car they purchase. For collectivist countries like Korea, the social value becomes a decisive factor for car purchase intention than individualist countries like the US, which find no relationship. People tend to seek information from others before purchasing decisions, especially high-involvement products such as cars. This is related to how experience and social networks play an essential role as determinant factors of the car purchase decisions for electric cars (Habich-Sobiegalla et al., 2018, 2019). Using comparative studies amongst Chinese, Brazilian, and Russian, the interpersonal relationship influenced car purchase intention, supporting previous studies that found influence from friend and family opinions on purchase decisions (Habich-Sobiegalla et al., 2019). In addition, the study of social influence on one's car purchase intention is described by the study by Jayaraman et al. (2015) in the Malaysian context; in particular, Pojani et al. (2018) illustrate that Malaysian consumers are influenced mainly coming from their families.

Several studies that extend Ajzen's theory of behavior use subjective norms to explain the relationship between the influence of significant people on one's car purchase intention. For example, Schmalfuß et al. (2017) studied car purchase intention for battery-electric cars with two approaches: a survey and a 24-h test trial. The first study found that subjective norm, which is the perception of individuals on their significant people's expectations, increases motivation to purchase a car. Interestingly, when participants asked for 24-h driving trial, the role of subjective norms on car purchase intention was more substantial than before the test drive. This may be during a 24-hour trial test, influenced by family or friends involved and affecting one's knowledge, in turn increasing subjective norms (Schmalfuß et al., 2017).

Lastly, Belgiawan et al. (2017) use subjective social norms as the perceived expectation from significant others about purchasing a car in understanding students' car purchase intention in seven countries. They measure the different motivation patterns of the students to comply with the expectation of several groups such as parents, partners, family members and relatives, close friends, peers at university, people in the neighborhood, and people in the province/state. Parents

are the most influential group from all samples combined, followed by family members, partners, and close friends. The findings mean that students perceive higher expectations in the inner circle of the social network. For specific cases, students in Japan and Indonesia found a high influence factor from parents motivating their car purchase intention compared to other countries' samples. Students in Taiwan show the lowest influence. For Japan, Berkeley, and Indonesia, the family is the second most influential group. Meanwhile, Taiwan and China from partners, and Beirut from close friends. Interestingly, only students in the Utrecht case have a weak influence of others on motivating their car purchase decision. As indicated by the result of the means value analysis from all groups is negative (Belgiawan et al., 2017).

II.5 Proposed Research

Previous scholars have widely researched individual car purchasing behavior and show significant developments in the literature related to what determinant factors influence decisions. According to the comprehensive literature review in the previous section, Figure II.2 show that the relationship between psychological factors, especially the influence of others and attitudes on car purchase intention, is still limited, as indicting there are no links (maybe thin) between the influence of others (or social influence), attitudes, and purchase intention. In addition, Hamzah and Tanwir (2021) encourage exploring psychological factors in the study of car purchases because the previous literature has not widely known it. The influence of others is one of the psychological factors that focus on this study in understanding the intention to purchase a car among adolescent people. However, as shown in Table II.4 to II.6, most of the study uses general "important people" compared to focusing on specific "important people". Although the study by Pojani et al. (2018) used the family effect and Grinblatt et al. (2008) used the neighbor effect, these studies do not comprehensively explain who the individual is in the family and what type of neighbors impact respondents' decisions.

Moreover, the study of the influence of others in the specific context of the inner-circle group by Belgiawan et al. (2013) in the Indonesian case found that the father

and mother have high statistical value for others' influence. This means their suggestion for children's car purchase decisions is powerfully influential. The strong relationship is considered that parents' beliefs (Pojani et al., 2018) and attitudes (Nishihara et al., 2017) can shape children's overall behavior, impacting their final decision, particularly car purchasing. Support by Belgiawan et al. (2017) confirms that the parents more significantly influence Indonesian students' car purchase intention. Using a comparative case study in seven countries, they found that in the case of Indonesia, parents are the first significant others in the inner circle that have the most influence on students' car purchase intentions. Along with all these findings, there is still an unexplored explanation for parents' influence as it all comes from students' perceptions rather than asking parents directly whether they suggest the students' car purchases.

This study tries to fill the gap by examining specific inner-circle groups, especially parents' influence on students' car purchase intention. This study will collect the data from three datasets consisting of father, mother, and child; thus, the multi-actor samples can describe parents' direct influence apart from children's perceived influence of their parents. Nishihara et al. (2017) found that parents' attitudes directly affect their children's attitudes. The findings are supported by Belgiawan et al. (2017), who argue that understanding parents' attitudes is necessary when aiming to understand the influence on a child's attitudes. Moreover, Nishihara et al. (2017) found rejection for the hypothesis that the difference between child's attitudes toward cars is smaller when the family relationship is better. Therefore, this study also tries to confirm the findings of Nishihara et al. (2017), for which there are no similar studies (except their research) in examining the relationship between parent and child attitudes towards cars, as this calls for future studies on this issue in countries outside of Japan. Finally, this study tries to find out the role of family relationships on children's car purchase intention by receiving the challenge to prove whether, in the Indonesian context, the family relationship has relations to forming children's car attitude or not. As presented in Figure II.2, this study tries to fill in the gaps due to the limited literature incorporating family relationships in the context of the influence of others (particularly in inner circle groups) on car purchase intentions.

Table II.4 Summary of previous car purchase intention studies that used the influence of others

NO	AUTHOR(S)	UNIT OF ANALYSIS	TYPE CAR	RESPONDENTS TOTAL	STUDY LOCATION	INFLUENCE OF OTHERS	LEVEL OF INFLUENCE	
							PERCEIVE	ACTUAL
1	Grinblatt et al. (2008)	Car owner	General car	2,520,575	Finlandia	Neighbors influence	√	
2	Oliver & Lee (2010)	Car driver	Hybrid car	1,083 (US), 783 (Korean)	US and Korea	social value (Important people)	√	
3	Belgiawan et al. (2013)	Student/adolescent	General car	134	Bandung, Indonesia	influence group (friends, AV commercial, parents, text commercial, siblings)	√	
4	Belgiawan et al. (2014)	Student/adolescent	General car	All: 1229, Indonesia: 200, China: 167, Taiwan: 139, Beirut: 271, Japan: 142, Utrecht: 84, and Berkeley: 226	Indonesia, China, Taiwan, Beirut, Lebanon, Japan, Utrecht, The Netherlands and Berkeley, USA	Social norm (family members, close friends, peers, people in their neighborhood, and people in their province/state)	√	
5	Jayaraman et al. (2015)	Car owner	hybrid car	121	Malaysia	Social Influence (important people)	√	
6	Nayum et al. (2016)	Car owner	Conventional and battery electric cars	1508	Norway	Descriptive norm, subjective social norm (important people)	√	
7	Belgiawan et al. (2017)	Student/adolescent	General car	All: 1229, Indonesia: 200, China: 167, Taiwan: 139, Beirut: 271, Japan: 142, Utrecht: 84, and Berkeley: 226	Indonesia, China, Taiwan, Beirut, Lebanon, Japan, Utrecht, The Netherlands and Berkeley, USA	Subjective norm (parents, partner, family members, close friends, peer at university, neighborhoods, people in province/state)	√	

Table II.5 Summary of previous car purchase intention studies that used the influence of others (*Continued*)

NO	AUTHOR(S)	UNIT OF ANALYSIS	TYPE CAR	RESPONDENTS TOTAL	STUDY LOCATION	INFLUENCE OF OTHERS	LEVEL OF INFLUENCE	
							PERCEIVE	ACTUAL
8	Jansson et al. (2017)	Car adopter and non-adopter	Electric vehicles and flex fuel vehicles	EV adopters: 494; Biofuel FFV adopters: 386; non-adopters: 312	Sweden	Social Influence (important people)	√	
9	Jansson et al. (2017)	Car owner	Alternative fuel vehicles	1,690 were AFVs and 3,920 CVs (gasoline and diesel)	Sweden	Interpersonal influence: neighbors, family, and coworkers	√	
10	Schmalfuß et al. (2017)	Car owner	Battery electric vehicle (BEV)	(1) online survey (n = 286) and (2) a 24-h field test (n = 30)	Germany	Subjective norm (important people)	√	
11	Habich-Sobiegalla et al. (2018)	Car consumer	Electric car	total sample size of 2806 from China (n=1078), Brazil (n=929), and Russia (n=799).	China, Brazil, Russia	Experience and social network	√	
12	Pojani et al. (2018)	Student/adolescent, parents	General car	374	Tirana, Albania	Social influence (family)	√	
13	Carley et al. (2019)	Car owner	Battery electric vehicle (BEV) and plug-in electric vehicle (PEV)	2011: 250, 2017: 250	US	Ads, relatives, neighbors, friend	√	

Table II.6 Summary of previous car purchase intention studies that used the influence of others (Continued)

NO	AUTHOR(S)	UNIT OF ANALYSIS	TYPE CAR	RESPONDENTS TOTAL	STUDY LOCATION	INFLUENCE OF OTHERS	LEVEL OF INFLUENCE	
							PERCEIVE	ACTUAL
14	Simsekoglu & Nayum (2019)	Car owner	Battery electric vehicle (BEV)	205	Norway	Subjective norm (important people)	√	
15	Bobeth & Kastner (2020)	Household who interested buy a car	Electric Car	220	Germany	Social norm (Important people)	√	
16	Mou et al. (2020)	Car consumer	General car	607	China	Social norm (family, friends)	√	
17	Habich-Sobiegalla et al. (2019)	Car consumer	Electric car	1080	China	Experience and social network	√	
18	Bhutto et al. (2022)	Automobile consumer	Hybrid vehicle	266	Pakistan	Subjective norm (important people)	√	
19	Asadi et al. (2021)	Car owner	General car	177	Malaysia	Subjective norm (important people)	√	
20	Hamzah and Tanwir (2021)	Car owner	General car	256	Malaysia	Subjective norm (important people)	√	
21	Haustein et al. (2021)	Car owner	Battery electric vehicles (BEVs) and internal combustion engine vehicle (ICEV)	2949 (ICEV users), 2862 (BEV users)	Denmark & Sweden	Social norm (Important people)	√	
22	Meena et al. (2021)	Student/adolescent, parents	General car	813	Jodhpur city, India	Peer/external influences (relative, friend, family)	√	

Table II.7 State of the art (SOTA)

NO	AUTHORS	OBJECT RESEARCH		PREDICTOR VARIABLE									UNIT OF ANALYSIS	STUDY AREA
				SOCIO-DEMOGRAPHIC	FAMILY RELATIONSHIP	INFLUENCE OF OTHERS				ATTITUDE				
		GENERAL CAR	SPECIFIC CAR			PARENTS	SOCIAL NORM	SUBJECTIVE NORM	OTHER	PARENT ATTITUDE	ADOLESCENT/ STUDENT ATTITUDE	RESPONDENT ATTITUDE		
1	Grinblatt et al. (2008)	√							√				Car owner	Finlandia
2	Erdem et al. (2010)		√	√								√	Car consumer	Turkey
3	Oliver & Lee (2010)		√						√				Car driver	USA and Korea
4	Belgiawan et al. (2013)	√		√					√				Students/Adolescents	Bandung, Indonesia
5	Carley et al. (2013)		√	√									Car owner	USA
6	Belgiawan et al. (2014)	√		√			√				√		Students/Adolescents	Indonesia, China, Taiwan, Beirut, Lebanon, Japan, Utrecht, The Netherlands and Berkeley, USA
7	Jayaraman et al. (2015)		√						√			√	Car owner	Malaysia
8	Belgiawan et al. (2016)	√		√							√		Students/Adolescents	Indonesia
9	Hackbarth and Madlener (2016)		√										Car consumer	Germany
10	Junquera et al. (2016)		√	√									Car consumer	Spain
11	Nayum et al. (2016)		√	√				√				√	Car owner	Norway
12	Noor and Wen (2016)		√									√	Car consumer	Malaysia

Table II.8 State of the art (SOTA; *Continued*)

NO	AUTHORS	OBJECT RESEARCH		PREDICTOR VARIABLE									UNIT OF ANALYSIS	STUDY AREA
				SOCIO-DEMOGRAPHIC	FAMILY RELATIONSHIP	INFLUENCE OF OTHERS				ATTITUDE				
		GENERAL CAR	SPECIFIC CAR			PARENTS	SOCIAL NORM	SUBJECTIVE NORM	OTHER	PARENT ATTITUDE	ADOLESCENT/ STUDENT ATTITUDE	RESPONDENT ATTITUDE		
13	Belgiawan et al. (2017)	√		√			√	√			√		Students/Adolescents	Indonesia, China, Taiwan, Beirut, Lebanon, Japan, Utrecht, The Netherlands and Berkeley, USA
14	Jansson et al. (2017)		√				√					√	Car owner	Sweden
15	Jansson et al. (2017)		√						√				Car owner and non	Sweden
13	Schmalfuß et al. (2017)		√	√				√				√	Car owner	Germany
14	Muromachi (2017)	√		√							√		Students/Adolescents	Japan
15	Nishihara et al. (2017)	√		√	√	√				√	√		Students/Adolescents and Parents	Japan
16	Cecere et al. (2018)		√	√									Car owner	Europe countries
17	Luke (2018)	√		√							√		Students/Adolescents	South Africa
18	Giansoldati et al. (2018)		√	√									Car consumer	Italy
19	Habich-Sobiegalla et al. (2018)		√	√					√				Car consumer	China, Brazil, Russia
20	Ng et al. (2018)		√						√			√	Car consumer	Hongkong

Table II.9 State of the art (SOTA; *Continued*)

NO	AUTHORS	OBJECT RESEARCH		PREDICTOR VARIABLE									UNIT OF ANALYSIS	STUDY AREA
				SOCIO-DEMOGRAPHIC	FAMILY RELATIONSHIP	INFLUENCE OF OTHERS				ATTITUDE				
		GENERAL CAR	SPECIFIC CAR			PARENTS	SOCIAL NORM	SUBJECTIVE NORM	OTHER	PARENT ATTITUDE	ADOLESCENT/ STUDENT ATTITUDE	RESPONDENT ATTITUDE		
21	Pojani et al. (2018)	√		√					√		√		Students/Adolescents	Tirana, Albania
22	Chen et al. (2019)		√									√	Car consumer	China
23	Chng et al. (2019)		√	√								√	Car decision maker	UK
24	Simsekoglu and Nayum (2019)		√	√				√				√	Car owner	Norway
25	Carley et al. (2019)		√	√					√				Car owner	US
26	Habich-Sobiegalla et al. (2019)		√	√					√				Car consumer	China
27	Bobeth & Kastner (2020)		√				√						Car consumer	Germany
28	Luca et al. (2020)		√	√								√	Car consumer	Italy
29	Mou et al. (2020)	√		√			√					√	Car consumer	China
30	Asadi et al. (2021)		√					√				√	Car owner	Malaysia
31	Hamzah and Tanwir (2021)		√					√				√	Car owner	Malaysia

Table II.10 State of the art (SOTA; *Continued*)

NO	AUTHORS	OBJECT RESEARCH		PREDICTOR VARIABLE									UNIT OF ANALYSIS	STUDY AREA
				SOCIO-DEMOGRAPHIC	FAMILY RELATIONSHIP	INFLUENCE OF OTHERS				ATTITUDE				
		GENERAL CAR	SPECIFIC CAR			PARENTS	SOCIAL NORM	SUBJECTIVE NORM	OTHER	PARENT ATTITUDE	ADOLESCENT/ STUDENT ATTITUDE	RESPONDENT ATTITUDE		
32	Haustein et al. (2021)		√				√						Car owner	Denmark & Sweden
33	Haustein et al. (2021)	√							√				Students/Adolescents	Jodhpur City, India
34	Wang et al. (2021)		√	√									Car consumer	Canada
35	Bhutto et al. (2022)		√					√				√	Automobile consumer	Pakistan

II.6 Hypothesis Development

II.6.1 The relationship between students' and parents' car attitudes, the direct influence, and family relationships.

The characteristics of an individual and the position in the social network can be used as indicators to estimate the long-term influence of an individual in the network (Phan & Godes, 2018). As it relates to the inner circle network of the relationship between parents and children, a previous study argues that parents' beliefs have a more substantial influence on their children than anyone else (Pojani et al., 2018). A previous study stated a relationship between parents and children and how parents perceive particular items in a child's purchase decision (Neulinger & Zsótér, 2014). The relationship between parents and children in purchase decisions can distinguish as hierarchical or horizontal. Hierarchical refers to parents being influential in their children's purchase decisions by giving suggestions, while, the horizontal one, parents do not have more influence on their children's decisions (Flurry, 2007).

In the case of a child's mode decision to and from school, previous studies found the relationship between parents' attitudes toward cars and their influence on children's car use during school mobility (Ermagun & Samimi, 2018; Mehdizadeh et al., 2020). From these studies, the driving factor of car use suggested by parents is because of its convenience and safety. Related to a study by Sarangi and Manoj (2020), despite parents perceiving their house environment as safe and secure, parents who have private cars keep choosing to pick up and drive their children to school using their car. Besides, a study by Hafram and Hasim (2018) stated that mobility decision is considered the parents' decision because parents' perception of the private vehicle can give an easier way to mobile than public transport. Although previous studies have not revealed parents' direct influence on children's car purchasing, this paper hypothesize that parents' attitude and the direct influence on the children have a significant relationship. This is related to previous studies above on how parents' attitude influences children's mobility decisions.

Nishihara et al. (2017) conducted a study to identify the relationship between parents' attitudes and children's attitudes toward cars. They also analyze family

relationships' role in shaping children's attitudes toward a car. Using 500 datasets consisting of three samples─ father, mother, and children in Japan, the study found that parents' attitude toward cars strongly influences children's attitudes. In addition, Nishihara et al. (2017) stated that although the mother's attitude towards the car was less positive, the influence of the mother's attitudes on the child's attitudes was better than the father's influence. The findings from Nishihara et al. (2017) are in line with the study by Belgiawan et al. (2017), who suggest that analyzing parents' attitudes is essential to understanding children's attitudes toward a car.

Moreover, related to the relationship between family relationships and child's attitudes toward cars, Nishihara et al. (2017) found that children who respect their family directly influence child attitudes. The families with closer bonds tend to have a closed attitude towards cars (Nishihara et al., 2017). The findings above describe that the positive parents' car attitudes have implications for parents' direct influence on students' car purchases and students' attitudes toward cars. Students' car attitudes are also formed by having a harmonious relationship with their parents. Therefore, this paper proposes that:

H1: Father attitude toward cars have a significant relationship with the father's direct influence.

H2: Mother attitude toward cars have a significant relationship with the mother's direct influence.

H3: Father attitude toward cars have a significant relationship with the students' car ownership attitudes.

H4: Mother attitude toward cars have a significant relationship with the students' car ownership attitudes.

H5: The cohesiveness in family relationships has a significant relationship with students' car attitudes.

II.6.2 Students' car attitudes and perceived influence on purchase intention

In psychological behavior, previous studies suggest that the influence of others and attitudes are important factors affecting one's intention to purchase a car (Asadi et al., 2021; Bhutto et al., 2022; Hamzah & Tanwir, 2021; Jayaraman et al., 2015; Mou et al., 2020; Schmalfuß et al., 2017; Simsekoglu & Nayum, 2019). This is related to the study by Belgiawan et al. (2017) that stated significant person, notably parents, is perceived by Indonesian student as the most influential significant others in influencing car purchase intention. This shows that parents' communication effectively influences a person's purchase decision.

Studies in car purchasing found that attitudes toward cars have different influences on children's car purchase intentions. For example, Belgiawan et al. (2014) conducted comparative studies in seven countries. They found a significant positive correlation between symbolic/affective independence and children's intention to purchase a car in various countries, including Indonesia. Belgiawan et al. (2016) also conducted a study specifically in Bandung, Indonesia. The study results found that independence-related aspects are the most influential factor in children's car purchases. In addition, the contrary findings that found symbolic/affective related aspects do not explain car purchases amongst children.

The comparative study by Chng et al. (2019) between developed countries found that Singaporeans perceived car ownership as a social status symbol, whereas Londoners have different perceptions. Similar to Singaporeans, Indian perceive purchasing a car can provide comfortable mobility besides creating social status and a good image for the owners (Verma et al., 2016). In addition, in the Chinese case, symbolic/affective also impact their decision to purchase and own a car; nevertheless, this factor is significantly negative when perceiving it for car use (Zhou and Wang, 2019). The finding means that the Chinese have a different perception of car attitude of symbolic affective when they own and use. Car purchase intention among students from psychological determinant factors shows that apart from students' attitude toward a car, the implication also found a significant relationship from their perceived influence of the parents. Thus, drawing on this discussion, this paper hypothesizes that:

H6: Students attitude toward cars has a significant relationship with children’s car purchase intention.

H7: Students’ perceived influence of their parents has a significant relationship with their car purchase intention.

II.6.3 Parents direct influence on students’ car purchase intention

In psychological factors, the children’s perceived influence and parents’ direct influence are primary constructs in explaining adolescent car purchase intention besides adolescent attitudes toward the car. The statement is relevant to previous studies that found the influence of parents has a significant relationship with children's car purchase intention (see. Belgiawan et al., 2014, 2017; Pojani et al., 2018). Lien et al. (2018) explained the role of the family in developing countries in the purchasing decision of children. Parents will play different roles such as facilitators, cultural mentors, or patriarchs (male dominate the decision: the father in this context). The role of parents in children's decision-making is also related to the relationship between parents and children on how children respond to parents’ decisions (Lien et al., 2018). This relates to whether the child is obedient and submissive to his parents or follows their aspirations. However, this study does not explicitly determine whether the father or mother has the most dominant influence on children's purchasing decisions.

A study by Yang et al. (2012) discusses the influence of others on car purchase decisions using word-of-mouth (WOM). The study found that first-time car buyers are more likely to consume information from others. The limited knowledge about the car generates a more substantial individual need to gain information to help them make a purchase decision (Yang et al., 2012). Conversely, those with driving experience are more likely to generate information about purchasing a car. In line with this study, children who purchase a car for the first time may consume the information from their significant others who have a car before making a purchase decision. In addition, parents will generate or suggest a child’s car purchasing directly because they have experience with cars. Although previous studies have never examined the parents' direct influence on children's car purchase intention, this paper hypothesizes the relationship to be positive and significant. This

condition can be supported by the previous study related influence of parents on the children's car purchase intention (See. Belgiawan et al., 2017) and the result by Belgiawan et al. (2014) that explains parents' financial maturity (i.e., income) is the determinant factor of children car purchase intention. Therefore, based on previous studies, the proposed hypotheses are:

H8: The father's direct influence has a significant relationship with students' car purchase intention.

H9: The mother's direct influence has a significant relationship with students' car purchase intention.

Figure II.6 illustrates the conceptual framework and hypothesis relationship of constructs influencing children's car purchase intention. The ellipses represent psychological variables (latent), and solid arrows represent structural relationships.

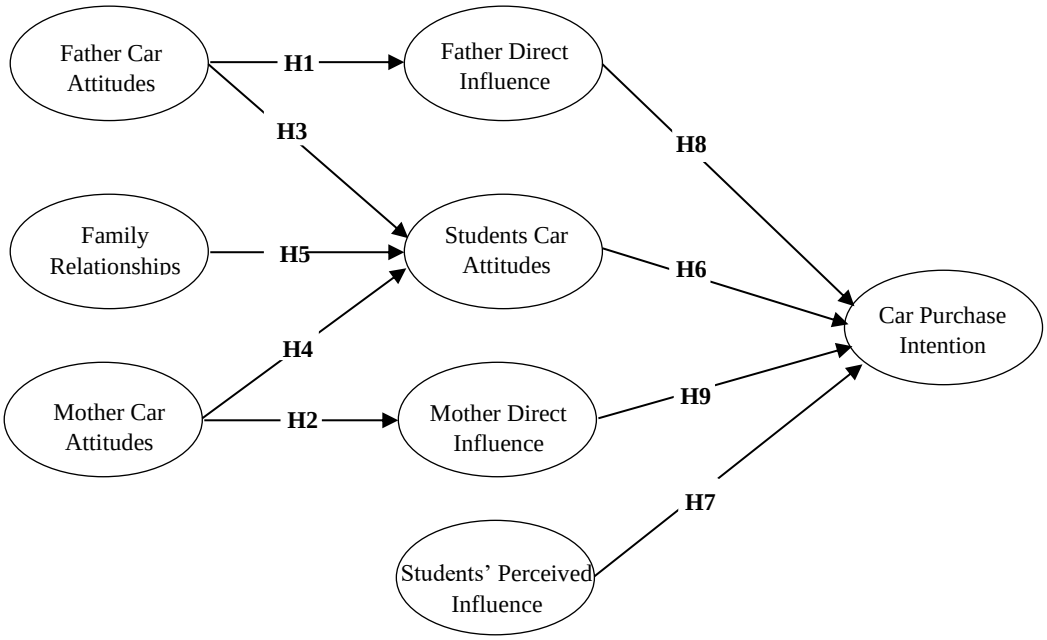

Figure II.5 Conceptual Framework

II. 7 Chapter Summary

Car purchase among students is an exciting topic to discuss, especially during the pandemic; car sales in Indonesia experienced a significant decline and rose again after the government issued the stimulus of PPnBM. However, the studies of disaggregate with psychological factors level have not optimized use by previous studies in explaining car purchase decisions. Actually, the psychological factor is the primary process of individual purchase decisions. This chapter discusses the theoretical foundation of this research. A comprehensive literature review using bibliometrics has been conducted to describe studies related to car purchase intention in three popular journal databases. The results show what this study assumes regarding limited research on psychological factors influencing car purchase intention.

The chapter then discusses the influence of others on one's behavior, starting from the theory of psychology-related ones influenced by their society until the explanation of the recent theory such as subjective norms. This sub-chapter further discusses the multidisciplinary studies that incorporate the influence of others, and the studies focus on transportation and car purchase context. Moreover, this sub-section discusses the influence factors of inner-circle and outer-circle group society. Hereafter, the next sub-chapter discusses the family relationships among household members and how the family members influence one decision especially related to car purchases. Also, this subsection describes the decision-making in the family, mainly how parents (father and mother) take a role in the decision. The last sub-chapter investigates the factors that influence car purchase intention and the description of theoretical development related to car purchase. Hypotheses development and conceptual framework follow the final discussion of this chapter.

Chapter III Research Methodology

This chapter describes the methodology applied in this research. The discussion begins by describing the research approach and the elements. In addition, the research design follows by illustrating the research step from the preliminary to the conclusion. The sub-chapter then discusses scale development and questionnaire design. Moreover, sampling and data collection follow the discussion and then presenting the data analysis used in this study.

III.1 Introduction

Car manufacturing is one of the significant contributors to Indonesia's economic growth. In the condition of car sales decline during the pandemic, explaining factors influencing car purchase intention is critical to help the car industry recover. Previous studies had explained that factors of consumer psychology have a relationship to car purchase motivation. However, previous studies have not been complete in describing the factors at this level, especially regarding the influence of the inner-circle group (particularly in this study, parents) on students' purchasing decisions that focus on student perceptions rather than testing the significant other. As such, confirmatory testing using quantitative methodologies is essential to realize this research call.

This study uses a quantitative approach to evaluate parents' influence, attitudes, and the role of family relationships on the student's car purchase intention. According to Saunders et al. (2009), quantitative research refers to the numerical study associated as a technique that can help to explore, present, describe, and examine the relationships and trends through quantified data. In marketing research, Malhotra (2010) classifies quantitative research as conclusive research that aims to test hypothetical relationships using quantitative data and yield a quantitative-based conclusion. Thus, the relationship testing allows the result findings to be conclusive in nature (Malhotra, 2010). There are three reasons for this study to use the quantitative method:

1. Researchers need to elaborate on respondents' experiences and knowledge from a large amount of data from a sizeable population to know determinant factors in car purchase intention.
2. A quantitative approach allows researchers to understand the whole picture of phenomena from clearly defined information, particularly prior research results that adolescent perceive their parents influence their car purchases. This shows the appropriate use of a quantitative approach to confirm the findings by examining parents' direct influence.
3. Quantitative allows the result to be conclusive in the nature of the study's topic. It can make a fundamental source that helps decision-makers evaluate, determine, and select the best course of action to take. Thus, the benefit will be equally high, both theoretically and practically.

In line with the aims and reasons for the research, the element of quantitative methods of this study's analysis is determined and summarized as shown in Table III.1.

Table III.1 Research elements

Element	Explanation
Philosophies	Positivism
Approach	Deductive (Quantitative based research)
Research purpose	Hypothesis testing / Explanatory studies
Type of investigation	Correlational relationship
Study setting	Non-contrived
Strategies	Survey
Choices	Multi-method
Measurement and measures	Total of 78 item measurements from 8 latent variables.
Data Collection method	Self-administered questionnaire
Unit of Analysis	Adolescent students and the parents
Sampling design	Non-probability/purposive sampling
Sample sizes	514 datasets (1 data consisting of adolescent student, father, and mother)
Time horizon	One-shot/cross-sectional
Data processing methods	Descriptive statistics, Principal component analysis (PCA), and partial least square structural equation modeling (PLS-SEM)
Data processing tools	Microsoft Excel, SPSS, SmartPLS 3.3.3

The elements adapt from Saunders et al. (2009) and Sekaran and Bougie (2017)

III.2 Research Design

In providing an understanding and comprehensive picture of the details of this study, this section clarifies the research methodology by presenting research designs as shown in Figure III.1. Since the phenomena of car purchase in Indonesia have been identified, this paper takes the first steps by reviewing the literature related to car purchase intention and the influence factors of psychological context, especially the influence of others. The gap in theory related to limited consideration of psychological factors on car purchase behavior; and unclear explanation of the influence of inner circle group specifically from parents, which only focuses on asking perception not the direct influence is recognised as a problem of this study.

The literature review continues by comprehensively reviewing the studies development of car purchase intention topic and the spread of the relationship between the subject and the period of the topic is majorly discussed. This is done to emphasize the importance of studying the psychological factors of the intention to purchase a car. The literature review is still being carried out to describe the topic more clearly and find appropriate variables, measurement items, and hypotheses development. The next step is collecting the data by distributing the questionnaire to families with the adolescents' students and biological parents. The research assistant distributed the questionnaire directly approaching students and their parents in Greater Jakarta. The respondent mostly found around the university before making an appointment for a respondent home visit or online meeting.

After the data is collected, the process then moves on to data cleaning and filtering to be used appropriately for data analysis. The first analysis is principal component analysis (PCA) to find factors that form children's and parents' attitudes towards cars. After PCA is completely carried out, the PLS-SEM measurement assessment is followed. Measurement assessment consists of the testing factor loading, convergent validity, and divergent validity. Convergent validity consists of Cronbach alpha, composite reliability (CR), and average variance extracted (AVE). Divergent validity measures the heterotrait–monotrait (HTMT) ratio of correlations. After the constructs meet the criteria of validity and reliability, the analysis continues for the structural model. The structure model was conducted as

the last analysis test in PLS-SEM to find the relationship between variables and assess how well the model can clarify the findings. This analysis consists of the coefficient determinant (R^2), predictive relevance (Q^2), and path coefficients.

The last step is to discuss the result of the data analysis and make a judgment on the hypotheses. This step follows the conclusion to confirm the research questions and present the contribution for practical and theoretical, and research recommendations.

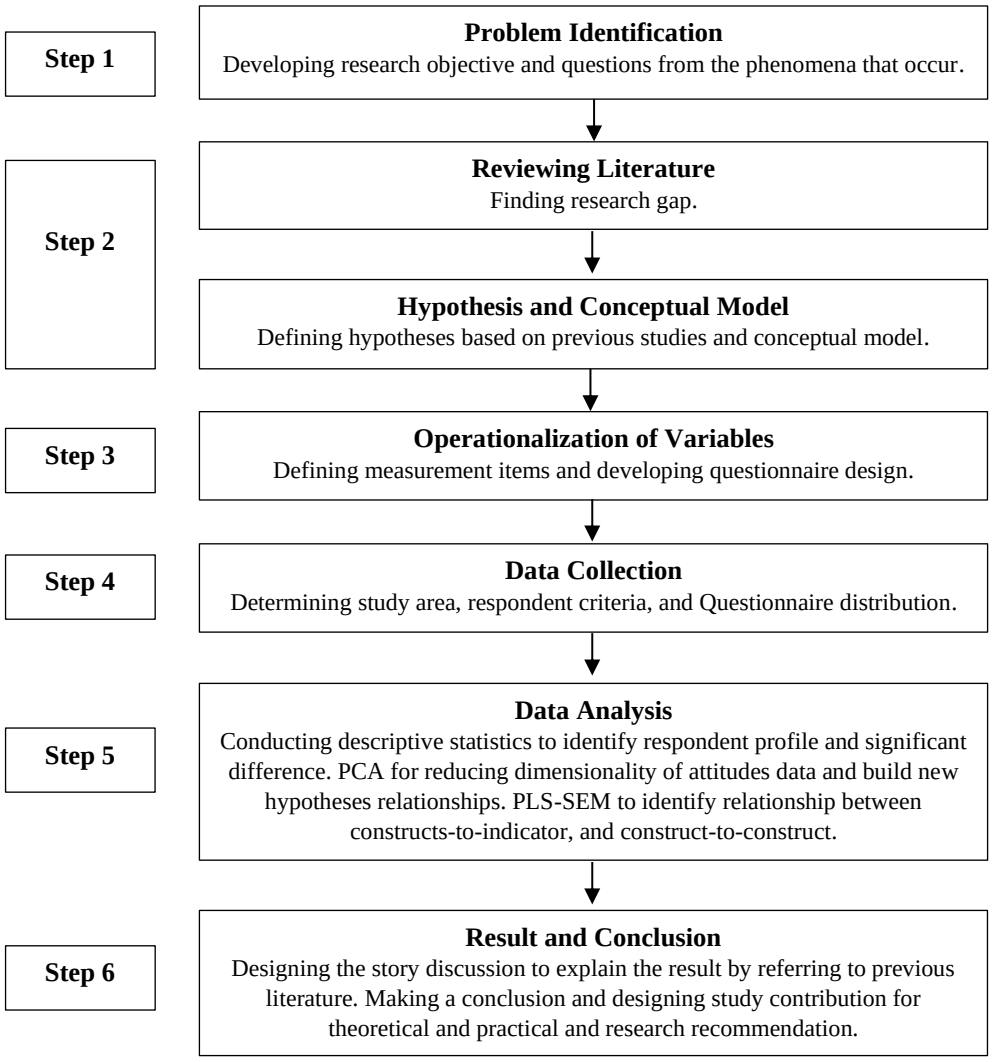

Figure III.1 Research Design

III.3 Scale Item Development and Questionnaire

There are two types of data in research, namely primary and secondary data. These two types of data can be used for the analysis process to answer research questions.

Sekaran and Bougie (2017) define primary data as information obtained directly from data sources, while secondary data is obtained from existing sources. In this study, researchers use both data sources to support accountable results. The primary data source is carried out by surveying the students with their biological parents (according to the established criteria). Meanwhile, secondary data is carried out on previous research, report, and article.

According to Sekaran and Bougie (2017), ethics in business research is a norm of behavior faced during the research process, whether conducted by researchers, organizations or respondents who will provide data. Furthermore, according to Saunders et al. (2009), the ethical issue in research is to ensure that the research process and data collection do not embarrass participants (data sources), harm, or any other material disadvantage. This study has addressed and considered ethical issues in formulating survey questions and collecting data. Researchers ensure that the issues raised in this research are not sensitive issues but rather part of scientific development. Besides, respondents' data collection process prioritized respondent agreement, such as volunteering for the survey or arranging the face-to-face survey schedule, permission to fully use the data in analyzing the information provided and protecting the respondents' data. Furthermore, data collection through accessible sources such as reports and articles on the digital web have mentioned the original author(s).

The survey-based questionnaire used in the current study consists of three sections with two parts questionnaires (see Appendix A). The first section is the question for the father, followed by the mother and the last section for the student. Each section of the survey design has two question parts. The first part is questions of the latent variable questionnaires. The question was formed based on measurement items in previous studies related to car purchases. The answer to each question using a 7-points Likert scale is as follow: 1 – Strongly Disagree, 2 – Disagree, 3 – Somewhat Disagree, 4 – Neutral, 5 – Somewhat Agree, 6 – Agree, 7 – Strongly Agree. Besides, car purchase intention was answered by 1 – strongly no intentions to 7 – strongly intentions. Then, the second part is the question about respondent characteristics related to the socio-demographic questionnaire. The question mainly asks the

general information about the respondent, such as gender, age, occupation (for parents), income, and car ownership. The answer contains choice and open-ended categorical questions.

There are 78 Likert-scale data questions in total, with each section containing 21 items for the father, 21 items for the mother, and 36 items for the student. For the father and mother section, the question of latent variables is quite similar, which asks about their attitude towards cars and their direct influence on students' car purchases. There are only questions in the socio-demographic part on household car ownership, such as car price and category, that are asked once in the father section. For the student section, the question of latent variables consists of attitudes toward cars, perceived influence, family relationships, and car purchase intention.

Attitude toward cars is formed by 20 measurements. All of the attitude measurement items were developed by adopting from the study by Belgiawan et al. (2016), which they built based on the study by Steg (2005), Van & Fujii (2011), and Weinberger & Goetzke (2010, 2011). Another question asked in the student's section is perceived influence and family relationship, each containing ten measurement items. Student perceived influence is adapted from Nishihara et al. (2017), who asked about students' perception of their parents influencing their car purchase decision. Meanwhile, the family relationship is adapted from the Brief Family Relationship Scale (BFRS) developed by Moos and Moos and taken from Fok et al. (2014).

The questions of father and mother direct influence respectively contain two items: the new scale designed by the author with marketing and transportation research experts. For car purchase intention, the question is used as a single item since the object in the construct is concrete, and the question represents the meaning of the construct clearly (see. Hair et al., 2021; Sarstedt et al., 2016). Moreover, in this car related questionnaire, this study considers the respondents to express their car questions to the "car in general". Table III.2 shows the measurement items of latent variables.

Table III.2 Variable operationalization

Variable	Factor	Code	Measurement Item
Attitude Towards Car (ATC)			All the questions in car attitude start from "The cars are…
	Father car attitude (FAC)	FAC1	…comfortable
		FAC2	…allow one to care for others
		FAC3	…convenient
		FAC4	…allow one to travel anytime
		FAC5	…environmentally unfriendly
		FAC6	…allow one to travel safety
		FAC7	…cool
		FAC8	…allow to do adventurous things
		FAC9	…disturbing one's neighborhood
		FAC10	…allow to express yourself
		FAC11	…fun to have
		FAC12	…helps one to save time for travel
		FAC13	…giving arrogant impression
		FAC14	…allow one to be independent
		FAC15	…trendy
		FAC16	…allow one to pick up or see off others
		FAC17	…expensive to own and maintain
		FAC18	…allow to distinguish oneself from others
		FAC19	…bring prestige
		FAC20	…allow one to travel anywhere
	Mother car attitude (MAC)	MAC1	…comfortable
		MAC2	…allow one to care for others
		MAC3	…convenient
		MAC4	…allow one to travel anytime
		MAC5	…environmentally unfriendly
		MAC6	…allow one to travel safety
		MAC7	…cool
		MAC8	…allow to do adventurous things
		MAC9	…disturbing one's neighborhood

Table III.3 Variable operationalization (*Continued*)

Variable	Factor	Code	Measurement Item
Attitude Towards Car (ATC)	Mother car attitude (MAC)	MAC10	…allow to express yourself
		MAC11	…fun to have
		MAC12	…helps one to save time for travel
		MAC13	…giving arrogant impression
		MAC14	…allow one to be independent
		MAC15	…trendy
		MAC16	…allow one to pick up or see off others
		MAC17	…expensive to own and maintain
		MAC18	…allow to distinguish oneself from others
		MAC19	…bring prestige
		MAC20	…allow one to travel anywhere
	Student car attitude (SAC)	SAC1	…comfortable
		SAC2	…allow one to care for others
		SAC3	…convenient
		SAC4	…allow one to travel anytime
		SAC5	…environmentally unfriendly
		SAC6	…allow one to travel safety
		SAC7	…cool
		SAC8	…allow to do adventurous things
		SAC9	…disturbing one's neighborhood
		SAC10	…allow to express yourself
		SAC11	…fun to have
		SAC12	…helps one to save time for travel
		SAC13	…giving arrogant impression
		SAC14	…allow one to be independent
		SAC15	…trendy
		SAC16	…allow one to pick up or see off others
		SAC17	…expensive to own and maintain
		SAC18	…allow to distinguish oneself from others

Table III.4 Variable operationalization (*Continued*)

Variable	**Factor**	**Code**	**Measurement Item**
		SAC19	…bring prestige
		SAC20	…allow one to travel anywhere
Student Perceived Influence (SPI)		PCI1	Your father is expecting you to have your car at some point in the next years?
		PCI2	Your mother is expecting you to have your car at some point in the next years?
		PCI3	Father's opinion is important when it comes to buying a car
		PCI4	Mother's opinion is important when it comes to buying a car
		PCI5	You respect your father
		PCI6	You respect your mother
		PCI7	You ask your father any advice when you make an important decision for your life
		PCI8	You ask your mother any advice when you make an important decision for your life
		PCI9	You trust your father
		PCI10	You trust your mother
Parents Direct Influence (DI)	Father Direct Influence (FDI)	FDI1	I think my child should buy a car in the future
		FDI2	I suggest my child to buy a car
	Mother Direct Influence (MDI)	MDI1	I think my child should buy a car in the future
		MDI2	I suggest my child to buy a car
Family Relationship (FMR)		FMR1	In our family we really help and support each other
		FMR2	In our family we spend a lot of time doing things together at home
		FMR3	In our family we work hard at what we do in our home
		FMR4	In our family there is a feeling of togetherness.
		FMR5	In our family we really get along well with each other.
		FMR6	In our family we can talk openly in our home
		FMR7	In our family we sometimes tell each other about our personal problems.
		FMR8	In our family we begin discussions easily.
		FMR9	My family members really support each other
		FMR10	I am proud to be a part of our family.
Car purchase intention (CPI)		CPI	How much would you like to intend to buy a car?

III.4 Sampling and Data Collection Method

III.4.1 Sampling

The study's unit of analysis is families with a child aged 18 to 25 years. The minimum age of students for this sample criteria is because three reason. First, we targeted students who have experienced riding their family cars; the general requirement to obtain a driving license is 18 years old. Second, the minimum average of entering university, graduating and getting a first job, and entering a master's program is between 18-25 years (Indonesia ministry of education, 2020). Third, this age criteria for the student are the entry-level for considering buying their own car. The parent in this current study is limited to the biological father and mother, living in the same house and married status (not divorce). The family minimum owns a car and lives in Greater Jakarta, including Jakarta, Bogor, Depok, Tangerang, and Bekasi. This study chose Jakarta and the surrounding urban areas because they have various transportation modes, allowing students to decide and compare the transportation they plan to use.

Considering the minimum requirement of adequate sample sizes, scholars have different opinions with respect to this criterion. The most cited minimum sample size determination is the 10-time rule (Hair et al., 2021), which suggests sample size should be ten times the number of independent variables in the complex relationship or the maximum number of inner relationships pointing to any dependent variable in the structure model. In the current study's model, the 10-times rule leads to the minimum sample size estimation of 40 samples (120 respondents in total). This is because the maximum number of relationships linked to the dependent variable is 4. Hair et al. (2021) also suggest using statistical power of the estimation using application-based namely G power, to determine the minimum required sample size. Using a 0.05 significant level (or 95% confident interval), the effect size of 0.15, and the power level of 0.80 (Faul et al., 2007; Hair et al., 2021) suggested a minimum n = 273 to perform the analysis. Therefore, these two methods of estimating the minimum sample size are the basis for the total sample size used in this study.

III.4.2 Data Collection

Data collection will be conducted by survey method using a questionnaire using a cross-sectional time horizon. The survey strategy is defined by Malhotra (2010) as a system in collecting data using a structured questionnaire for the people in order to obtain specific information such as respondent knowledge, attitudes, and behavior. Meanwhile, Malhotra (2010) defines the questionnaire as a structured data collection with a formalized set of questions for obtaining respondents' information. Moreover, according to Sekaran and Bougie (2017), a one-shot or cross-sectional time horizon is an activity of data collection that is carried out only once, maybe a few days, a few weeks or even a few months.

Data collection is done by distributing the questionnaire randomly at different location around university in Greater Jakarta, assisted by 18 assistants. The offline process is conducted by first approaching students around the university or social media contacts (for surveyors' colleagues). Students who meet the criteria and are interested in participating and agree to schedule a face-to-face interview with their parents at home are asked to share their WhatsApp contact numbers for scheduling. Then the surveyor visited the respondent's house for face-to-face data collection, considering COVID-19 prevention health protocol at a predetermined time. The surveyor asked the student's father's permission first to complete the survey, followed the mother, and finally submitted it by the student after they completed the questions. The process approach and structure are similar for online (remote) collection; The difference is that surveyors guide data collection through a meeting application. Respondents who completed the questionnaire were given souvenirs as an appreciation for participating.

The data is collected with a total of 514 datasets, consisting of the responses from fathers, mothers, and children. Data collection is completed in a month, specifically collected from 14 June 2021 to 14 July 2021. Detailed respondents can be found in Tables III.5 to III.7. As shown in Table III.7, most households have only one car. Most of the responding students were primarily female, aged between 19–20 years old, and more than half of 50 percent have an income of about 1〜3 million IDR. Furthermore, most of the responding fathers were aged 41–50 years, and the majority of them were employees. About 55% of the fathers answered that they

dominate car purchase decision-making in their households. The responding mothers mainly were 40–49 years old, and most of them were homemakers.

Table III.5 Respondent profile - Student data

Variables	Frequency	%
Age		
18	69	13.4
19	121	23.5
20	118	23.0
21	66	12.8
22	59	11.5
23	50	9.7
24	23	4.5
25	8	1.6

Table III.6 Respondent profile - Student data (*Continued)*

Variables	Frequency	%
Gender		
Male	228	44.4
Prefer not to answer	13	2.5
Female	273	53.1
Income		
Under 1 million IDR	185	36.0
1～3 million IDR	264	51.4
3～5 million IDR	54	10.5
5～8 million IDR[a]	11	2.1

[a]1 USD = 14,500 IDR in July 2021

Table III.7 Respondent profile - Parents' data

Variables	Frequency	%
Father		
Age		
31-40	17	.3
41-50	340	66
51-60	147	29
61 and more	10	.2
Occupation		
Stay at home dad	7	1.4
Civil Servant	125	24.3
Employee	238	46.3
Freelancer	4	.8
Entrepreneur	97	18.9
Others	43	8.4
Car purchase decision making dominates		
1 (other persons in household decide)	11	2.1

Table III.8 Respondent profile - Parents' data (*continued*)

Variables	Frequency	%
2	15	2.9
3	12	2.3
4	55	10.7
5	61	11.9
6	75	14.6
7 (I [father] decide alone)	285	55.4
Car ownership		
One car	441	85.8
Two cars	65	12.6
Three cars	8	1.6
Mother		
Age		
30-39	38	.7
40-49	370	72
50-59	103	20
60 and more	3	.1
Occupation		
Housework	252	49
Civil Servant	22	4.3
Employee	39	7.6
Entrepreneur	181	35.2
Freelance and Others	20	3.9

III.5 Data Analysis

III.5.1 Principal component analysis (PCA)

PCA is a methodology for determining linear combinations of measurable variables that retain the original information of the variables as much as possible (Fabrigar et al., 1999). The PCA is performed to reduce uncorrelated items in 20 attitudinal questions into a smaller set of factors with Varimax rotation. The items are grouped into factors that have similar characteristics according to the appropriate scoring criteria and are omitted for some items if they do not meet a satisfactory score with a threshold of 0.5. This study uses SPSS to perform data analysis with PCA.

III.5.2 Structural equation modeling (SEM)

Structural equation modelling (SEM) is the second generation of multivariate data analysis technique in estimating statistical models, which helps explain hypothesized relationships between variables (Hair et al., 2021). Partial least square structural equation modeling (PLS-SEM) is suitable for the current study because it can estimate complex models (many structural models) among multiple

independent and dependent variables simultaneously without imposing assumptions on data distribution (Hair et al., 2021). In addition, PLS-SEM is suitable to be applied in this study because it is related to the objective of developing theory and explaining variance in predicting constructs. Moreover, PLS-SEM has some benefits, such as an analytical tool that can be used for theoretical framework testing, no identification issues with small or large sample sizes, and can easily handle constructs measured with single- and multi-item measures (Hair et al., 2021).

Hair et al. (2021) state that there are two primary components in data analysis using PLS-SEM, namely the measurement model (outer model) and structure model (inner model). Measurement models are defined as the relationship between the variable and their indicator being observed. The structure model is a path model in measuring the relationship between construct in the structure mode. The two processes of analysis in PLS-SEM are the first measurement models to confirm the validity and reliability of the measurements. Second, after establishing validity and reliability, assessing the relationship between independent and dependent variables is followed.

This current study's measurement items typically represent each latent construct or the latent construct that causes the measurement items. Therefore, the criteria are suitable for the reflective measurement model. There are four steps for the evaluation of the reflective measurement model based on Hair et al. (2021): (1) assess the indicator reliability, (2) assess the internal consistency reliability, (3) assess the convergent validity, and (4) assess the discriminant validity. Meanwhile, for the structure model, there are five assessments: (1) assess collinearity issues, (2) assess the significance and relevance of the structure model relationship, (3) assess the model's explanatory power, and (4) assess the model's predictive power. The current study uses Microsoft Excel, SPSS, and SmartPLS. In the following Table III.8, the researcher summarizes the criteria of analysis guidelines using PLS-SEM by Hair et al. (2021).

Table III.9 Criteria using PLS-SEM Analysis

ANALYSIS	CRITERIA
Measurement Model	
Reflective indicator loadings	≥ 0.708
Internal consistency reliability	Cronbach alpha and composite reliability value above 0.70
Convergent Validity	AVE ≥ 0.50
Discriminant Validity	• The heterotrait–monotrait (HTMT) ratio of correlations. HTMT ≤ 0.85 for simple model and ≤ 0.90 for complex model • If the value is above 0.90, the confidence interval should be less than 1.
Structure Model	
Collinearity	• Collinearity is not problematic if VIF < 3 and uncritical if VIF = 3-5 (some study accepts tolerance of an uncritical issue if VIF < 10)
Significant and relevance of path coefficient	• t value higher than the critical value (strong relationship) • t value less than the critical value (no significant relationship) • critical value: 1.65 (one-tailed significant level of 5%) • effect size f^2
Model's explanatory power	R^2 values 0.25, 0.50 and 0.75 are concluded as weak, moderate, and substantial
$PLS_{predict}$	RMSEA

III. 6 Chapter Summary

This chapter explains the methodology used in this study. This study uses a quantitative approach to explain the psychological factors that have a relationship with car purchase intention among Indonesian students. Quantitative methodology is used to confirm previous findings related to student car purchase motivation that can benefit car marketers to boost car purchases in the near future during or after pandemic situations.

This study collects 514 datasets from a family, including the father, mother, and student (in a total of 1542 samples), using the survey strategy. Research assistants distributed the questionnaire directly to the family in Greater Jakarta for one month in 2021. The primary data that was gathered was then analyzed using SPSS and SmartPLS.

Chapter IV Results and Analysis

This chapter describes the result and analysis of this study. This chapter begins with an explanation of the analysis and result for descriptive statistics and PCA. The new hypothesis and conceptual model follow the discussion as this is an adjustment for attitudinal factors. The sub-chapter then discusses the analysis and the result of measurement assessment related to validity and reliability. Moreover, the structure model assessment follows the discussion of the PLS-SEM result by presenting the path coefficient as well as predictive power and model fit of this study.

IV.1 Introduction

This study aims to reveal the factor that has a significant relationship with parents' direct influence and student attitudes toward cars. In addition, this study tries to reveal the determinant factor of student car purchase intention. The descriptive statistical analysis for car attitudinal variables was firstly analyzed to know the difference in attitude between parents and the student. Later, the PCA was conducted for the attitudinal construct to reduce the dataset's dimensionality. This study uses PLS-SEM to measure two sub-models: the relationships between the observed indicators and the latent variable and the relationships between latent variables. The PLS-SEM is appropriate in this study as this tool is useful for analyzing the complex model and predicting key driver construct for student car purchase intention.

IV.2 Result of Descriptive Statistics

This part analyzes whether there are significant differences in attitudes toward cars between the father-mother, the father-student, and the mother-student. Mann-Whitney U test is used for the analysis since the variables are ordinal and test two different groups. As shown in Table IV.1, only two attitudinal variables have significant differences in the father-mother at the 5% level. For the father-student, three variables are significant at 5% and three at 10%. Only one variable has a significant difference in the mother-student, with a significant level of 10%.

Table IV.1 Attitudinal differences between Father-Mother, Father-Student, and Mother-Student

Variable	Father		Mother		Student		Father-Mother	Father-Student	Mother-Student
	Mean	SD	Mean	SD	Mean	SD	Mann-Whitney U	Mann-Whitney U	Mann-Whitney U
Cars are comfortable	6.37	0.981	6.43	0.932	6.43	0.938	127013	127904	131150
Cars are allow one to care for others	5.25	1.404	5.44	1.294	5.44	1.345	122886 **	121052 **	130264
Cars are convenient	6.05	1.181	6.06	1.152	6.11	1.148	131981	128792	128638
Cars are allow one to travel anytime	6.01	1.294	6.11	1.167	6.1	1.164	128305	129448	130921
Cars are environmentally unfriendly	5.13	1.693	5.19	1.658	5.08	1.718	130262	129999	128221
Cars are allow one to travel safety	6.29	1.033	6.32	0.979	6.32	0.983	130090	130309	131894
Cars are cool	5.57	1.502	5.64	1.5	5.76	1.473	128183	121992 **	125906
Cars are allow to do adventurous things	5.69	1.491	5.74	1.417	5.87	1.37	131576	124040 *	124300 *
Cars are disturbing one’s neighborhood	3.77	2.331	3.77	2.321	3.82	2.268	131352	131249	130558
Cars are allow to express yourself	5.19	1.673	5.24	1.665	5.41	1.594	130209	122920 **	124806
Cars are fun to have	5.82	1.399	5.87	1.308	5.99	1.239	131300	124693 *	125216
Cars are helps one to save time for travel	5.3	1.558	5.54	1.345	5.47	1.372	122840 **	126254	128501
Cars are giving arrogant impression	3.43	2.175	3.46	2.174	3.58	2.106	131186	126481	127494
Cars are allow one to be independent	5.61	1.606	5.69	1.549	5.71	1.514	128592	128487	132033
Cars are trendy	5.26	1.743	5.41	1.672	5.48	1.588	125843	124016 *	130422
Cars are allow one to pick up or see off others	6.2	1.093	6.23	1.048	6.27	1.003	130857	129271	130539
Cars are expensive to own and maintain	5.22	1.925	5.28	1.932	5.36	1.879	129668	126833	129340
Cars are allow to distinguish oneself from others	4.27	2.366	4.44	2.275	4.45	2.303	126870	126832	131928
Cars are bring prestige	4.8	1.857	4.83	1.898	4.85	1.91	130581	129429	130985
Cars are allow one to travel anywhere	6.06	1.325	6.17	1.203	6.13	1.255	128738	129202	131716

The high significant difference between father-student compared mother-student is supported by the previous findings in the Japanese context related to mother significantly influences children's car attitudes compared to father (Nishihara et al., 2017). As shown in Table IV.1, students generally have more positive attitudes toward cars, followed by mothers and fathers. Moreover, interesting findings show that students and mothers have a similar attitude with the statement that cars are *comfortable, cars allow one to care for others,* and *cars are allowed one to travel safely*. Only statement *cars are disturbing one's neighborhood* that has a similar attitude between father and mother.

Moreover, mean value analysis also found that there is not significant difference between parent and student attitude. However, when compare specifically to each sample, student has higher attitude toward car compared to the parents. The student generation thinks of cars as good because they are accustomed to the various car values when they use it. Moreover, the analysis follows to the car purchase expectation perceived by student. The result show that both father and mother are expecting them to purchase a car. However, related to car purchase decision, asking for father opinion show the higher value compared to mother. This can be interpreted that student are more likely to ask their father when purchasing a car because of his opinion is valuable and critical. Meanwhile, opinion related to important decision in life is high to ask the mother. The student car purchase suggestion has similar mean value both from father and mother, indicating they have similar expectations. However, when the car purchase in necessary, desirable, and important to have, the father has the higher expectations compare to mother.

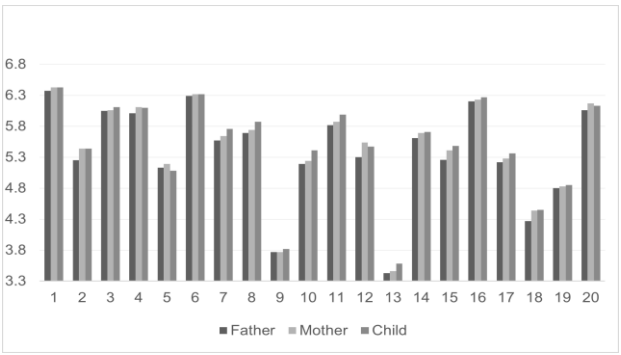

Figure IV.1 The attitudinal difference for 20 items between father, mother, and child

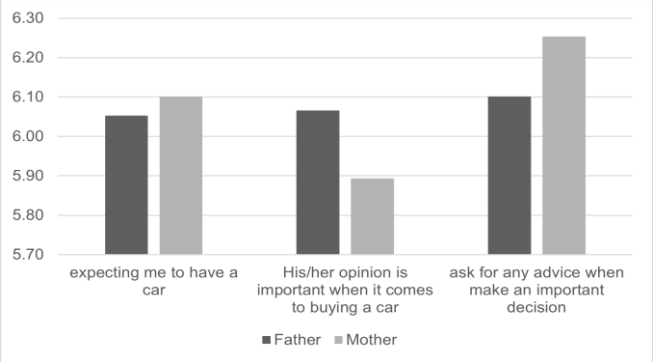

Figure IV.2 Child perceived influence and the importance of parent opinion

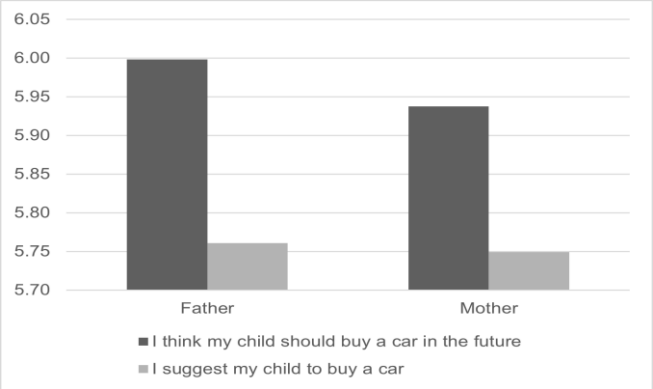

Figure IV.3 Parent suggestions on their child's car purchase

IV.3 Results of Principal component analysis (PCA)

PCA with varimax rotation is performed in order to construct uncorrelated factors of attitudes towards cars. This analysis has been performed via IBM SPSS 26 with 20 items of the attitudinal questions. Before performing PCA analysis, the Measure of Sampling Adequacy (MSA) is conducted to assess how suited the data is for factor analysis using Kaiser-Meyer-Olkin (KMO)-Bartlett's Test. The MSA value for the father, mother, and student's 20 attitudinal items in the KMO test was 0.95, 0.93, and 0.94, which is more than 0.7, indicating marvelous. In addition, Bartlett's Test of Sphericity for father, mother, and student are respectively $p < 0.001$. Thus, the data were adequate and suitable for factor analysis.

After the MSA has been completed with the result data adequate for factor analysis, the PCA is conducted by first analyzing the father's attitudinal item, followed by

the mother and student. For the father and mother result, the analysis obtained three attitudinal factors and had only one item, “FAC 8 (MAC 8): *the cars are allowed to do adventurous things*” do not give sufficient factors, which decide to remove. Then, run the same steps of the second PCA and result in the final analysis with three factors and 19 items for the father and mother sample. The last, the analysis was conducted three-step to run student attitudinal items. The first running obtained three factors with one item, namely “SAC 5: *the cars are environmentally unfriendly*,” have cross-loadings below criteria of 0.05. Then the item was removed and employed the same steps were to run the second. Three factors were obtained from the second PCA, with one item significantly different from the other items (below 0.05). The item "SAC 11: *cars are fun to own*" is released and proceeds to run the same analysis. The third PCA is final for the student sample, obtaining three factors with 18 remaining items. Table IV.2 shows the result of the final PCA values and factors in this study.

The first factor accounted for 51%, 47%, and 50% of the variance, respectively, for the father, mother, and student. This factor is formed through negative emotions about the car, such as being *cool* (except in students), *disturbing one’s neighborhood, expressing oneself, giving arrogant impression, trendy, expensive to own and maintain, allowing to distinguish oneself from others,* and *bring prestige.* Thus, the first factor named “superior prestige,” similar name to some car attitudinal factors from previous studies such as arrogant prestige (Belgiawan et al., 2016), symbolic affective (Belgiawan et al., 2017; Van et al., 2014), and image (Nishihara et al., 2017).

The second factor accounted for 11% of the variance, the similar values for the three samples. This factor is named “safety and usability” because the variable describes the utility and safety of the cars. In the father and mother sample data, the item of this factor consists of *comfort, allow one to travel safety, fun to have, allow one to be independent, pick up or see off others, and travel anywhere.* Besides in the student sample, the items are *convenient, allow one to travel anytime, allow one to travel safety, allow to do adventurous things, helps one to save time for travel, allow one to be independent, allow one to pick up or see off others, allow one to pick up or see off others,* and *allow one to travel anywhere.* In previous studies,

similar factors were referred to as usefulness (Nishihara et al., 2017) and independence (Prawira F Belgiawan et al., 2016; Prawira Fajarindra Belgiawan et al., 2017).

The third-factor account for 5% of the variance, with the percentage similar for the three samples. The factor is named social/convenience. The items for the third factor in father and mother include *allowing one to care for others, convenient, allow one to travel anytime, environmentally unfriendly, and helps one save time for travel.* Besides, for student sample, the items are *comfortable, allow one to care for others,* and *cool.* The factor's name is similar to the previous study, such as instrumental (Belgiawan et al., 2016).

Based on the PCA results, the latent variable of car attitude in the research model was updated, which implicated to re-customizing hypotheses relationship. In accordance with the items formed in the attitudinal factor, hypotheses one to four (H1 to H4) divide into three attitude factors. The codes a, b, and c are used to differentiate each factor. In Addition, hypotheses five and six (H5 and H6) adapted to change in three new attitudinal factors. The updated model is shown in Figure IV.1, with further change hypotheses are presented as follows:

H1a : Father car attitude of superior prestige has a significant relationship with the father's directly influencing the student's car purchases.

H1b : Father car attitude of safety and usability has a significant relationship with the father's directly influencing the student's car purchases.

H1c : Father car attitude of social/convenience has a significant relationship with the father's directly influencing the student's car purchases.

H2a : Mother car attitude of superior prestige has a significant relationship with the father's directly influencing the student's car purchases.

H2b : Mother car attitude of safety and usability has a significant relationship with the father's directly influencing the student's car purchases.

H2c : Mother car attitude of social/convenience has a significant relationship with the father's directly influencing the student's car purchases.

H3a : Father car attitude of superior prestige has a significant relationship with the student car attitude of superior prestige.

H3b : Father car attitude of safety and usability has a significant relationship with the student car attitude of safety and usability.

H3c : Father car attitude of social/convenience has a significant relationship with the student car attitude of social/convenience.

H4a : Mother car attitude of superior prestige has a significant relationship with the student car attitude of superior prestige.

H4b : Mother car attitude of safety and usability has a significant relationship with the student car attitude of safety and usability.

H4c : Mother car attitude of social/convenience has a significant relationship with the student car attitude of social/convenience.

H5a : The cohesiveness in family relationships has a significant relationship with students' car attitudes of superior prestige.

H5b : The cohesiveness in family relationships has a significant relationship with students' car attitudes of safety and usability.

H5c : The cohesiveness in family relationships has a significant relationship with students' car attitudes of social and convenience.

H6a : Students' car attitude of superior prestige has a significant relationship with children's car purchase intention.

H6b : Students' car attitude of safety and usability has a significant relationship with children's car purchase intention.

H6c : Students' car attitude of social and convenience has a significant relationship with children's car purchase intention.

Figure IV.4 Updated of conceptual framework based on PCA result

Table IV.2 Principal component analysis result of attitudes toward cars for three samples

Father car attitudes				Mother car attitudes				Student car attitudes			
Items code	Component			Items code	Component			Items code	Component		
	1	2	3		1	2	3		1	2	3
FAC18	0.845			MAC9	0.866			SAC18	0.859		
FAC9	0.844			MAC18	0.852			SAC9	0.823		
FAC13	0.829			MAC13	0.830			SAC13	0.807		
FAC19	0.767			MAC19	0.790			SAC19	0.765		
FAC10	0.748			MAC17	0.718			SAC17	0.712		
FAC17	0.737			MAC10	0.705			SAC15	0.701		
FAC15	0.712			MAC15	0.628			SAC10	0.655		
FAC7	0.636			MAC7	0.572			SAC20		0.776	
FAC16		0.821		MAC16		0.805		SAC12		0.679	
FAC1		0.707		MAC14		0.667		SAC4		0.672	
FAC6		0.690		MAC6		0.652		SAC3		0.671	0.507
FAC20		0.644		MAC1		0.640		SAC6		0.668	0.507
FAC11	0.544	0.574		MAC20		0.612		SAC14		0.668	
FAC14		0.571		MAC11		0.555		SAC16		0.657	
FAC2			0.792	MAC2			0.709	SAC8		0.509	
FAC5			0.726	MAC4		0.517	0.645	SAC2			0.831
FAC4		0.534	0.615	MAC12			0.635	SAC1		0.514	0.595
FAC3		0.593	0.598	MAC5			0.602	SAC7	0.569		0.575
FAC12			0.566	MAC3		0.502	0.592				

IV.4 Result of Measurement Model Assessment

The measurement model assesses how unobserved latent variables are measured (Hair et al., 2021). The current study is modeled based on a reflective measurement model, which indicates the direction of the arrows from the construct to the indicators. The assessment of the reflective measurement model consists of evaluating reliability and validity, which involves four steps.

The first step is to assess the reliability of the indicators, which involves how much each indicator is explained by its construct. In the PLS-SEM result, indicator reliability is reflected through the outer loading value. According to Hair et al. (2021), the minimum outer loading recommended is 0.708. Examining the effect of indicator removal on construct validity and reliability when outer loading is less than 0.708 should be carefully considered. Indicators with outer loadings between 0.40 to 0.708 can be removed when it significantly increases the internal consistency reliability and convergent validity reaches the value above the suggested threshold. Furthermore, internal consistency reliability determines whether all indicators have the same score and associate with each other when tested and used to measure the same construct (Hair et al., 2021). In PLS-SEM, internal consistency reliability was measured through Cronbach alpha and composite reliability (CR) with the criteria for a “satisfactory to good” minimum of 0.70.

Tables IV.3 to IV.5 present the result of indicators reliability and internal consistency reliability. It can be seen from the Table that the majority of outer loading values are above 0.708. Despite outer loading values for three items in mother car attitudes of social and convenience and two items in student car attitudes of safety and usability show the value below the 0.708 (range 0.595 to 0.699). These items were not considered for removal and remain in the model, as the internal reliability has no issue for the value under threshold criteria. For internal consistency reliability, it shows that Cronbach alpha and CR values for all associate construct was greater than the minimum acceptable criteria of 0.7. Therefore, this study's indicator reliability and internal consistency indicate that all model indicators and constructs are reliable and produce consistent results.

The next analysis is the validity analysis, which determines the level of suitability of the measuring instrument correctly representing the concept of the study. This analysis was tested through convergent validity and discriminant validity. According to Hair et al. (2021), convergent validity defines how the construct converges when it explains the variance of all indicators in the model. The average variance extracted (AVE) was used to test the convergent validity with minimum acceptable values above 0.50. This indicates the construct explains 50 percent (or specific values above thresholds) indicator's variance. Furthermore, discriminant validity was carried out to analyze how the constructs in the structural model are empirically different. In the PLS-SEM result, it can be seen from the values of heterotrait–monotrait ratio (HTMT) of correlations with the maximum acceptance of 0.90 or bootstrap confidence intervals are significantly different from 1.0 if a discriminant validity issue occurs.

As shown in Tables IV.3 to IV.5, the AVE value above the recommendation of 0.5 indicates that all constructs in the model explain 50 percent and more variance of indicators that compose the construct. Afterwards, the result in Table IV.4 and IV.5 shows that most of the mean value of items correlation coefficient between two constructs is smaller than 0.85 (more distinct constructs) and 0.90 (construct conceptually very similar). Discriminant problems are present for the correlation between attitudes toward cars of superior prestige in three samples (FSP and SSP, MSP and SSP, and MSP and FSP). This implied that HTMT of correlation detects correlations among indicators measuring the latent variables (the monotrait–heteromethod correlations). Since the bootstrap confident intervals (CI) of 5% and 95% significance of these constructs (in Table IV.6 and IV.7) do not contain value 1, suggesting these two constructs have no significant issue with discriminant validity (Cao et al., 2021). Therefore, the convergent and discriminant validity meets the criteria of measurement model assessment.

Table IV.3 Indicator reliability, internal reliability, and convergent validity results

Items	Outer Loading	Cronbach alpha	Composite Reliability	AVE
Father car attitudes – Superior Prestige		0.939	0.950	0.702
FAC7	0.810			
FAC9	0.860			
FAC10	0.869			
FAC13	0.771			
FAC15	0.844			
FAC17	0.784			
FAC18	0.898			
FAC19	0.860			
Father car attitudes – Safety and Usability		0.873	0.904	0.612
SAC1	0.778			
FAC6	0.810			
FAC11	0.796			
FAC14	0.726			
FAC16	0.798			
FAC20	0.781			
Father car attitudes – Social and Convenience		0.848	0.892	0.624
FAC2	0.735			
FAC3	0.873			
FAC4	0.848			
FAC5	0.775			
FAC12	0.707			
Mother car attitudes – Superior Prestige		0.930	0.943	0.675
MAC7	0.779			
MAC9	0.872			
MAC10	0.849			
MAC13	0.749			
MAC15	0.815			
MAC17	0.754			
MAC18	0.897			
MAC19	0.844			
Mother car attitudes – Safety and Usability		0.858	0.894	0.585
MAC1	0.778			
MAC6	0.807			
MAC11	0.779			
MAC14	0.713			
MAC16	0.740			
MAC20	0.768			

Table IV.4 Indicator reliability, internal reliability, and convergent validity results (*Continued*)

Items	Outer Loading	Cronbach alpha	Composite Reliability	AVE
Mother car attitudes – Social and Convenience		0.789	0.855	0.545
MAC2	0.669			
MAC3	0.839			
MAC4	0.856			
MAC5	0.699			
MAC12	0.595			
Student car attitudes – Superior Prestige		0.922	0.937	0.682
SAC9	0.845			
SAC10	0.828			
SAC13	0.751			
SAC15	0.842			
SAC17	0.758			
SAC18	0.910			
SAC19	0.837			
Student car attitudes – Safety and Usability		0.903	0.922	0.600
SAC3	0.843			
SAC4	0.846			
SAC6	0.828			
SAC8	0.781			
SAC12	0.620			
SAC14	0.677			
SAC16	0.751			
SAC20	0.821			
Student car attitudes – Social and Convenience		0.761	0.862	0.677
SAC1	0.828			
SAC2	0.773			
SAC7	0.864			
Family Relationship		0.966	0.971	0.767
FMR1	0.865			
FMR2	0.881			
FMR3	0.911			
FMR4	0.915			
FMR5	0.886			
FMR6	0.882			
FMR7	0.848			
FMR8	0.899			
FMR9	0.845			

Table IV.5 Indicator reliability, internal reliability, and convergent validity results (*Continued*)

Items	Outer Loading	Cronbach alpha	Composite Reliability	AVE
FMR10	0.824			
Student Perceived Influence		0.953	0.959	0.699
PCI1	0.818			
PCI2	0.815			
PCI3	0.813			
PCI4	0.821			
PCI5	0.873			
PCI6	0.848			
PCI7	0.845			
PCI8	0.852			
PCI9	0.838			
PCI10	0.832			
Father Direct Influence		0.833	0.922	0.855
FDI1	0.942			
FDI2	0.907			
Mother Direct Influence		0.885	0.943	0.893
FDI1	0.969			
FDI2	0.920			
Car Purchase Intention		1.000	1.000	1.000
CPI	1.000			

Table IV.6 Heterotrait–monotrait ratio (HTMT) of correlations

Construct	SSP	FSP	MSP	SSU	FSU
SSP					
FSP	0.957 (0.936,0.977)				
MSP	0.979 (0.959,0.998)	0.976 (0.958,0.993)			
SSU	0.689 (0.646,0.73)	0.591 (0.538,0.644)	0.603 (0.552,0.655)		
FSU	0.628 (0.561,0.696)	0.757 (0.721,0.792)	0.654 (0.595,0.712)	0.792 (0.712,0.871)	
MSU	0.646 (0.595,0.698)	0.661 (0.613,0.708)	0.724 (0.683,0.765)	0.851 (0.789,0.908)	0.887 (0.829,0.944)
SSC	0.732 (0.686,0.779)	0.608 (0.548,0.671)	0.658 (0.606,0.716)	0.889 (0.838,0.936)	0.661 (0.565,0.761)
FSC	0.607 (0.547,0.667)	0.663 (0.615,0.71)	0.610 (0.549,0.67)	0.744 (0.674,0.813)	0.878 (0.839,0.914)
MSC	0.609 (0.552,0.668)	0.594 (0.539,0.647)	0.661 (0.609,0.716)	0.809 (0.734,0.877)	0.735 (0.67,0.798)
FMR	0.528 (0.468,0.586)	0.482 (0.426,0.535)	0.498 (0.44,0.554)	0.512 (0.445,0.579)	0.472 (0.399,0.549)
SPI	0.454 (0.388,0.52)	0.432 (0.37,0.493)	0.439 (0.375,0.503)	0.542 (0.477,0.608)	0.513 (0.433,0.594)
FDI	0.401 (0.336,0.466)	0.388 (0.328,0.45)	0.373 (0.31,0.44)	0.480 (0.405,0.556)	0.557 (0.478,0.633)
MDI	0.440 (0.375,0.502)	0.385 (0.328,0.444)	0.389 (0.33,0.45)	0.413 (0.343,0.483)	0.424 (0.34,0.51)
CPI	0.516 (0.463,0.567)	0.450 (0.402,0.498)	0.451 (0.398,0.503)	0.468 (0.392,0.544)	0.417 (0.333,0.504)

Table IV.7 Heterotrait–monotrait ratio (HTMT) of correlations (*continued*)

Construct	MSU	SSC	FSC	MSC	FMR	SPI	FDI	MDI	CPI
SSC	0.741 (0.666,0.814)								
FSC	0.696 (0.633,0.757)	0.692 (0.602,0.778)							
MSC	0.880 (0.833,0.927)	0.794 (0.713,0.874)	0.885 (0.826,0.944)						
FMR	0.496 (0.424,0.568)	0.641 (0.57,0.713)	0.556 (0.48,0.63)	0.556 (0.486,0.626)					
SPI	0.506 (0.434,0.579)	0.633 (0.558,0.709)	0.518 (0.443,0.59)	0.572 (0.499,0.643)	0.718 (0.653,0.779)				
FDI	0.481 (0.401,0.563)	0.531 (0.424,0.639)	0.571 (0.488,0.65)	0.567 (0.488,0.645)	0.492 (0.405,0.577)	0.647 (0.567,0.727)			
MDI	0.425 (0.344,0.505)	0.537 (0.451,0.624)	0.462 (0.377,0.546)	0.481 (0.4,0.562)	0.571 (0.499,0.639)	0.663 (0.599,0.725)	0.708 (0.608,0.805)		
CPI	0.382 (0.303,0.466)	0.531 (0.447,0.612)	0.426 (0.341,0.51)	0.421 (0.348,0.496)	0.337 (0.251,0.427)	0.461 (0.393,0.528)	0.486 (0.401,0.569)	0.413 (0.329,0.496)	

Note: (1) SSP ─ Student Superior Prestige, FSP ─ Father Superior Prestige, MSP ─ Mother Superior Prestige, SSU ─ Student Safety and Usability, FSU ─ Father Safety and Usability, MSU ─ Mother Safety and Usability, SSC ─ Student Social and Convenience, FSC ─ Father Social and Convenience, MSC ─ Mother Social and Convenience, FMR ─ Family Relationships, SPI ─ Perceived Influence, FDI ─ Father Direct Influence, MDI ─ Mother Direct Influence, CPI ─ Car Purchase Intention.
(2) In cell, the above value is HTMT and below the value of the confident interval (5%, 95%).
(3) Confident intervals are significantly different from 1.0.

IV. 5 Result of Structure Model Assessment

After the measurement model assessment confirms that the measurement of constructs is reliable and valid, the data analysis process continues with structure model analysis. According to Hair et al. (2021), the structure model assessment procedure consists of four steps. In the first step, this study examines the structure model for potential collinearity issues by calculating the variance inflation factor (VIF) values. Tabachnick and Fidell (2019) explain that collinearity among constructs non-exist if the value is below 10. As shown in Table IV.8, no construct measures something similar to other constructs in the model since the value is below the conventional threshold 10 (the value falls between 1.297 and 6.223). Therefore, indicating that multicollinearity is not a concern in this study.

The second assessment of the structure model is the significance and relevance of the structural model relationships. The path coefficient (β) representing the relationship among constructs is usually between -1 and +1. The closer value to -1 represents a negative significance, and the closer to +1 represents a positive significance. This study uses a path coefficient significant at 5 percent (confident level of 95 percent) with a two-tailed test (rejected hypothesis null [H0] if critical value ≥ 1.96). A complete bootstrapping procedure based on 10,000 samples was conducted to analyze the hypotheses testing of structure relationship in the significant path coefficient as suggested by Hair et al. (2021).

As shown in Table IV.8, based on the path coefficient and the significance, the father's attitude toward cars of safety and usability (H1b: $\beta = 0.246$; $p < 0.01$), and social and convenience (H1c: $\beta = 0.295$; $p < 0.001$) have a positive and significant relationship on father direct influence. The findings further show that mother direct influence positive significantly formed by superior prestige (H2a: $\beta = 0.193$, $p < 0.001$) and social and convenience (H2c: $\beta = 0.267$, $p < 0.001$). There is only the father car attitude of superior prestige (H1a: $\beta = 0.017$; $p > 0.05$) and the mother car attitude of safety and usability (H2b: $\beta = 0.067$; $p > 0.05$) as the factors of parents' car attitude that has no significant relationship on father or mother direct influence. Therefore, H1b,c and H2a,c are supported.

The next path coefficient results related to relationship between father and mother car attitudes and student car attitudes (H3 and H4). The result found that father and mother car attitude of superior prestige (H3a: $\beta = 0.371$; $p < 0.001$; H4a: $\beta = 0.533$; $p < 0.001$), safety and usability (H3b: $\beta = 0.282$; $p < 0.001$; H4b: $\beta = 0.471$; $p < 0.001$) and social and convenience (H3c: $\beta = 0.147$; $p < 0.05$; H4c: $\beta = 0.390$; $p < 0.001$) have a significant relationship with student attitudes toward cars. Moreover, the cohesiveness in family relationships has significant relationship with three attitudes factors of the student such as superior prestige (H5a: $\beta = 0.077$; $p < 0.001$), safety and usability (H5b: $\beta = 0.142$; $p < 0.001$), and social and convenience (H5c: $\beta = 0.282$; $p < 0.001$).

The last hypothesis testing is about the determinant factors of student car purchase intention which are stated in H6 to H9. According to the path coefficient result, only student attitude toward cars of superior prestige has a significant relationship with car purchase intention (H6a: $\beta = 0.263$; $p < 0.001$). The significant result does not meet for student car attitudes of safety and usability (H6b: $\beta = 0.046$; $p > 0.05$) and social and convenience (H6c: $\beta = 0.096$; $p > 0.05$). Furthermore, other determinant factor of car purchase intention that show significant relationship are children perceived influence (H7: $\beta = 0.151$; $p < 0.05$) and father direct influence (H8: $\beta = 0.186$; $p < 0.01$). Lastly, the mother's direct influence was not significantly related to student car purchase intention (H9: $\beta = 0.023$; $p > 0.05$). The path coefficient result for statistical hypotheses is interpreted in Table IV.8.

Table IV.8 Path coefficient and collinearity

Hypothesis	Path	Path Coefficient				Collinearity	
		β	t-statistics	p-values	Result	VIF	Result
H1a	FSP → FDI	0.017	0.297	0.383	Not supported $^{n.s}$	1.920	No Collinearity
H1b	FSU → FDI	0.246	2.950	0.002	Supported **	2.956	No Collinearity
H1c	FSC → FDI	0.295	4.030	0.000	Supported ***	2.433	No Collinearity
H2a	MSP → MDI	0.193	3.387	0.000	Supported ***	1.772	No Collinearity
H2b	MSU → MDI	0.067	0.833	0.202	Not supported $^{n.s}$	2.689	No Collinearity
H2c	MSC → MDI	0.267	3.946	0.000	Supported ***	2.325	No Collinearity
H3a	FSP → SSP	0.371	5.592	0.000	Supported ***	6.109	No Collinearity
H3b	FSU → SSU	0.282	4.285	0.000	Supported ***	2.475	No Collinearity
H3c	FSC → SSC	0.147	2.290	0.011	Supported *	2.163	No Collinearity
H4a	MSP → SSP	0.533	8.038	0.000	Supported ***	6.223	No Collinearity
H4b	MSU → SSU	0.471	8.239	0.000	Supported ***	2.549	No Collinearity
H4c	MSC → SSC	0.390	5.756	0.000	Supported ***	2.142	No Collinearity
H5a	FMR → SSP	0.077	3.256	0.001	Supported ***	1.301	No Collinearity
H5b	FMR → SSU	0.142	3.706	0.000	Supported ***	1.297	No Collinearity
H5c	FMR → SSC	0.282	6.132	0.000	Supported ***	1.422	No Collinearity
H6a	SSP → CPI	0.263	5.183	0.000	Supported ***	1.919	No Collinearity
H6b	SSU → CPI	0.046	0.579	0.281	Not supported $^{n.s}$	2.606	No Collinearity
H6c	SSC → CPI	0.096	1.201	0.115	Not supported $^{n.s}$	2.690	No Collinearity
H7	SPI → CPI	0.151	2.201	0.014	Supported *	2.118	No Collinearity
H8	FDI → CPI	0.186	2.681	0.004	Supported **	1.863	No Collinearity
H9	MDI → CPI	0.023	0.325	0.373	Not supported $^{n.s}$	2.040	No Collinearity

Notes: ns means not significant; *, **, and *** denote significance at the $p < 0.05$, $p < 0.01$, and $p < 0.001$ levels, respectively.

The next step is assessing explanatory power, predictive power, and Goodness-of-Fit (GoF) by examining the coefficient of determination (R^2), predictive relevance (Q^2), and the root-mean-square error (RMSEA). R^2 is a measure of explanatory power in the structure model and represents the variance explained in each endogenous construct (Hair et al., 2021). In other words, the R^2 value implies the amount of effect of an exogenous construct able to explain the variance of an endogenous construct. The R^2 value range from 0 to 1, with the interpretation for each value, such as 0.75, 0.50, and 0.25, which can be considered substantial, moderate, and weak. The high value indicates the greater explanatory power. In this study (presented in Table 4.7), the R^2 value range between 0.211 to 0.853, which means the minimum 21.1% to be maximum of 85.3% certain endogen variance is explained by its exogen constructs.

Stone-Geisser's Q^2 test is used for predictive relevance assessment by conducting Blindfolding based on cross-validated redundancy. Q^2 measures the estimated model parameter, use available data and assesses how well the model accurately predicts data that is not used to estimate the model parameter. The Q^2 value larger than zero for a particular endogenous construct is considered to have predictive relevance. Based on Table 4.7, the blindfolding analysis shows an acceptable path model's predictive accuracy since all endogenous constructs have Q^2 values above 0. Moreover, this study also measures the Model Fit index using the standardized root mean square residual (SRMR). Table IV.9 shows that the SRMR value is lower than 0.08, indicating the model fits a population, not just the sample used for the estimation.

Table IV.9 Explanatory and predictive power, and Model fit

Variable	**R^2**	**Explanatory power**	**Q^2**	**Predictive relevance**
Student Superior Prestige	0.853	Substantial	0.577	Yes
Student Safety and Usability	0.619	Substantial	0.366	Yes
Student Social and Convenience	0.484	Moderate	0.321	Yes
Father Direct Influence	0.265	Moderate	0.215	Yes
Mother Direct Influence	0.211	Low	0.168	Yes
Car Purchase Intention	0.352	Moderate	0.333	Yes
SRMR	0.078			

Figure IV.5 PLS-SEM Result for structure model β coefficient and R^2

Notes: (1) ellipse is latent variable; (2) square dash arrow is attitudes construct; (3) solid arrow means significant relationship among construct, with *, **, and *** denote significance at the $p < 0.05$, $p < 0.01$, and $p < 0.001$ levels; (4) red dash arrow means no significant relationship among constructs.

IV.6 Discussion

This study aims to determine the factors influencing parents' direct influence, examine the relationship between parents' attitude and cohesiveness in a family with student car attitude, and examine the extent to which parent's direct influence and student attitudes influence student car purchase intention. The result of the

statistical analysis is already presented in the previous sub-chapter, which shows the exciting findings.

The statistical results of H1 and H2 show that both father and mother's direct influence is highly triggered by social and convenience factors of car attitudes. For fathers, they also indicate that safety and usability are the other critical factors directly influencing child car purchases; and they do not project their prestigious car to their children as shown no relation to superior prestige factor. This shows that fathers are driven by utilitarian values when suggesting the purchase of a child's car. For the father, the importance of what the child drives is not how much the car can provide social prestige to the child but how the car they drive offers comfort, safety, and usability. Interestingly, the second attitude factor that drives mothers' direct influence is superior prestige, which does not consider the safety and usability of the car. This indicates that mothers tend to be driven by hedonic values when suggesting the purchase of a child's car. For the mothers, in addition to the convenience factor, it is important to gain prestige or social status by what car the child drives.

Hypothesis 3, 4, and 5 related to the relation between parents' attitudes and family relationships with student attitudes. The findings show that both father and mother directly influence student attitudes toward cars of superior prestige, with the mother as the higher influencer. The role of the mother’s attitudes in forming the student car attitudes is also high for the remaining two factors, namely social and convenience, and safety and usability, rather than from the father's attitudes. Thus, consistent with the related empirical study by Nishihara et al. (2017), the parents' car attitudes strongly influence children's car attitudes, with the mother is strongly better at explaining student attitudes than the father. In addition, this study also corresponds to the study by Belgiawan et al. (2017) related to the importance of understanding parents’ attitudes when aiming to influence students’ attitudes toward a car. Another finding is that the cohesiveness in family relationships directly relates to student attitudes toward cars, consistent with Nishihara et al. (2017). Social and convenience evaluation of the cars show more influence among other factors of student car attitudes formed by family relationships. The findings are related to the positive relationship between the child and their family such as

spending time together using a car, resulting in the increased child car attitude of social or convenience.

The significant relationship between student attitudes toward cars with student car purchase intention is consistent with the previous studies (Belgiawan et al., 2016; Belgiawan et al., 2014, 2017; Bhutto et al., 2022; Jayaraman et al., 2015; Noor & Wen, 2016; Mou et al., 2020; Schmalfuß et al., 2017). The result shows that only superior prestige factors have a significant positive relationship. This means that the higher the student evaluates a car brings superior prestige, the higher the student's intention to purchase a car. The study by Steg (2005) revealed that symbolic/affective motives play a significant role in explaining the level of car use compared to instrumental factors. Another study that supported this study's finding is that conducted by Vögele et al. (2021) who found prestige/image dominated individuals' positive attitudes toward heavyweight cars such as SUVs. Although this study on cars in general, the findings by Vögele et al. (2021) are still relevant to explain the dominant factor of car attitude in evaluating motivation to purchase a car. In addition, the result is also supported by the study from Verma et al. (2016) that revealed the young adults that evaluate car ownership to create an image, happiness, and social symbol is significantly higher in an Asia developing country than in its developed. These findings related to this study's discussion that a car is considered an expensive product in Indonesia. It is limited for adolescent students to have a car on their own. Thus, those who have their own car will be perceived by others as having different status.

In addition to attitudes, student perceived influence also has a significant relationship with student car purchase intention, which corresponds to previous studies with different terms such as social norm (Belgiawan et al., 2014; Bobeth & Kastner, 2020; Haustein et al., 2021; Mou et al., 2020), subjective social norm (Belgiawan et al., 2017; Nayum et al., 2016), and subjective norm (Bhutto et al., 2022; Hamzah & Tanwir, 2021; Schmalfuß et al., 2017; Simsekoglu & Nayum, 2019). The typical Asia countries, including Indonesia, are collectivist so this finding can be justified because it is in accordance with the culture inherent in the social life of the Indonesian people. Students' perception that their parents expect them to purchase a car is related to the belief that students will have to do so at

some point in the near future to gain social acceptance. When the level of students' assuming their significant others encourage their car purchase is high, car purchase intention among students will also rise high.

The last discussion is related to parents' direct influence on student car purchase intention. The result found that only fathers show significant relation, which means the influence of student car purchase intention from parents' direct influence is only from the father. This may be related to a study by Hafram and Hasim (2018) that found that compared to women, men more often use the car. Thus, it implicates to the expertise that men have more capability and knowledge in automotive (Lezotte, 2014). The work by Lezotte (2014) also explains that automotive knowledge and car technical expertise have been regarded as men's property and associated with masculinity. In addition, this is also supported by previous work by Varga et al. (2018) related to masculinity (or femininity) in family decision-making of the new cars in Asia countries which revealed the husband as the leading actor of decision-making authority of the household purchasing a new car. The role of the husband's dominant authority in household decision-making in Asian countries has been carried out by previous studies with similar findings (Carlsson et al., 2012; Xia et al., 2006; Yusof, 2015). Moreover, the finding also related to the survey question in this study regarding who dominantly influenced car purchase decisions in the household, which accounts for the father's answer higher than the mother. Therefore, the father's direct influence on students' car purchase intention is highly related to the dominant authority in purchasing a new car in the household.

Along with these three predictors for student car purchase intention, the statistical result found that attitude toward cars is more predict student car purchase intention follow by the actual and direct influence from father and student perceive influence. This indicates favorable evaluation of the car takes a critical role in purchase intention, which supports the theory being used in this study─ TPB; Ajzen (1991), related attitude made a significant contribution to predicting behavioral intention than the subjective norm. Moreover, the role of attitude that is more significant than the influence of others is consistent with previous studies on car purchases (Asadi et al., 2021; Bhutto et al., 2022).

IV.7 Chapter Summary

This chapter explains the result of data analysis in this study that uses descriptive statistics, PCA, and PLS-SEM. The PCA analysis is conducted to simplify the dimensionality of larger data sets in the attitudinal construct. Based on the PCA result, this study found three factors of attitudes toward cars with the name superior prestige, safety and usability, and social/convenience. The PCA result implicated hypothesis development which the new hypothesis is created with adjusted based on attitudinal factors. PLS-SEM assessment consists of two, namely measurement model assessment and structure model assessment. This study has met the validity and reliability criteria in the measurement model. For the structure model, the relationship between the construct has shown an exciting finding.

The factors of father car attitudes such as social and convenience and safety and usability have a significant relationship with the father's direct influence. Meanwhile, for the mother's direct influence, significant factors have come from social and convenience and superior prestige. The father and mother car attitudes also have a significant relationship on student car attitudes, and the cohesiveness in family relationships is significant toward student car attitudes. Moreover, the determinant factor of student car purchase based on significant correlation is student car attitudes of superior prestige, father direct influence and student perceived influence.

Chapter V Summary and Conclusion

V.1 Conclusion

The study of car purchase intention is quite limited in the literature, particularly the research that incorporates disaggregate psychological construct as the determinant factor. In fact, the psychological context in car purchase intention is critical and necessary since the decision-making process model by Schiffman and Wisenblit (2019) states that individual perception and evaluation take an important role in the final purchase decision. Moreover, it is critical to know based on an individual's psychological point of view due to the current condition of car sales decrease caused by the COVID-19 pandemic. Thus, this study conducted an understanding of car purchase intention through disaggregate psychological factors with a focal on students as the potential car market in the near future.

Moreover, previous studies that used psychological predictors found that parents have a significant influence on car purchase intention along with attitude. However, the previous studies related to the influence of others only used the perception of the respondent, not directly asking the significant others whether they do influence or not. Therefore, this study fills the gap by examining student car purchase intention using multi-actor samples. This study also uses disaggregate psychological factors related to the parent-children construct, such as parent direct influence, perceived influence, attitude, and family relationship.

With a total of 514 family datasets, including the father, mother, and student response data, this study employs quantitative data analysis using descriptive statistics, PCA, and PLS-SEM. The finding of this study will be presented in four points below as its response to this study's questions:

1. The determinant factors of the father's suggestion are the father's evaluation that cars provide social and convenience, and safety and usability. Meanwhile, the mother's direct influence is determined by the mother car attitudes of social and convenience, and superior prestige.
2. The parents' car attitude significantly has a positive relationship with children's car attitudes. The finding shows that the mother better explains

students' attitudes than the father. Moreover, the cohesiveness in the family relationships was also significant, which means the relations between family members can shape student attitudes.

3. Only the father's direct influence has a significant relationship with student car purchase intentions. For personal constructs, the attitude of superior prestige and students' perceived influence of their parents have also had a significant relationship. From the findings, students' car attitudes take a high role in shaping their intention to purchase a car. They are followed by the direct influence of the father and the student perceived influence.

Additionally, this study also found that student and parents' attitude towards cars has not significantly difference. However, if compared to one of others, child attitude toward cars is higher than the parents. Both father and mother expect their child to purchase a car. When purchasing a car is an obligation or essential thing must be done by child, this tends to be driven by the advice of the father. When student planning to purchase a car at some point in the future, the opinion from father is important as the input. However, mother opinion perceived essential when it comes for make an important decision.

V.2 Implication

This study has theoretical implications for consumer decision-making and reflections on the influence of others, particularly on major family purchasing decisions (i.e., car purchases). It also provides managerial implications for companies that want to produce cars catering to consumers' desires and policy decision-makers.

This study has two main contributions to the literature and research method. First, recent studies on transportation choice and car purchase intention that incorporate social norms have primarily focused on individual expectations of their significant people rather than examining the actual influence of others on one's behavior (Belgiawan et al., 2017; Cai et al., 2019; Mou et al., 2020). This research extends TPB by exploring parents' direct influence on children's behavioral intention to purchase a car other than children's perceived influence. By doing so, this study

addresses a gap in the extant literature related to the influencing factors of individual decisions.

Second, this study is among the pioneering studies that incorporate three sets of data and analyze them simultaneously in a model. The sample data in this study comprised three-set—those of the father, mother, and children. Since no study has used more than one sample of data, the present research model and methodology provide a new way of analyzing social influences on behavioral intention. This approach was implemented to clarify others' influence by analyzing actual data from significant people for their influence on a person's behavior. The study's result regarding social influence provides concrete evidence that parents have a direct influence on children's decisions.

As for its managerial contribution, the results of this study are helpful in the area of car marketing and advertisements, especially for countries with a collectivist culture like Indonesia, where the relationship between children and families is definitely close. Advertisers and marketers must create different advertisement concepts when it targets increasing parents' or students' attitudes toward cars. As attitude more significantly influences student car purchase intention and the mother attitudes toward cars are better at explaining students' attitudes, advertisements must highlight the projection that the car can give a superior prestige or social image when it targets students and their mothers. It can be done by the advertisement concept that buying a car improves their image—by making them appear trendier, providing a prestigious image, affording them the social, and so on.

In addition, the target advertisement to the father (as significantly related to the student car purchase intention) must convey and highlight the cars are convenient with safety and usability features for various travel needs—by showing them interior features, safety features, power safe and other related concepts. Projecting a combination of these two values (hedonic and utilitarian) in car advertisements or marketing activities can increase students' car purchase intention.

Moreover, this study also contributes to the potential way to promote public transportation modes in the sight of the policy decision-maker. Although the desire for prestige when owning a car might not be easier to reduce in students' car

attitudes, adapting to changing lifestyles by creating a new trend in active modes or public transportation modes for mobility is noteworthy by policymakers. The public transport marketer must provide advertising content that can make student and their parents feel that using active or public modes is a new lifestyle in society, improves their image in sustainable living, and have convenient mobility. Although this study acknowledges that campaigns for a low carbon lifestyle and sustainability are not a silver bullet for promoting the motivation to use public transport modes; it potentially supports minimizing car dependence and increasing the perception for the private car-free living among young adolescents and motivating them that using active or public transport modes have an impact on future quality of life.

V.3 Limitation and Future study

This study has limitations and is expected to be extended by future research. The sample is collected in an area that constrains the results' ability to generalise. Future studies should attempt in other cities/provinces in Indonesia or other developing countries with different collectivistic cultures to further insight into students' car purchase decisions. Data concerning children in the family have limited to only one child and are unable to cover if the student has siblings and other family members at the house. Further research can create a decision-making model by including other family members and measuring how each family member influences one decision in car purchases. This study limited only asking the intention to purchase a car. The next study is recommended to measure willingness to pay, repurchase intention, or actual purchase. Lastly, this study focuses only on cars. This study is applicable to purchase decisions on two-wheeled motor vehicles since they are the most common private mode in developing countries such as Indonesia.

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APPENDICES

Appendix A: Survey form – In bahasa Indoensia

Bagian 1/Part 1 ─ Pengantar (Introduction)

Informasi tentang survey ini.

Penelitian ini dilakukan untuk mengetahui sikap dan perilaku pembelian mobil generasi muda yang dipengaruhi oleh orang tua dalam pengambilan keputusan. Dengan demikian, penelitian ini diharapkan dapat memberikan gambaran tentang pilihan mobil dimasa depan.

Survey ini ditujukan untuk responden yang terdiri dari orang tua (ayah dan ibu) dan anak dengan usia 18 s.d. 25 tahun. Keluarga memiliki minimal satu mobil, dan anak pernah mengendarai mobil tersebut.

Survey ini membutuhkan waktu selama kurang lebih 15 menit/sesi dengan partisipasi bersifat sukarela. Jika anda memenuhi kriteria dan menyetujui kesediaan untuk memberikan informasi pengalaman, silakan untuk klik tombol "BERIKUTNYA" dibawah ini.

Kami menyadari pentingnya kerahasiaan data sehingga segala bentuk informasi yang anda berikan hanya akan dipergunakan untuk kepentingan penelitian.

Salam,
Muhamad Abdilah Ramdani

Bagian 2/Part 2 ─ Pertanyaan untuk Ayah (Questions for the father)

No	Uraian/Description	Pilihan Jawaban/Answer choice
Keputusan pembelian mobil Pada bagian ini, anda diminta untuk mengisi dominasi keputusan pembelian mobil dalam keluarga		
1	Siapa yang paling mendominasi pengambilan keputusan di rumah tangga terkait keputusan membeli mobil? Silakan anda nilai pada skala per 1-7	• 1 = Orang lain di rumah saya yang memutuskan • 7 = Saya memutuskan sendiri
2	Berapa banyak mobil yang anda miliki di rumah?	• 1 • 2 • 3 • 4 • 5 • Lebih dari 5
3	Berdasarkan pertanyaan 2, berapa yang Anda bayarkan untuk membeli mobil tersebut?	• 100 ～ 200 juta rupiah • 200～300 juta rupiah • 400～500 juta rupiah • 500～750 juta rupiah • 750 juta ～1 milyar rupiah • lebih dari 1 milyar rupiah

Sikap Terhadap Mobil Pada bagian ini, Anda diminta untuk mengisi pertanyaan terkait sikap Anda terhadap kepemilikan dan pemakaian mobil.		
	Menurut saya mobil itu…	• 1 = Sangat tidak setuju • 2 = Tidak setuju • 3 = Sedikit tidak setuju • 4 = Cukup • 5 = Sedikit setuju • 6 = Setuju • 7 = Sangat setuju
4	…nyaman	
5	…membuat seseorang peduli terhadap sesama	
6	…mudah digunakan (convenient)	
7	…kapan saja bisa digunakan	
8	…ramah lingkungan	
9	…aman untuk bepergian	
10	…keren	
11	…bisa digunakan untuk berpetualang	
12	…mengganggu lingkungan bertetangga	
13	…bisa membuat seseorang mengekspresikan diri	
14	…menyenangkan untuk dimiliki	
15	…menghemat waktu	
16	…memberikan kesan sombong	
17	…tidak tergantung pada orang lain	
18	…trendi	
19	…bisa menjemput orang lain	
20	…biaya perawatan mahal	
21	…membedakan satu orang dengan yang lainnya	
22	…membawa kesan prestisius	
23	…ke mana saja bisa digunakan	
Pengaruh ayah dalam pembelian mobil anak Anda diminta untuk menjawab pertanyaan dorongan pembelian mobil pada anak		
24	Menurut saya, anak saya harus membeli mobil dimasa depan	• 1 = Sangat tidak setuju • 2 = Tidak setuju • 3 = Sedikit tidak setuju • 4 = Cukup • 5 = Sedikit setuju • 6 = Setuju • 7 = Sangat setuju
25	Saya menyarankan anak saya untuk membeli mobil	
Profil Responden Anda diminta untuk menjawab pertanyaan terkait pekerjaan dan usia anda.		
1	Apa pekerjaan Anda sekarang?	• Ayah rumah tangga • Pegawai swasta • Pekerja paruh waktu • Pegawai Negeri Sipil (PNS) • Pengusaha • Lainnya
2	Berapa usia anda?	(Pertanyaan terbuka)

Bagian 3/Part 3 – Pertanyaan untuk Ibu (question for the mother)

No	Uraian/Description	Pilihan Jawaban/Answer choice
Sikap Terhadap Mobil Pada bagian ini, Anda diminta untuk mengisi pertanyaan terkait sikap Anda terhadap kepemilikan dan pemakaian mobil.		
	Menurut saya mobil itu…	• 1 = Sangat tidak setuju • 2 = Tidak setuju • 3 = Sedikit tidak setuju • 4 = Cukup • 5 = Sedikit setuju • 6 = Setuju • 7 = Sangat setuju
1	…nyaman	
2	…membuat seseorang peduli terhadap sesama	
3	…mudah digunakan (convenient)	
4	…kapan saja bisa digunakan	
5	…ramah lingkungan	
6	…aman untuk bepergian	
7	…keren	
8	…bisa digunakan untuk berpetualang	
9	…mengganggu lingkungan bertetangga	
10	…bisa membuat seseorang mengekspresikan diri	
11	…menyenangkan untuk dimiliki	
12	…menghemat waktu	
13	…memberikan kesan sombong	
14	…tidak tergantung pada orang lain	
15	…trendi	
16	…bisa menjemput orang lain	
17	…biaya perawatan mahal	
18	…membedakan satu orang dengan yang lainnya	
19	…membawa kesan prestisius	
20	…ke mana saja bisa digunakan	
Pengaruh ayah dalam pembelian mobil anak Anda diminta untuk menjawab pertanyaan dorongan pembelian mobil pada anak		
21	Menurut saya, anak saya harus membeli mobil dimasa depan	• 1 = Sangat tidak setuju • 2 = Tidak setuju • 3 = Sedikit tidak setuju • 4 = Cukup • 5 = Sedikit setuju • 6 = Setuju • 7 = Sangat setuju
22	Saya menyarankan anak saya untuk membeli mobil	
Profil Responden Anda diminta untuk menjawab pertanyaan terkait pekerjaan dan usia anda.		
23	Apa pekerjaan Anda sekarang?	• Ibu rumah tangga • Pegawai swasta • Pekerja paruh waktu • Pegawai Negeri Sipil (PNS) • Pengusaha • Lainnya
24	Berapa usia anda?	(Pertanyaan terbuka)

Bagian 4/Part 4 – Pertanyaan untuk Siswa (question for the student)

No	Uraian/Description	Pilihan Jawaban/Answer choice
Kepemilikan mobil Pada bagian ini, anda diminta untuk mengisi kepemilikan mobil pribadi anda		
1	Apakah Anda memiliki mobil sendiri? (mobil milik pribadi)	• Ya • Tidak
Sikap Terhadap Mobil Pada bagian ini, Anda diminta untuk mengisi pertanyaan terkait sikap Anda terhadap kepemilikan dan pemakaian mobil.		
	Menurut saya mobil itu…	• 1 = Sangat tidak setuju • 2 = Tidak setuju • 3 = Sedikit tidak setuju • 4 = Cukup • 5 = Sedikit setuju • 6 = Setuju • 7 = Sangat setuju
2	…nyaman	
3	…membuat seseorang peduli terhadap sesama	
4	…mudah digunakan (convenient)	
5	…kapan saja bisa digunakan	
6	…ramah lingkungan	
7	…aman untuk bepergian	
8	…keren	
9	…bisa digunakan untuk berpetualang	
10	…mengganggu lingkungan bertetangga	
11	…bisa membuat seseorang mengekspresikan diri	
12	…menyenangkan untuk dimiliki	
13	…menghemat waktu	
14	…memberikan kesan sombong	
15	…tidak tergantung pada orang lain	
16	…trendi	
17	…bisa menjemput orang lain	
18	…biaya perawatan mahal	
19	…membedakan satu orang dengan yang lainnya	
20	…membawa kesan prestisius	
21	…ke mana saja bisa digunakan	
24	Seberapa besar niat Anda untuk membeli mobil?	• 1 = Sangat tidak berminat • 2 = Tidak berminat • 3 = Sedikit tidak berminat • 4 = Netral • 5 = Sedikit minat • 6 = Berminat • 7 = Sangat berminat
Persepsi pengaruh dari orang tua Pada bagian ini, Anda diminta untuk memberikan informasi terkait pengalaman dalam proses pengambilan keputusan yang dipengaruhi oleh orang tua		
25	Ayah saya mengharapkan saya untuk memiliki mobil suatu hari di waktu mendatang	• 1 = Sangat tidak setuju • 2 = Tidak setuju • 3 = Sedikit tidak setuju • 4 = Cukup • 5 = Sedikit setuju
26	Ibu saya mengharapkan saya untuk memiliki mobil suatu hari di waktu mendatang	
27	Pendapat ayah penting dalam hal pembelian mobil	

28	Pendapat ibu penting dalam hal pembelian mobil	• 6 = Setuju • 7 = Sangat setuju
29	Saya mematuhi Ayah saya	
30	Saya mematuhi Ibu saya	
31	Saya meminta nasihat Ayah ketika membuat sebuah keputusan penting	
32	Saya meminta nasihat ibu ketika membuat sebuah keputusan penting	
33	Saya percaya pada ayah Anda	
34	Saya percaya pada ibu Anda	
Hubungan dengan keluarga Pada bagian ini, Anda diminta untuk memberikan informasi terkait hubungan dengan keluarga		
35	Di dalam keluarga kami, kami saling membantu dan mendukung satu sama lain	• 1 = Sangat tidak setuju • 2 = Tidak setuju • 3 = Sedikit tidak setuju • 4 = Cukup • 5 = Sedikit setuju • 6 = Setuju • 7 = Sangat setuju
36	Di dalam keluarga kami, kami menghabiskan banyak waktu bersama untuk melakukan beberapa hal di rumah	
37	Di dalam keluarga kami, kami selalu bekerja keras untuk hal yang kami lakukan bersama di rumah	
38	Di dalam keluarga kami, terdapat perasaan kebersamaan	
39	Di dalam keluarga kami, kami sangat rukun satu sama lain	
40	Di dalam keluarga kami, kami dapat bercerita secara terbuka di rumah	
41	Di dalam keluarga kami, kami sesekali bercerita tentang masalah pribadi satu sama lain	
42	Di dalam keluarga kami, kami dengan mudah memulai pembicaraan	
43	Anggota keluarga saya mendukung satu sama lain	
44	Saya bangga menjadi bagian dari keluarga saya	
Profil Responden Anda diminta untuk menjawab pertanyaan terkait pekerjaan, penghasilan, jenis kelamin dan usia anda.		
45	Apa status anda saat ini?	• Pelajar • Pegawai swasta • Pekerja paruh waktu • Pegawai Negeri Sipil (PNS) • Pengusaha • Lainnya
46	Berapa penghasilan bulanan Anda saat ini ? (akumulasi kepemilikan uang pribadi)	• dibawah 1 juta Rupiah • 1～3 juta Rupiah • 3～5 juta Rupiah • 5～8 juta Rupiah • 8～12 juta Rupiah • 12 juta Rupiah dan lebih
47	Apa jenis kelamin anda	• Laki-laki • Perempuan • Memilih tidak menjawab
48	Berapa usia anda?	(Pertanyaan terbuka)

Appendix B: Sample of Raw Data

Raw data sample of Father

ID	Car purchase decision in HH	Number of cars in HH	Car Price	Occupation	Age	A1	A2	A3	A4	A5	A6	A7	A8	A16	A17	A18	A19	A20	I1	I2
1	7	2	200～300 juta rupiah	Pegawai swasta	65	6	6	6	6	6	6	5	6	7	7	5	7	7	4	4
2	6	1	100 ～ 200 juta rupiah	Lainnya	60	7	3	5	5	3	7	4	5	7	5	4	5	7	5	5
3	5	1	200～300 juta rupiah	Pengusaha	67	7	5	6	4	4	6	6	6	7	4	3	5	4	6	6
4	6	2	500～750 juta rupiah	Lainnya	55	7	7	7	7	7	7	6	7	7	4	4	6	7	6	6
5	6	2	500～750 juta rupiah	Lainnya	55	7	7	7	7	7	7	6	7	7	4	4	6	7	6	6
6	7	2	200～300 juta rupiah	Pengusaha	58	7	6	5	3	5	6	2	4	5	2	4	2	5	6	5
7	7	1	100 ～ 200 juta rupiah	Pegawai swasta	55	4	6	7	5	7	6	5	7	7	2	1	2	7	1	1
8	7	1	100 ～ 200 juta rupiah	Pengusaha	50	7	4	7	7	6	7	4	4	7	1	4	4	7	5	5
9	5	2	200～300 juta rupiah	Pengusaha	58	6	5	5	3	3	6	2	4	4	3	3	1	4	5	4
10	5	1	100 ～ 200 juta rupiah	Pegawai Negeri Sipil (PNS)	65	6	5	5	5	5	6	6	5	6	7	5	6	7	5	5
11	6	1	100 ～ 200 juta rupiah	Pegawai swasta	56	6	6	6	6	6	6	6	6	6	6	1	6	6	6	6
12	6	1	100 ～ 200 juta rupiah	Pegawai swasta	56	6	6	6	6	6	6	6	6	6	6	1	6	6	6	6
13	6	1	200～300 juta rupiah	Pegawai swasta	58	6	6	6	6	4	7	6	7	7	4	1	4	6	6	5
14	7	1	100 ～ 200 juta rupiah	Lainnya	49	5	2	6	5	3	7	7	1	7	5	1	4	7	1	3
15	4	1	100 ～ 200 juta rupiah	Pegawai swasta	49	7	1	3	3	3	7	7	3	7	7	1	3	3	4	4
16	7	1	100 ～ 200 juta rupiah	Pegawai Negeri Sipil (PNS)	49	7	6	7	7	4	7	5	4	6	5	5	4	6	7	6
17	7	1	100 ～ 200 juta rupiah	Pegawai Negeri Sipil (PNS)	47	4	4	4	4	4	4	4	4	4	4	4	4	4	7	7
18	7	1	400～500 juta rupiah	Pengusaha	51	6	3	6	2	3	6	4	3	7	3	1	4	7	4	7
19	4	1	400～500 juta rupiah	Pegawai swasta	51	5	3	4	2	2	5	6	2	7	5	1	5	7	3	7
20	1	1	100 ～ 200 juta rupiah	Pegawai Negeri Sipil (PNS)	56	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Raw data sample of Mother

ID	Occupation	Age	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20	I1	I2
1	Ibu rumah tangga	72	4	4	4	4	4	4	4	4	1	4	4	4	4	4	4	4	4	4	4	4	6	6
2	Ibu rumah tangga	61	7	4	6	5	4	7	4	6	4	4	4	5	3	7	3	7	6	4	3	6	5	5
3	Lainnya	57	7	7	5	7	4	7	5	7	3	4	6	4	2	4	4	5	4	4	4	5	6	6
4	Ibu rumah tangga	52	6	6	6	6	6	6	5	6	4	6	6	6	5	7	7	7	6	7	6	7	7	7
5	Ibu rumah tangga	52	6	6	6	6	6	6	5	6	4	6	6	6	5	7	7	7	6	7	6	7	7	7
6	Pegawai swasta	51	7	6	7	6	6	7	4	5	2	3	5	4	1	2	3	5	5	3	2	5	6	5
7	Ibu rumah tangga	51	7	3	7	5	7	7	7	1	1	2	3	7	1	7	6	7	1	1	4	7	1	1
8	Ibu rumah tangga	45	7	5	7	7	7	7	7	7	1	5	7	7	1	7	7	7	1	5	1	7	7	7
9	Pegawai swasta	61	7	5	6	4	3	6	3	5	2	4	3	3	3	5	2	6	2	2	1	4	5	5
10	Pegawai swasta	56	6	6	6	5	5	6	6	5	5	6	6	5	5	6	6	6	7	6	7	7	4	4
11	Ibu rumah tangga	54	6	6	6	6	6	6	6	6	2	6	6	6	2	2	6	6	6	2	6	6	6	6
12	Ibu rumah tangga	54	6	6	6	6	6	6	6	6	2	6	6	6	2	2	6	6	6	2	6	6	6	6
13	Lainnya	52	7	6	6	7	4	7	6	6	2	5	7	5	1	7	7	7	3	2	6	7	7	7
14	Ibu rumah tangga	51	7	1	5	6	1	6	7	5	1	3	5	7	2	7	1	7	1	3	4	5	1	3
15	Ibu rumah tangga	50	7	4	3	7	3	7	7	2	1	2	4	2	1	3	7	7	7	1	3	3	4	4
16	Ibu rumah tangga	49	7	6	5	7	3	7	5	4	1	3	2	4	1	1	3	5	6	3	3	7	7	7
17	Ibu rumah tangga	48	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	7	7
18	Ibu rumah tangga	47	6	1	7	3	2	5	4	6	1	3	5	3	2	7	5	7	3	1	4	7	5	6
19	Pengusaha	47	7	4	7	4	1	7	6	3	1	2	5	2	1	7	5	7	1	1	5	7	3	7
20	Ibu rumah tangga	46	7	7	7	7	1	7	4	3	1	2	5	5	1	1	3	6	5	4	4	6	7	7

Raw data sample of Student

ID	Car Ownership	Occupation	Income	Living with	Age	Gender	A1	A2	A3	A4	A5	A6	A7	A8	A9
1	Tidak	Pelajar	1～3 juta Rupiah	Ayah, Ibu	25	Laki-laki	5	5	5	5	5	5	5	5	1
2	Tidak	Pelajar	dibawah 1 juta Rupiah	Ayah, Ibu, Kakak/adik	25	Laki-laki	6	3	5	5	2	7	5	5	3
3	Tidak	Pegawai Swasta	5～8 juta Rupiah	Ayah, Kakak/adik	25	Perempuan	7	7	6	5	5	7	5	6	1
4	Tidak	Lainnya	1～3 juta Rupiah	Ayah, Ibu, Kakak/adik	25	Perempuan	7	4	7	7	3	7	5	7	5
5	Tidak	Lainnya	1～3 juta Rupiah	Ayah, Ibu, Kakak/adik	25	Perempuan	7	4	7	7	3	7	5	7	5
6	Ya	Pengusaha	5～8 juta Rupiah	Ayah, Ibu, Kakak/adik	25	Laki-laki	7	6	6	7	7	7	4	7	2
7	Ya	Pelajar	dibawah 1 juta Rupiah	Ayah, Ibu, Kakak/adik	25	Perempuan	7	5	7	6	7	7	5	7	1
8	Ya	Pekerja paruh waktu	1～3 juta Rupiah	Ayah, Ibu, Kakak/adik	25	Perempuan	7	5	6	7	7	7	7	7	1
9	Ya	Pegawai Swasta	5～8 juta Rupiah	Ayah, Ibu, Kakak/adik	24	Laki-laki	6	6	6	5	3	6	2	5	3
10	Tidak	Pekerja paruh waktu	1～3 juta Rupiah	Ayah, Ibu, Kakak/adik	24	Laki-laki	6	6	6	6	6	6	6	6	6
11	Ya	Pegawai Swasta	5～8 juta Rupiah	Ayah, Ibu, Kakak/adik	24	Laki-laki	6	6	6	6	6	6	6	6	2
12	Ya	Pegawai Swasta	5～8 juta Rupiah	Ayah, Ibu, Kakak/adik	24	Laki-laki	6	6	6	6	6	6	6	6	2
13	Ya	Pelajar	1～3 juta Rupiah	Ayah, Ibu	24	Memilih tidak menjawab	6	6	7	7	4	7	7	7	1
14	Ya	Pekerja paruh waktu	3～5 juta Rupiah	Ayah, Ibu, Kakak/adik	24	Perempuan	5	1	7	4	5	7	3	2	1
15	Tidak	Pegawai Swasta	3～5 juta Rupiah	Ayah, Ibu, Kakak/adik	24	Laki-laki	7	3	5	7	3	7	7	3	1
16	Tidak	Pelajar	dibawah 1 juta Rupiah	Ayah, Ibu, Kakak/adik	24	Laki-laki	7	7	7	7	4	7	7	6	1
17	Tidak	Pelajar	dibawah 1 juta Rupiah	Ayah, Ibu, Kakak/adik	24	Laki-laki	4	4	4	4	5	4	4	4	4
18	Ya	Pekerja paruh waktu	1～3 juta Rupiah	Ayah, Ibu, Kakak/adik	24	Laki-laki	6	6	6	6	3	7	5	6	1
19	Ya	Pelajar	dibawah 1 juta Rupiah	Ayah, Ibu, Kakak/adik	24	Laki-laki	6	2	4	3	2	6	4	3	1
20	Tidak	Pelajar	1～3 juta Rupiah	Ayah, Ibu, Kakak/adik	24	Laki-laki	7	7	7	7	1	7	7	7	1

Raw data sample of Student (Continued)

ID	A17	A18	A19	A20	PI	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10	FR1	FR2	FR3	FR4	FR5	FR6	FR7	FR8	FR9	FR10
1	5	5	5	5	7	7	7	7	7	7	7	7	7	7	7	6	6	6	6	6	6	6	6	6	6
2	5	5	5	5	5	5	5	5	5	4	4	4	4	3	3	5	5	5	5	4	4	5	5	4	5
3	4	3	5	6	6	7	7	4	4	6	6	7	7	7	7	5	6	5	6	7	4	4	4	5	6
4	7	6	6	7	5	5	6	7	7	7	7	7	5	7	7	7	7	7	7	7	7	7	7	7	7
5	7	6	6	7	5	5	6	7	7	7	7	7	5	7	7	7	7	7	7	7	7	7	7	7	7
6	4	2	1	5	5	5	6	5	6	4	5	4	6	5	7	6	7	5	6	5	6	5	6	4	7
7	1	1	3	5	2	1	1	4	2	6	7	7	6	7	7	7	3	5	6	4	2	2	1	4	2
8	7	7	7	7	7	5	7	3	3	7	7	5	7	6	7	5	5	5	5	5	7	5	5	7	7
9	5	2	1	5	6	5	5	4	4	5	6	5	7	5	6	6	6	7	6	5	5	5	6	6	7
10	6	6	6	6	5	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
11	6	2	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7
12	6	2	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7
13	5	2	5	7	7	5	7	7	7	6	7	6	7	7	7	7	6	7	7	5	5	4	6	6	7
14	1	1	4	7	2	1	1	7	1	1	5	1	5	3	4	3	4	1	4	3	1	3	1	3	2
15	7	1	3	3	4	3	3	4	4	3	4	4	6	3	5	7	4	5	3	6	2	2	6	7	7
16	6	6	5	7	7	7	7	7	7	7	7	7	7	7	7	7	7	6	7	7	6	6	6	7	7
17	4	4	4	4	7	6	6	7	7	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4
18	2	1	4	6	6	7	4	7	7	4	4	6	4	4	4	4	4	4	4	4	4	4	5	7	2
19	3	1	6	7	1	4	4	7	3	7	7	2	2	7	7	3	6	2	1	7	1	1	3	7	4
20	5	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	6	6	7	7	6	6	6	7	7