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# Elaborating the Antecedents of Purchase Intentions in Second-Hand Car Industry: Case Study in Kurdistan Region of Iraq

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**Abstract:** The aim of this study was to elucidate the antecedents of purchase intentions of the secondhand market customers. In this regard, the data was collected from Kurdistan region of Iraq to test the impacts of antecedents. Collected data was composed of validity and reliability analysis. Regression analysis was used to test the impacts. Results reveal that price has significant negative impact on the purchase intention while product quality, safety, and serviceability had significant positive impact on the purchase intentions. Lastly, it was observed that oil consumption didn't have a significant impact on the purchase intentions of the customers.

Keywords: Product quality, safety, secondhand car industry, purchase intention, price

#### 1. INTRODUCTION

The interaction through which we purchase items and administrations is diverse for all of customers and for each class of the item. Today's market is driven and overwhelmed by buyers and that is the explanation he is thought of the King. The choice of, regarding life, is there any point to it of a favored brand or item depends exclusively on the selection of purchasers. Understanding the purchasing conduct of the objective market is the fundamental assignment of advertising supervisor under present marketing (Dhanabalan, et al., 2018). Product quality car industry is important for each customer in the market and it is different for each customer, some customer or some people are thinking quality it is important for me because have a good money but some type of customer have a low money do not thinking about quality of cars and Some customer when coming the market they are a lot of search about the cars because in the Kurdistan market have a lot of second hand cars for all cars are the same and the customer look a cars are aske a lot of question about the cars how many car is drive before and has a damage or not and have a problem in the machine or not and asked about the police in the traffic government it has any punishment or not the customer are focus the contract between seller and buyer after agreement the car. all my speeches about Kurdistan region of Iraq.

When the number of cars increasing in the market it is a problem for customer or risk because the customer cannot choose a special car because in the market has a lot of different brand or different features and different price after that the model of cars are the same problem for customer every brand of cars are different in the price, features and safety it a problem for customer when they want purchase the cars and customer cannot believe all brand of cars cannot trust all brand it not easily for customer purchasing and the brand or company product the cars cannot understand customers want and the model is very important for customer because know about the problem the cars if cars have a high model the customer more satisfy when cars have a low model and the some for price and features But in there have a big problem about the customer why? Customer want or purchase a high model features and quality by a low price it is not possible because if cars have a high these things have a high price (Demir et al., 2021).

A piece of what helps Toyota is simply great unwavering quality in all cases, Automotive Testing for Consumer Reports. Another motivation behind why Toyota is so famous among customers is its standard safety highlights, for example, programmed crisis slowing down and forward-crash notice frameworks. As indicated by Toyota, their proceeded with obligation to carrying quality items with key wellbeing advances to their clients stays to be a first concern. BMW targets customers from high society gathering of people as they are individuals for whom BMW will be moderate and additionally, they will value the work of art. The worldwide leader, BMW has situated itself as an image of value, mechanically progressed, elite and select car brand. Execution, Safety, and Quality. Basically, BMW offers the best exhibition, wellbeing, and quality out of any extravagance vehicle brand, giving drivers almost endless motivations to purchase a BMW instead of a vehicle from another producer. Sari & Kusuma (2014).

The price of second-hand car purchase is important for the customer because some customer does not think about the second-hand cars and the second-hand cars is a low price because the cars is drive and some specific

issue and the customer look a body of cars and look the machine of cars and some customer purchasing a second-hand car because price is decrease and putting the number in the traffic police and give a cost of the company by who bought the cars in the company and these process easy for the second hand customer in the sometime the second hand cars is pay some costs by who bought the cars in the company it is good for the second hand customer because the price is low and second hand customer can buy a high quality and high model without the company by a low price in the market price is one of the predominant elements that decide the accomplishment of business. An appropriate estimating methodology can build the business volume in an extensive level, then again, an inappropriate valuing procedure may prompt abatement the deal volume and prompted creating issues and its results there will be issue in business. (Dhanabalan, et al., 2018).

product safety is alluded to as a reduction in the likelihood that the utilization of an item will prompt affliction, injury, casualty or contrary effects on individuals, property or hardware. product safety characterized as the conveyance of an item that is positive by purposeful contamination, harm, or redirection inside the production network. Safety issues about assembling surrenders are typically remembered for bigger quality issues that have been painstakingly considered. Up until now, the connection between master fabricating and expanded degrees of safety issues is the principal concern. at the point when safety and safety are contemplated, purchasers spend more for additional product ascribes, like motor limit, brakes, and airbags. customer think about the likely estimations of such extra ascribes and are glad to pay more for them if the mileages of such added ascribes exceed the additional cost. (Phuong, et al., (2020).

Durability is important for cars purchase the customer look a durability's cars because some customer buy the cars for two or five years and the customer thinking this cars how many durability when buy cars it is different for each cars or each brand some brand have a good durability more than another brand durability sometimes is problem for the customer because if the cars have a durability the cars have a high price all customer want the cars have a durability but cannot buy it because have a high price in the market durability depend on the quality of the cars if the cars have a high a quality have a high durability and if the cars have a durability high the price and does not any problem in the part of cars for example the machine dose not fixed durability is satisfy for the customer because the cars is comfortable and does not pay any cost for fixed early.

Reliability is important for the purchasing cars customer because the customer satisfy this car if the cars have a durability high quality the customer can a reliability this car the reliability is different to each car or each brand all brand have a specific reliability if the cars customer can a reliability have high price in the market which company can produce a reliability car can take a customer in the market if the cars have a reliability this car is comfortable. Regarding esteem unwavering quality shoppers believe a vehicle to be dependable in the event that it is probably going to have less issues than different vehicles Vehicle unwavering quality has been found to emphatically affect the shoppers' probability of picking a vehicle. Dependability and quality are interrelated, seen quality straightforwardly affects client buy choice and brand steadfastness particularly during the time clients have less or then again, no data of the items that they will buy. Moreover, dependability is one of the models to be considered for vehicle decision. Customers need their vehicles to be both solid, easy to keep up what's more, to fix. The advantages that buyers find in purchasing a vehicle with high unwavering quality incorporate lower expenses of fix and higher resale esteem. Consequently, purchasers are probably going to be worried about vehicle unwavering quality while investigating their impending vehicle buy. (Lee & Govindan (2014).

Product design as an innovative methodology to assist an endeavor with acquiring upper hands in the market. For this situation, item configuration was the key achievement factor in the market that it could draw in purchaser consideration, however could likewise plainly speak with shoppers to advance item value. included human-factors designing in item plan. isolated the particular elements of plan as item properties, human-factors designing, and appearance feel delivery. Stated that item configuration assumed a significant part in the correspondence of item use and activity technique with shoppers as it was the common course of action and match of item design and components to upgrade the utilitarian and financial delight of items. In like manner, the possibility of human-factors configuration is acquainted with item configuration to accentuate the connection among individuals and items and is a basic factor in consumers" activity. (Dhanabalan, et al., 2018). Performance is regarding the working of the vehicle. It envelops top force, top speed, gas tank limit, slowing down capacity, concerning capacity, commotions, and voyaging solace. standard financial hypothesis allows a wide scope of elements for clients to assess or to turn into the subject of buyer inclinations (counting utilitarian characteristics like expense, eco-friendliness, and execution, just as more emotional characteristics like plan inclination). Nonetheless, it doesn't represent the other psychological and situational which can influence customers' contemplations over the span of the buying of another vehicle. Social financial aspects and promoting show guides to underline numerous manners by which purchasers' inclinations can be obliged and superseded by these extra psychological and situational factors. Execution implies speed, increasing speed, solace, and brakes of the vehicle. Phuong, et al., (2020). Performance is different of each class of cars or brand for the luxury cars high a good performance quality speed durability and price.

Dominating in item serviceability is essential in the new item market, where it has been distinguished as one of the three most significant credits to buyers. Item workableness additionally is basic for productive achievement in the after deals market, which has been assessed, now and again, to be multiple times bigger than the new item market, and to create more than three times the income of the first buy. While serviceability was distinguished as one of eight basic components of item

quality by, it has been talked about for the most part at a reasonable level in the literature. There is a requirement for experimental exploration on how purchasers see item administration capacity and its effects on after-deals administration cost (AC) and consumer loyalty and faithfulness for the item (SYAHRIAL, 2018).

Demonstrates the impact of demeanor on the acquisition of such vehicles. As to fundamental explicit convictions about the results of purchasing such car, recommends that most purchasers partner efficiency with the littlest and least expensive car and don't see any distinction between efficiency and fuel effectiveness. Those respondents for whom the two terms mean various things partner eco friendliness – as opposed to efficiency – with better cars what's more, new innovation which, thus, may be related to a higher price tag. Clearly, shoppers accept fuel utilization to change just insignificantly inside one vehicle size class and traditional innovation range. Subsequently, the insight that the best way to have an eco-friendly vehicle is a compromise against size, execution, solace, safety and cost may settle the dismissal of fuel utilization in the buy measure. These affiliations additionally demonstrate emotional obstructions which decrease apparent conduct control (PBC) when eco-friendly vehicles which are proper for one's requirements are seen as not accessible or as excessively costly. Peters, et al., (2011).

In-store marketing, for example, exceptional offers is probably going to affect the impacts that costs apply on client conduct by the costs of comparative items and by shopper convictions of changes in cost (Demir, 2020). The strategy should manage retailers to boost value advancements on natural items. In spite of the fact that value motivations may at first reason purchasers to contradict to the cost change, there is a consistent change in customers' valuations of cost. This demonstrates that underlying responses of clients to the value change will vanish when they adjust to more exorbitant costs. Monetary switches ascending over the long haul can reduce this issue. Various factors like fixed costs, economies of scale, innovation and different angles cause estimating of autos to turn into an unpredictable issue. In addition, rivalry and buyer request likewise assume a significant part in this. As of late, value decreases have been known as the fundamental vital arrangement to draw in purchasers by most vehicle makers. To make value decreases, organizations need to settle on a few choices at each phase of creation and deals, beginning from controlling variables of creation and production network to arrangement with vendors. The business changeability of items and administrations is extensively influenced by cost. Purchasers will in general misrepresent the transient item and think little of things to come, which implies they don't think about the drawn-out running costs engaged with items. Phuong, et al., (2020).

## 2. LITERATURE REVIEW

#### 2.1. Price

This paper considers the dealer purchaser divert in which the end request is price touchy and the vender may offer exchange credit to the purchaser. The unit value vender charged by the dealer and the length of the credit time frame offered by the merchant to the purchaser both impact the last interest for the item (Ali, 2021; Budur, 2018). Consequently, both to be strategy factors for the dealer. We utilize the instance of no credit as a benchmark in our investigation. The paper gives strategies to determining the vender's also, the purchaser's approaches under non-helpful just as agreeable connections. In the non-agreeable case, we decide for the merchant the ideal unit cost and the length of the credit time frame. The basic role for the vender in offering trade credit to the purchaser is the incitement of the end interest for the item (Budur et al., 2019; Torlak et al., 2019). Offering trade credit will be financial for the vender if the extra benefit produced by the expanded deals is adequate to remunerate the chance expense brought about. On the opposite side, the purchaser can take benefit of a credit period and diminish his expenses what's more, increment his benefit. The exchange credit can be gainful to both the dealer and the purchaser in certain conditions. One of the investigations that consider offering of exchange credit from a provider's perspective is the new study. Assuming that the unit cost charged by the merchant to the purchaser is fixed, the creators define a model to decide the ideal credit period for the provider (Budur et al., 2018). They confine their investigation to non-agreeable (for example pioneer devotee) vender purchaser relationship think about the issue in which the vender offers one-time credit to the purchaser if the purchaser focuses on placing a bigger than-typical request. The end request is viewed as fixed in this study. Assuming interest is touchy to the selling price, the unit cost charged by the vender to the purchaser impacts the end interest for the item. In such a case if exchange credit is to be offered, the dealer requirements to arrange his pricing and exchange credit approaches since both impact the end interest for the item. In this article we present a model of the dealer purchaser relationship that thinks about the above communication. Both the merchant's unit cost as well as the length of the credit time frame are viewed as choice factors in our model. We utilize the instance of no credit as a benchmark in our examination. We consider the vender purchaser relationship under non-agreeable just as helpful structure (Demir et al., 2020; Demir et al., 2019).

This last examination is applicable given the present accentuation on coordination in store network the board. At the point when end request is value touchy, the unit value that the vender charges to the purchaser just as the exchange credit offered by the vender to the purchaser has impact on the money and material streams in the channel. In this paper we have detailed a model of dealer purchaser relationship which sees both the unit value the merchant charges and the length of the acknowledge period as choice factors. We have considered the non-agreeable just as the helpful circumstance. The models introduced in this paper give a system to the merchant for coordinating his pricing and credit strategy. When the dealer offers exchange credit to the purchaser, he needs to consider the collaboration between the unit cost and the credit period before setting his approaches. As it were, the vender needs to pick between offering a little unit cost and no credit against a high unit cost however some exchange credit. Abad, & Jaggi,(2003).

We show that a significant condition for productive cost segregation is that the rate change in excess (i.e., purchasers' all out ability to pay, less the association's costs) related with an item overhaul is expanding in purchasers' ability to pay. The promoting, financial matters, and activities oversee ment literary works have perceived numerous manners by which a firm can cost segregate. Models incorporate goad uct line estimating (e.g., BMW 3 and 5 arrangement), harmed merchandise (e.g., Intel 486 SX and DX), intertemporal pricing (e.g., Talbot's semiannual deal), administration lines (e.g., need client care), advance buy limits carrier, rail, and lodging tickets), and coupons (e.g., unattached supplements). In these test ples, firms offer a menu of decisions at various costs also, permit purchasers to choose their preferred proposal (second-degree value separation). For test ples, a client who shops at Talbot's has the alternative of buying today at the normal cost or sitting tight for the semiannual deal, where holding up may postpone con-Sumption or increment the danger that the item will become inaccessible. A model in which a firm picks the costs and characteristics of the items it sells, and show that the model flawlessly stretches out to different types of value separation. We relate the expanding percentage contrasts condition to existing outcomes in the literatures on product offering estimating, intertemporal valuing, harmed merchandise, and need administration lines. With a single bringing together condition, we can both recreate also, sum up existing outcomes from these literatures. Anderson, & Dana (2009).

However, an important feature of the automobile market is that the price the consumer sees is different from the price the producer charges. Consumer decisions depend on transaction prices. These differ from suggested retail prices in that they include transportation costs, local or state taxes, and dealer-specific discounts. Goldberg (1995).

## 2.2. Safety

Safety implies wellbeing, just as the actions taken to be protected or ensured. Frequently this word is utilized in mixtures, for example, a safety effort, safety check or safety officer. Safety implies wellbeing, just as the actions taken to be protected or ensured. Frequently this word is utilized in mixtures, for example, a safety effort, safety check or safety officer. The safety office in a business is now and again called safety. The basic job of working framework insurance mechanisms in giving framework safety has been well understood for more than thirty years, yet the entrance control instruments of existing standard working frameworks are as yet deficient to give solid safety (Morris et al, 2002).

These days there has been higher safety to Automobile is needed because of different specialty of burglary is increased. These days vehicle can been taken for some reasons. So Anti-robbery safety framework is required. We can utilize GPS in vehicle for figuring out area whenever and we can discover taken car. GPS can likewise use full in Automobile for award admittance to Start vehicle motor. Vicinity Sensor is very use full for identify things close to vehicle and siron rang consequently. These days Fingerprint module is extremely fundamental since it can just offer admittance to the individual whose finger impression information base is put away in Unique mark module. It receives optic unique finger impression sensor, which comprise higher performance Digital Signal Processing and Flash. Finger impression Sensor Module can lead finger impression picture preparing. It is utilized to perform unique mark check for better safety to Automobile safety framework. Jadav, Wandra & Dabhi (2015).

Obviously, China is an extraordinary country in quality, yet not in power. On the foundation of the quick development furthermore, various disservices of the vehicle industry in China, the need of surveying the vehicle industry safety of China deductively is self-evident. Furthermore, this evaluation likewise establishes a strong framework for the reasonable advancement of vehicle industry furthermore, securing right freedoms for additional turn of events Subsequently, this article sorted out the vehicle modern safety file framework and investigated the consequences of these safety files extravagantly. The modern safety can be characterized as the state-possessed economy, accomplishing the size of creation, having capacities to grow ceaselessly and solid impact in its relative industry, acquiring serious advantage in the open climate. In this wellbeing list framework, the auto condition in China is partitioned into four sections to analyze: the homegrown endurance climate, the global seriousness, the modern level of outside reliance and the controlling power. The solid mechanical safety file arrangement of vehicle. LA-fang, Wen, Ming-yong, Rui & Jun (2010, November).

Vehicle safety is important to lessen the event of vehicle mishaps. A more extensive extent of vehicle wellbeing is street traffic safety comprehensively, for example street plan. Vehicle safety is important to lessen the event of vehicle mishaps and its results. Raya& Hubaux (2005).

The cost of value safety frameworks isn't anything contrasted with the expenses of break-ins. In the event that somebody at any point takes a stab at breaking into your vehicle, you won't just compensation for your taken property. In the event that a cheat takes your own subtleties from your vehicle, you will likewise be inclined to turn into a casualty of data fraud, something that can take you months or even a long time before you can recuperate from it. It is the entirety of our obligations as drivers and travelers to make progress toward vehicle safety. Only one out of every odd mishap can be forestalled totally, yet we as purchasers can use sound judgment by choosing a protected vehicle for ourselves and our families, and exercise the self-control framework. An exceptional forward leap of the previous decade or two has been the creation of driver and traveler airbags, including side airbags that convey from the entryways. Youngster safety seats are another quantum jump in vehicle safety as more grounded combinations that the vehicles are built with. Obeng (2008). Antilock brakes devices keep the wheels from locking when you hit the brakes rapidly. Bolted wheels can make the vehicle turn out on a tricky help, making it unthinkable for you to direct. An ABS framework will utilize sensors on each wheel to beat the slowing mechanism to each wheel during hard slowing down to forestall locking the wheels. This wellbeing highlight will help keep you in charge, in any event, when you need to hit the brakes hard. Knipling (2009).

At long last, while considering vehicle safety highlights, consider footing control. This is an electronic control framework that limits how much the wheels can turn when you are speeding up. This implies that the wheels will have most extreme footing, even in wet or tricky conditions. Footing control frameworks are ordinarily combined with the antilock brake device framework to slow down when a wheel begins turning excessively fast, steering capacity to the contrary wheel to forestall sliding. Sternlund, Strandroth, Rizzi, Lie & Tingvall (2017). Aside from guaranteeing accessibility of data that gives a more secure driving conduct and a superior voyaging experience, the network is a monetary, correspondence, and information the board empowering influence. Notwithstanding, in spite of the advantages, data safety dangers and protection issues represent a colossal challenge to VANET extension and utilization. Perhaps the most fascinating pieces of the network is simply the capacity of the organization coordinate in an exceptionally versatile organization climate. This paper gave per users a concise story of the organization by portraying the organization qualities, engineering, applications, correspondence examples, and safety challenges. Offor (2012).

#### 2.3. Durability

Durability is the capacity of an actual item to stay practical, without requiring extreme upkeep or fix, when confronted with the difficulties of ordinary activity over its plan lifetime (Demir and Mukhlis, 2017). There are a few proportions of sturdiness being used, including long stretches of life, long periods of utilization, and number of operational cycles. Durability is when something keeps going quite a while. The durability of your pair of climbing boots holds them back from destroying in any event, when you've strolled numerous miles in them. Utilize the thing toughness to portray the nature of perpetual quality or strength that keeps something working or holds it together. (Demir, 2020; Swan loca1970).

durability is consistently a key concern. As a solitary part of the item producing measure, it has a shockingly wide arriving at set of suggestions. This incorporates the pragmatic benefits it offers, yet additionally the practical and ecological advantages it gives as well. Thus, this week on the blog, we're taking a gander at precisely why item durability is consistently significant. While durable items can regularly be at first a touch more costly, that underlying expense rapidly adjust in the long haul. Less expensive, less tough items are normally inclined to substantially more regular breakages, which implies that maintenance or substitution costs can rapidly increase, making at last them all the more exorbitant. What's more, if it's your own bespoke item that you're selling onto clients, that monetary irritation will probably bring about a deficiency of loyalty to your image.

At the point when you are trying for solid strength, the numbers are effortlessly characterized and are reliably done so paying little mind to natural components. One territory may be searching for various strength limit than another, however the boundaries will remain something very similar. Alternately, testing for durability is hard to characterize by direct testing strategies. In any case, the connection among porousness and strength permits the solidness of a blend to be dictated by testing the penetrability of the blend being referred to. As has been expressed before in various articles on this site and through publications in different distributions, the main source of early decay of solid crumbling are because of the entrance of water. To have a tough construction, the entry of water through concrete should be diminished. This is additionally why the best, most solid waterproofing framework is needed to get the legitimate strength and further, maintainability of solid designs. Geiker (2012).

In numerous strong merchandise ventures, utilized items are exchanged decentralized secondary markets that are not straightforwardly constrained by the makers of new merchandise: the auto business is maybe the most

noticeable model. In this article, we look to comprehend the impacts of toughness what's more, auxiliary business sectors on balance creation conduct in this industry. With regards to a dynamic balance model, we model unequivocally how item sturdiness and exchange optional markets influences balance maker conduct in the cars market. The durability of vehicles and the presence of an optional market have significant serious suggestions for new-vehicle makers. The auxiliary market presents, as pre-owned vehicles, countless (defective) substitutes to the new vehicles delivered every period, which restricts the market force of every maker. Thus, levelheaded firms perceive that their present creation will arrive at the optional market later on and, by bringing down costs in those business sectors, will dissolve future benefits. the conversation above underscored, durability and auxiliary business sectors bring elements into the two makers' yield choices and customers' buy choices in the auto market, which makes difficulties for both hypothetical and exact work. (Ali, 22021; Esteban & Shum 2007).

In their present structure, item related administrations offer minimal in terms of progress towards advancement at the framework level. Of the featured activities, none set up changes in ownership structure, institutional setting, or producer user interaction, with financing plans prompting no change at all in any of the five key regions. Distant diagnostics frameworks such as OnStar may assist makers with improving their insight into vehicle execution being used. Nonetheless, the dependence on in cars telematics implies that there is next to zero effect on client learning. Upkeep contracts, maintenance agreements and extra parts arrangement don't change the gadget idea however may conceivably expand the usable lifetime of a cars. Cars reclaim plots additionally lead to an improvement in the management of cars at the ELV stage. Williams (2007).

#### 2.4. Reliability

Unwavering quality is characterized as the likelihood that an item, framework, or administration will play out its planned capacity satisfactorily for a predetermined timeframe, or will work in a characterized climate without disappointment. reliability has now and again been delegated "how quality changes over the long run". The contrast among quality and unwavering quality is that quality shows how well an article plays out its appropriate capacity, while unwavering quality shows how well this item keeps up its unique degree of value after some time, through different conditions (Demir, 2019; Mohammed et al., 2020). For example, a quality vehicle that is protected, eco-friendly, and simple to work might be viewed as great. On the off chance that this vehicle keeps on gathering this model for quite a while, and performs well and stays safe in any event, when driven in nasty climate, it very well might be viewed as reliable. Fosgerau, M., & Karlström, A. (2010).

Reliability is a very important element of validity proof. A grade could have high dependability and be substantial for one reason, however not for another reason. A model regularly utilized for reliability and validity is that of gauging oneself on a scale. reliability importance records are important in setting up course and prioritization of activities identified with an overhauling exertion (reliability improvement) in framework plan, or proposing the most productive approach to work and keep up framework status. Existing records are determined through logical methodologies, and use of these records to complex repairable frameworks might be immovable. Complex repairable frameworks are as a rule progressively seen, and issues identified with scientific framework reliability and accessibility arrangements are notable. One of the reasons for framework reliability investigation is to recognize the shortcoming in a framework and to measure the effect of segment disappointments. The supposed "reliability importance" is utilized for this reason. These significance measures give a mathematical position to figure out what parts are more imperative to framework reliability improvement or more basic to framework disappointment. Wang, Loman & Vassiliou (2004).

Purchasing new vehicle is rarely simple, with the scope of conditions including everything from eco-friendliness to the quantity of safety features included consistently. Truth be told, now and again these impacts stretch past the norm. Was causing individuals to think about purchasing new sports vehicle. For the nation's fuel card users, the impacts and wants that educate their buys are likely somewhat more controlled. With half breeds and electric vehicles overwhelming press inclusion from the new Detroit Auto Show, it appears like purchaser interest will be sticking to this same pattern. In any case, a new overview affirmed that this isn't exactly the situation yet. The early American car industry established an extreme takeoff from its antecedent, the pony carriage industry. Not at all like the pony carriage industry that depended on creature power, vehicle firms utilized steam, fuel, and electric ability to furnish clients with horseless carriages. Pony carriage firms were exclusive activities, yet early auto firms were collects who set up purchased out segments. Most importantly, the vehicle was a drastically new relic that vowed to change the experience of transportation, some accounts of the auto business lessen the introduction of the early car industry to the topic of how gas fueled vehicles started to rule the business. Albeit the innovative improvement of the car business is fascinating by its own doing, it can redirect consideration from the bigger inquiry of how the vehicle came to be legitimated. The first firm to make cars was set up by the Duryea brothers in 1895. At the beginning of the vehicle business, the car was a new item whose reliability was suspect. Large numbers of the early producers were distantly associated with making vehicles. Reliability runs comprised of slope climbing, perseverance, and now and again, mileage runs. These runs featured vehicles that were probably going to be utilized by normal buyers. An essayist remarked about the Glidden Tour, an unwavering quality challenge, saying that it had "demonstrated the vehicle is currently practically idiot proof. It has demonstrated that American vehicles are durable and effective. It has strengthened our confidence in the permanence of the engine vehicle". In the event that reliability challenges set up the common engine vehicle prone to be utilized by customers as a practical component, speed challenges included highlighted particular monsters far-fetched to at any point be purchased by buyers. Sea shore, track, and street races that set essential accentuation on speed were more important for their commitment to auto innovation as tests for shortcomings in plan than as exposure for the engine cars. Rao (2004).

Customarily, buying a vehicle was viewed as dreary with various visits to vehicle display areas, examination of highlights through handouts, taking assessments from companions, verbal exchange from peers lastly encountering the vehicle through a test drive. The data innovation upheaval has enabled shoppers to get to data applicable to vehicle acquisition without any problem. There is a wide array of data accessible on the car business internet, going from vehicle model particulars to estimating, account choices, used vehicles et al. Nagaraja (2012).

The portrayal endeavor of the framework individual cars environment as a component of the framework individual specialized object environment has been made. In the framework examination the reliability of the machine exploiter a vehicle driver has been considered. It has been brought up that specialized framework administrators (for this situation – the drivers) have to be viewed as significant in the design of reliability of these frameworks. The operational and organic dependability normal for a person specialized framework administrator has been completed. The features referenced above are not credited to a specific driver for great. They may change powerfully relying upon the conditions, for example, time, season, traffic conditions, and so on In the hypothesis of human's dependability there are quantitative and subjective definitions. The administrator's dependability (for this situation reliability of a driver) in the quantitative sense implies the capacity portrayed by the likelihood to perform given errands. In the subjective sense however, agreeing, it is the capacity to perform errands with the negligible hazard of committing an error and in a given time. reliability might be perceived as a component of sufficiency between inside variables of the administrator (touchy highlights, character, inspiration, capabilities), and outer elements (errands, specialized quality and machine abuse, strategies for work, actual natural conditions, social environment, work environment). Matuszak, Jaśkiewicz, Więckowski & Stokłosa (2017).

#### 2.5. Design

A design is an arrangement or particular for the development of an article or framework or for the execution of a movement or measure, or the aftereffect of that arrangement or determination as a model, item or cycle. The action word to configuration communicates the way toward building up a plan (Demir, 2019). A design or attracting created to show the look and capacity or operations of a structure, piece of clothing, or other article before it is made. cars design is an imaginative cycle used to characterize the actual appearance of engine vehicles like vehicles, trucks, cruisers and so on It envelops inside and outside plan. To guarantee a vehicle is streamlined, its outside plan needs to incorporate a few fundamental shapes: curve, the shoulder, a wedge, etc. Dominating the EMC-related highlights of a full vehicle in its early plan stage is getting one of the significant specialized issues for car makers. Canavero, Kedzia, Ravier & Scholl (2000).

In general, great design is just the capacity to depict your message the most ideal way that is available. Here's the reason configuration is significant: incredible design makes it simpler for clients to utilize your site, pulls in the ideal individuals to your image, and passes on your image esteems surprisingly fast (Ali, 2014).

definition includes Design the board the progressing measures, business choices, and techniques that empower advancement and make successfully designed products, services, interchanges, environments, and brands that upgrade our personal satisfaction and give hierarchical achievement. On a more profound level, plan the executives looks to interface design, advancement, innovation, the board and clients to give upper hand across the triple primary concern: economic, social/cultural, and environmental factors (Ali and Anwar, 2021).

In the space of actual items, item design is the action that changes a bunch of item necessities into a detail of the calculation and material prop-erties of a relic. Item designers make and determine the design by which the components of the item will be organized into a coordinated entire; the structure, surface, shading, and designs of the outside of the item; the UIs; the materials and creation measures for part producing; the joining procedures to hold the item together; and the itemized calculation and material detail of each part. Ulrich & Pearson (1998).

product and interaction co-advance in our record, and in this manner the monetary character of the business is made and changed. In this manner the all-steel body as an element of item design came about because of, and further upgraded improvement of, key cycle advancements as steel stepping, welding, and painting, which thusly turned into the characterizing determinant of economies of scale in the cars business. That is, this record is about how innovation change is incited and diffused through an industry. For reasons that become clear in the examination, the record focuses on the question of vehicle body design and production, as opposed to the interior burning motor that is typically seen as the center innovation of the car industry. While fundamentally

short, some thought is given to the centrality of all-steel body innovation to economies of scale in the car industry to legitimize the conflict that item design and measure innovation ought to be given more noteworthy noticeable quality in records of mechanical change. Generally significant, maybe, is that the 'Buddist' insurgency additionally achieved the modern design that has gotten common of the mass vehicle industry. Consistent refinement and improvement of the center advances to help the assembling and design of all-steel bodies requested ever-more prominent sizes of venture while at the same time lessening the work substance of production. Nieuwenhuis & Wells (2007).

Driver safety if there should arise an occurrence of mishap is a fundamental issue when building up another cars design, and this is of specific significance when managing hustling vehicle. This is expected to the higher speed that by and large describes the activity of a dashing vehicle concerning a metropolitan use vehicle. Higher speed implies higher (square force) active energy to be dispersed if there should arise an occurrence of effect. the design and mathematical recreation of effect occasion for the front facing safety construction of vehicle body for the equation SAE vehicle created by the Politecnico di Torino group. The performed mathematical recreations put in proof the requirements for the design of a good energy engrossing construction and furthermore the prerequisites for a decent design of the connections. Belingardi & Obradovic (2010).

To help the electronic-design chain, system originators in the cars business should set up another design stream. Clean interfaces and unambiguous particulars are fundamental pieces of this design stream. What's more, the design stream should address the prickly issue of IP assurance. This is significantly more significant in the cars area than in other modern fragments in light of the fact that the automotive supplier chain is more profound. design time and cost will rule system designers' dynamic cycle. Along these lines, design reuse of numerous sorts, just as without a moment to spare, minimal effort configuration investigating techniques, will be profoundly significant. design flexibility is crucial for planning a consistently developing usefulness onto a constantly developing set of related equipment execution choices. Sangiovanni-Vincentelli (2003).

in the design cycle to accomplish the eco-effective item execution. Natural effects, as the bothersome yields, might be in the types of vaporous emissions, fluid releases, and strong squanders. For instance, to urge car fabricates to design automobile with acceptable degrees of size and safety performance. Hwang etc at all (2013). design thinking implies remembering the client constantly while driving developments which are mechanically doable and financially feasible. Makers all throughout the planet have caused them to notice configuration thinking as an idea of advancement the executives as the associations have opened their psyches to gain from designers in being imaginative and creative. A design mastermind sets the customer at the core of reasoning, is cooperative by incorporating distinctive mark of perspectives, and spotlights on the future as opposed to thinking about how things work today. A design cycle model incorporates four indispensable advances: the investigation of the issue, designing the arrangement, the execution, and the assessment of the arrangement. Ali,Rashid & Jusoff (2009).

## 2.6. performance

Performance is characterized at the level of every person inside the association or at association level. It is seen as a comprehension of the accomplished outcomes. A more extensive meaning of performance great performance has in any event three levels the connections between the individual and the chief, the individual and their group and the individual and the more extensive association they work for. It is marvelous to laud and perceive great parts of the person's work in broad daylight. With regards to performance the board, the expression "execution" signifies consistently accomplishing the favored outcomes in a way that is pretty much as compelling and effective as could be expected. performance the executives advises us that being occupied isn't equivalent to creating results. performance is the way viable a person or thing is at doing a decent job. Performance is characterized as acting, singing, playing an instrument or in any case showing an art to a gathering of individuals. Carlson, M. (2013).

importance performance analysis, or IPA, is utilized to measure how fulfilled individuals are with the nature of administration they have gotten and the overall significance of specific qualities of a spot, issue, or program. importance- performance furnishes the board with a valuable concentration for creating promoting procedures. On account of administration costs, for instance, at any rate three techniques, or blends of systems. The seller could meet the value issue head-on

through instructive publicizing showing that the seller's rates are lower than administration station costs or on the other hand by running coupon specials for administration work performed dack times of the week. Given the high significance joined to

doing the work right the first run through and quick activity on grumblings, the vendor might endeavor to cause clients to feel that his administration rates merit paying by improving his performed during slack times of the week. The vendor may diminish the effect of his seen high assistance costs by selling clients an maintenance agreement which would diminish out-of-pocket fix charges and support their returning to the vendor for normal support. Martilla & James (1977).

administration quality and consumer loyalty are key drivers of monetary performance. mark the connect among fulfillment and productivity as the 'administration benefit chain'. They contend that fulfillment is an antecedent of dependability. Client dedication, thusly, brings about higher volume of buys, decreased working expenses, positive verbal exchange and lower value affectability. Matzler, Sauerwein & Heischmidt (2003).

Significance performance examination is a showcasing research method that has extraordinary potential in the medical care area. The helpfulness of the method has as of now been. Demonstrated in the accompanying business sectors: car food lodging and instructive administrations. Significance performance examination is not difficult to utilize and offers significant worth to medical care advertisers. Significance performance investigation is an advertising research method that includes the examination of consumer mentalities toward key ascribes or attributes of the item, administration or association being considered. Remarkable mentalities address the shopper's evaluative measures in item decision. They can be characterized as the basic measurements of any showcasing technique like superior grade, low cost, educational publicizing, helpful area, and so on. Silva & Fernandes (2010)

The vehicle area is quickly expanding its piece of the pie worldwide lately. It is a direct result of different business procedures via car producer, for example, more spotlight on little vehicles and eco-friendly vehicles having a low market value that are focused to catch the most extreme market, cars industrial are confronting. The performance of the firm, particularly in the cars area, is primarily founded on the fuel costs, natural issues, and so on . The client doesn't accepting those items that devour more energy in non-industrial nations like India and China. Then again, on the off chance that they emanate carbon they need to pay more might be as additional expense or punishment depending upon the guideline of a specific country. Double pressing factor one, to save the climate and another is to keep up the performance of the firm in the since a long time ago run. The performance of the firm can be decided based on monetary, operational and promoting ability of the firm. Kushwaha & Sharma (2016).

Toyota was the biggest auto producer by creation and it has gained notoriety for greatness in quality, cost decrease and hitting the market with vehicles that sell. Toyota has gotten a model through its Production System, an incorporated socio-specialized framework that involves its administration reasoning and practices. The majority of the significant agents of the cars business present in their yearly or supportability reports components in regards to performance the board. In any case, we can likewise recognize a disadvantage of these reports. The ones that present non-monetary KPIs or practices are extremely uncommon. The yearly reports as a rule and the car business ones specifically depend for the most part on the monetary information, ignoring different kinds of markers. In the current case, this could show that the auto business tends to zero in fundamentally on estimating the monetary performance. Imran, Jian, Urbański & Nair (2018).

Fulfillment with, and acknowledgment of, movement-based costing (ABC) systems has been blended and the interaction of execution has been embroiled in these results. Exploration on the determinants of ABC framework execution viability has recognized context oriented and execution measure factors that correspond with assessments of the ABC system. Anderson, Hesford & Young (2002).

Our subjective meetings with suppliers demonstrated that it is significant for providers to gain from different customer to improve their exhibition. performance advantage is because of "capabilities created from information and information aggregated in the long-haul associations with various customer, particularly Toyota and Nissan. In specific, improved the quality and dependability of its items through the designing tests directed by various customer utilizing models and PC reproduction. information on the most proficient method to improve item quality obtained from one customer was adequately redeployed to improve go duct quality for different clients. Customer firms commonly direct various designing tests in the wake of coordinating parts provided into a framework item or vehicle item. The customer. After items are sold in the market by customer, performance information, imperfection information, and consumer loyalty information are additionally given to providers. Consequently, gains from an assortment of customer, vehicle items and markets, applications, etc. shown that the amount and nature of these information impact the development and performance of new components. Nobeoka, Dyer & Madhok (2002).

## 2.7. Serviceability

serviceability the nature of having the option to offer great support. functionality, convenience, useableness, useableness. handiness, utility - the quality of being of viable use. Serviceability is a statement of the straightforwardness with which a part, gadget or framework can be kept up and fixed. Over-designing, which is planning frameworks to particulars better than least prerequisites. Duplication, which is broad utilization of repetitive frameworks and parts. Each building or other design should fulfill a strength limit state, in which every part is proportioned to convey the configuration burdens to oppose clasping, yielding, unsteadiness, break, and so forth; and serviceability limit states which characterize practical execution and conduct under load and incorporate such things as redirection, vibration, and erosion. In the United States, strength limit states have customarily been indicated in construction regulations since they control the safety of the structure. Griffis (1993).

serviceability in plan should start with the acknowledgment of Murphy's Law that says, "Whatever can fall flat, will." That law can be extended on account of autos to say that disappointments don't generally happen before exceptional vendors with profoundly prepared mechanics. Furthermore, that is the thing that Serviceability is all about - perceiving this present reality Service Industry capacities and making fix necessities as simple and cheap as possible. That improves the chances of getting vehicles fixed right the first run through. Since the greater part of client protests are on the grounds that they can't get their vehicles fixed (not on the grounds that they fizzled), Serviceability is a central point in consumer loyalty, and afterall isn't that the situation. serviceability' objective of limiting the cost of fixes to vehicles must be accomplished with planning and designing assistance. Items should adjust to existing field capacities what's more, impediments if the Service Industry is to be expected to perform appropriate fixes. Development is required in plan to make it conceivable to effectively analyze and fix the quickly growing, exceptionally complex gadgets on vehicles of what's to come. serviceability has accepted extents of significance to producers of purchaser items that was incredible preceding later a long time. Johnson (1980).

serviceability issues cost more cash to address than would be spent forestalling the issue in the design stage. Maybe serviceability conversations with the proprietor should address the tradeoff between the underlying expense of the possible degree of design versus the potential alleviation costs related with a more loosened up design. Such an examination is just conceivable on the grounds that serviceability occasions are, by definition, not safety related. The customer or their representative should recognize the required measures for the engineer. By and by, the architect should encourage the dynamic association of the client in the design phase of a construction and address the requirement for educated conversation of principles and levels of building performance. King, Bouazza, Gniel,Rowe & Bui (2017).

The lines among assembling and administration have obscured as makers grow past their customary part as makers of top-notch items to seek after servitization methodologies, wherein they give items packaged related administrations. Likewise, purchasers hope for something else from makers than the underlying item alone, as they look for more elevated levels of after-deals administration just as lower cost of possession. As needs be, it is basic for directors and researchers the same to comprehend item serviceability, which is an undeniably significant issue at the nexus of item quality and administration quality. Dominating in item serviceability is crucial in the new item market, where it has been distinguished as one of the three most significant credits to buyers. Item serviceability likewise is basic for productive achievement in the aftersales market, which has been assessed, now and again, to be multiple times bigger than the new item market, and to produce more than three times the income of the first buy. Syahrial, Suzuki & Schvaneveldt (2019).

The after-deal services can possibly show be compelling in building long haul connections on the off chance that they are intended to satisfy customer' fluctuated prerequisites, which drives customer toward being exceptionally fulfilled. Be that as it may, what most project supervisors can't comprehend or now and again invalidate is the job that an undeniable degree of satisfaction can play in advancing their customer' worth over the long haul. Hence, it is significant for services who are introduced as services planners to obviously see how the nature of their administrations are seen and decided by their clients so they can have a bringing together comprehension among them and their customers. Deciding a particular strategy to distinguish the main assistance credits that have the most impact on clients' conduct will persistently be seen as a test. There are numerous and complex components coming about because of the fast change in innovation (Budur et al., 2021). For instance, with the end goal for customer to save the time they ordinarily would spend holding up at the service focus, it is seen as pivotal by these customer to have an online choice to book their forthcoming upkeep. Then again, it very well may be seen as a non-esteem added choice to different customer—particularly by the individuals who are less disposed to utilize mechanical features. Parasuraman, contended that assistance places think that its hard to learn what perspectives contribute the most in being seen as top notch to clients and what is the required level for those perspectives to be conveyed in quality service. Al Hammadi (2016).

## 2.8. oil consumption

For oil consumption, most boundaries had a solid connection and are significant. This demonstrates that the outside of the chamber liner was firmly associated with this utilitarian interest. From the tables it was tracked down that countless boundaries had a significant part for oil consumption. The valleys in the surface are obviously significant for oil utilization and boundaries that are affected by valley profundity have a solid relationship. Greasing up oil consumption might be taken to be 1.5% of the fuel-oil utilization at full burden. To this should be added the amounts illustrative of any oil changes at routine assistance spans. This may change from between 250 h to each 5000 h of running, contingent on the size and speed of the motor. The sump limit of a 1.2 MW motor is of the request for 8001. For first gauges of greasing up oil costs, one may chip away at the premise of 5% of fuel costs for a similar period. Coconut oil is as a rule intensely advanced as a healthy oil, with benefits that incorporate backing of heart health. To evaluate the benefits of this case, the writing on the impact of coconut utilization on cardiovascular danger elements and results in people was audited. Coconut oil has been a significant eatable oil for the food industry for a long time and is typically named or named a lauric oil, a

tropical oil, or a sweet shop fat. The typical business item is either refined, dyed, and aerated coconut oil or, all the more as of late, virgin (crude) coconut oil. The creation of coconut oil has been expanding around the world. Eyres, Eyres, Chisholm & Brown (2016).

As a piece of the push to consent to progressively severe emanation principles, motor producers endeavor to limit motor oil consumption. This requires the headway of the comprehension of the attributes, sources, and driving instruments of oil consumption oil consumption from the cylinder ring-liner framework altogether adds to add up to motor oil utilization. Motor oil consumption is perceived to be a critical wellspring of toxin outflows in vehicles. Oil consumption is likewise a significant pointer for motor execution and, therefore, consumer loyalty. As a piece of the work to agree with progressively tough outflow norms, motor makers endeavor to limit motor oil consumption. oil consumption sources portrayed above add to add up to motor oil consumption. The relative significance of each source relies upon various main thrusts for oil transport that change with various design and motor working boundaries. Consequently, perceiving the commitments of various oil consumption sources empowers motor producers to settle oil consumption issues more powerful. Yilmaz, Tian, Wong & Heywood (2004).

oil interest and CO2 emanations from the Chinese street transport area and to investigate conceivable approach measures to contain the touchy development of Chinese vehicle oil consumption. To investigate the significance of strategy choices of containing the sensational development in Chinese vehicle oil interest, three situations in regards to engine vehicle mileage enhancements were planned in anticipating future oil use and CO2 emissions. Despite the fact that the portion of oil consumption by China's street transport out of its complete oil consumption is a lot lower than that in created nations, the offer in China will surely increment later on. Truth be told, it will be a moving undertaking for China to give sufficient oil to satisfy the fast development of street transport in the close future. He, etc at all(2005).

The new quick development in vehicle populace in China has raised worries over public energy safety and ozone depleting substance discharges. Alongside the measure of vehicle stock and the vehicle utilization force, one of the main considerations influencing transport related energy use is the fuel-consumption paces of engine vehicles (typically estimated in liters of fuel per 100 km). Understanding the fuel-consumption levels of existing cars in China is significant not just for precisely assessing the complete energy use and discharges of on-street transport, yet additionally for giving solid data to strategy producers so that suitable approach choices can be made to viably diminish energy use by the Chinese transportation area. Specifically, it is important to know the distinction in cars mileage. Huo etc at all (2012).

#### 2.9. Purchase intention

purchase intention is the inclination of shopper to purchase the item or administration. In another words, buy expectation has another perspective that the buyer will buy an item after assessment (Torlak et al., 2019). Purchase intention is by and large characterized as "an estimation of the likelihood that a shopper will buy a help or item." And today marks can't bear to inactively trust that purchasers will look for what they have to offer. Item quality is a critical factor in evaluating buy goal. It is a nonstop cycle of improvement that the constant changes increment item performance and subsequently the fulfillment of customer' requirements. Quality ought to be improved each second reasoned that if an item has a superior quality, customer will be more disposed to buy it. Moreover, their investigation accentuated that item quality has a positive effect on customer 'purchase intention. examined the higher quality item makes higher buy goal toward lower quality items. Mirabi et all (2015).

Brands furnish their clients with passionate and experiential advantages, also, these advantages are crucial for expanding solid brand value. To fabricate this solid brand value on the lookout, it is basic to comprehend the center components of brand picture, which is brand character, brand picture is comprised of five distinct aspects, which are client picture, event picture, item picture, brand character and remarkable quality. A significant idea for brand separation, which fundamentally impacts customers purchase decision, is brand character. The more positive the brand character is, the higher the buyers' purchase intention toward the brand would be. Brand character is characterized as the arrangement of human attributes related with a brand characterizes the related character of a brand as a bunch of human segment attributes like age, sexual orientation and race; human way of life qualities like exercises, interest and assessment; and human character qualities like extroversion, trustworthiness also, nostalgia. The brand turns into a living individual and is regularly connected to a representation. Along these lines, the theoretical elusive resources and qualities can be pictured in an unmistakable manner, and clients associate with brands as though they where human creatures. Like human character, brand character is unmistakable and persevering Accordingly, promoting experts have become progressively mindful of the significance of building an unmistakable and particular brand character as a focal driver of shopper inclination, utilization and purchase intention. Brand character has been quite possibly the main issues in advertising, in light of the fact that customers will in general settle on buy choices dependent on brand pictures that have as of now been shaped to them instead of from unique credits or attributes of the item itself. The significance of put away recollections of a brand in buyer dynamic has been all around archived.

Over the long haul, brand's structure incredible relationship in the personalities of buyers which help shoppers recuperate data filed in their brains to decide: once recuperated, the information gives motivation to get the item. de la Paz Toldos-Romero & Orozco-Gómez (2015).

Simultaneously, item/service suppliers rely upon a small bunch of key customers for a huge bit of their incomes. The hidden objective is for the brand is to summon sensations of trust, certainty, safety, strength, durability, speed, status, and selectiveness. Eventually, a solid item/administration brand passes on the guiding principle recommendation of both the association and its item/service in a way that resounds with clients. Albeit experimental confirmations demonstrated that brand value can influence buy Electronic word of mouth (PT)intention in the different settings the number of studies which measure the impact of brand picture on purchase intention is restricted. examined the effect of brand believability on shoppers' image buy goal zeroing in on China's vehicle industry. Their study uncovered that store picture has an immediate and constructive outcome on brand picture and purchase intention. Furthermore, they showed that assistance quality has an immediate and beneficial outcome on brand picture. shown that relational impacts and marking prompts shape purchase extravagance purchase intention. Jalilyand & Samiei (2012).

For some, buyers, picking a vehicle is frequently an unpredictable and high contribution measure. Despite the fact that vehicles are regularly utilized items, they are additionally once in a while purchased items. Also, a car is exorbitant, there is an enormous determination and the repercussions of not picking admirably regularly endures a significant stretch of time and may cost a part to address. Purchasers go into the interaction of distinctly assessing vehicles for buy when they experience a solid yearning or need for a vehicle. Gotten together with the capacity and need to purchase, the buyer is supposed to be on the lookout for another vehicle. This is accentuation the customer is setting aside cash or approaches assets for procurement, and they have solid expectations to finish the buy sooner rather than later. Specialist have followed this meaning of on the lookout' for purchase, it is helpful to present the potential measurements and assembles that consumers may use for choosing between various cars. Item performance what's more, work incorporates assessments of how the item is probably going to perform. Usefulness is a typical measure item performance. The consumer can assess execution direct by test-driving the vehicle or may acquire it second-hand through the media or over verbal. Item appraising is intently identified with execution and is the item's apparent quality and properties. Purchasers may accept that half and halves produce lower outflows, making it a predominant quality auto. Normally, item quality is contrarily associated with product price. Karunanayake & Wanninayake (2015).

## 3. METHODOLOGY

#### 3.1. purpose

After concluding and explained the importance and reasons of this project in this section the methods and methodologies that have been used is going to be explained. The purpose of this project is to realize of what customer's perspective about any car brand, what kind of features inside is important as well. And what attracts customer within car brands. In addition, to understand how customer evaluates the car service, price, quality and safety. Moreover, the paper helps car seller to understand customer needs and attract them with the better service.

## 3.2. sampling and demography

628 data have been collected in many firms of Sulaymaniyah by the questionnaire survey made of 35 questions and we have conducted these questions to the one who has car. We have distributed as a paper surveys to be field and after that checking the questionnaires to see if there are any inappropriate survey results which have been excluded from the analyses. For this method as a post graduate student composed to collect data from many people that they have cars and they are pursuing to a good quality car in the market to see how the willingness of the customer derives, from which point they focus on the car brand. The survey questions were asking to the people to see which kind of cars they want and drive, which consists luxury, high middle, low middle and cheap cars. The survey involves 140 data of luxury, 160 data of high middle, 172 data of low middle and 156 data for cheap cars that have been conducted.

The demographic information can be seen as the table shows.

age							
		Frequency	Percent	Valid Percent	Cumulative Percent		
Valid	18-22	67	10.7	10.7	10.7		
	23-25	141	22.5	22.5	33.1		
	26-30	200	31.8	31.8	65.0		
	31-40	110	17.5	17.5	82.5		
	41-50	73	11.6	11.6	94.1		
	51-60	29	4.6	4.6	98.7		
	60+	8	1.3	1.3	100.0		

100.0

100.0

		-			
education					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	primary school	49	7.8	7.8	7.8
	secondary school	74	11.8	11.8	19.6
	high school	168	26.8	26.8	46.3
	vocational school	164	26.1	26.1	72.5
	bachelor	137	21.8	21.8	94.3
	master	27	4.3	4.3	98.6
	Ph.D.	9	1.4	1.4	100.0
	Total	628	100.0	100.0	

car					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	luxury	140	22.3	22.3	22.3
	uppper middel class	160	25.5	25.5	47.8
	lower middel class	172	27.4	27.4	75.2
	cheap car	156	24.8	24.8	100.0
	Total	628	100.0	100.0	

## 3.3. procedure

In developing questions that we have collected we could see based on reliability, product quality, oil consumption, price, safety and service ability. For the price, service ability, oil consumption and purchase intention questions we have asked 3 main questions for each, for the product quality is 13 questions were collected, and the last one which is safety, which 4 main questions have been asked to the people. In addition, we have used exploratory factor analysis and reporting, and with regression analysis has been used to analyze the whole data.

## 4. Finding

Exploratory factor analysis and reporting

Total

628

Table 1: Descriptive statistics

Table 1: Descriptive statistics						
<b>Descriptive Statistics</b>						
	Mean	Std. Deviation				
Price1	5.0748	1.28137				
Price2	4.9411	1.17172				
Price3	4.9188	1.16492				
Sec1	3.7436	1.36936				
Sec2	3.5780	1.47016				
Sec3	3.4618	1.57132				
Sec4	3.4283	1.57724				
Dur1	3.6561	1.43754				
Dur2	3.6592	1.42381				
Dur3	3.6146	1.43811				
Dur4	3.3232	1.53085				
Rel1	3.6449	1.41974				
Rel2	3.7436	1.42976				
Rel3	3.6067	1.47594				
Des1	3.7038	1.43376				
Des2	3.6529	1.45990				

Des3	3.4889	1.50222
Perf1	3.6990	1.38580
Perf2	3.5637	1.41672
Perf3	3.5159	1.46454
Serv1	4.4936	1.24443
Serv2	4.4283	1.29640
Serv3	4.3105	1.36629
Oil1	3.9682	1.60708
Oil2	4.0462	1.43751
Oil3	3.9363	1.52044
MVal1	2.8185	1.30348
MVal2	2.9156	1.30545
MVal3	2.5016	1.26604
PVal1	3.4793	1.40331
PVal2	3.2484	1.19358
PVal3	3.3439	1.76701
Int1	3.5796	1.42378
Int2	3.2420	1.39446
Int3	3.0096	1.52488

Given in the Table 1, there are the results of descriptive statistics of the exploratory factor analysis. The results show that standard deviation for each question is 2 or below 2. This result shows that the participants agreed on their selection and rating of the question. Otherwise, it would be considered that the participants were thinking different from each other. Secondly, it was observed in the table that average results of each question, which were ranked from 1 to 7, have been changing between 5.0748 and 2.5016 after considering all question together.

Table 2: KMO results of the exploratory factor analysis

KMO and Bartlett's Test						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.945						
Bartlett's Test of Sphericity	Approx. Chi-Square	19323.014				
	df	595				
	Sig.	0.000				

Table 2 above show the Kaiser-Meyer-Olkin test results. This result stands for the sampling adequacy of the collected data. According to the standards, the test result must reveal minimum 0.5 value or above. Secondly, the threshold of Bartletts test of Sphericity must be checked and make sure that is it significant at 0.05. When the table above is observed, it was revealed that KMO test result contributed value of 0.945 which is very sufficient considering the standard that was explained. Lastly, the results of bartlett test of sphericity was significant at 0.000. Therefore, it was concluded that the sample of the dataset was sufficient to continue with the further analysis.

Table 3: Communalities of exploratory factor analysis

Communalities								
	Initial	Extraction						
Price1	1.000	.830						
Price2	1.000	.844						
Price3	1.000	.799						
Sec1	1.000	.752						
Sec2	1.000	.739						
Sec3	1.000	.789						
Sec4	1.000	.778						
Dur1	1.000	.700						
Dur2	1.000	.735						

Dur3	1.000	.652
Dur4	1.000	.577
Rel1	1.000	.790
Rel2	1.000	.680
Rel3	1.000	.783
Des1	1.000	.774
Des2	1.000	.764
Des3	1.000	.752
Perf1	1.000	.773
Perf2	1.000	.729
Perf3	1.000	.723
Serv1	1.000	.724
Serv2	1.000	.800
Serv3	1.000	.735
Oil1	1.000	.713
Oil2	1.000	.684
Oil3	1.000	.672
MVal1	1.000	.730
MVal2	1.000	.613
MVal3	1.000	.705
PVal1	1.000	.756
PVal2	1.000	.771
PVal3	1.000	.641
Int1	1.000	.726
Int2	1.000	.830
Int3	1.000	.709
Extraction Method:	Principal Component A	Analysis.

Table 3 show the communalities results of the exploratory factor analysis. The standards indicate that value for each question must be above or very close to 0.5 or more than this value. When the table above was observed, it was seen that all items held value above 0.5.

Table 4: explained variance for each dimension of the questionnaire

Total Variance Explained										
Component	Initial Eigenvalues				Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	14.219	40.627	40.627	14.219	40.627	40.627	12.926	36.932	36.932	
2	4.081	11.66	52.287	4.081	11.66	52.287	3.59	10.257	47.188	
3	2.856	8.159	60.446	2.856	8.159	60.446	2.522	7.205	54.394	
4	1.996	5.702	66.148	1.996	5.702	66.148	2.409	6.884	61.278	
5	1.569	4.483	70.632	1.569	4.483	70.632	2.214	6.326	67.603	
6	1.051	3.003	73.635	1.051	3.003	73.635	2.111	6.032	73.635	
7	0.893	2.552	76.187							
8	0.758	2.166	78.353							
9	0.632	1.805	80.158							
10	0.535	1.529	81.688							
11	0.475	1.357	83.044							
12	0.473	1.35	84.395							
13	0.439	1.255	85.65							
14	0.42	1.201	86.85							
15	0.382	1.093	87.943							

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16	0.373	1.067	89.009						
17	0.315	0.9	89.909						
18	0.291	0.833	90.742						
19	0.269	0.767	91.51						
20	0.264	0.754	92.264						
21	0.255	0.729	92.993						
22	0.247	0.706	93.699						
23	0.221	0.632	94.33						
24	0.214	0.612	94.942						
25	0.21	0.601	95.543						
26	0.192	0.549	96.092						
27	0.189	0.541	96.633						
28	0.179	0.513	97.146						
29	0.177	0.506	97.652						
30	0.162	0.462	98.114						
31	0.15	0.43	98.544						
32	0.141	0.403	98.947						
33	0.134	0.383	99.33						
34	0.122	0.348	99.678						
35	0.113	0.322	100						
Extraction M	Extraction Method: Principal Component Analysis.								

Given in the table 4, there are eigen value and extracted variance for each dimension and in total. According to the thresholds, first of all, eigen value must hold minimally 1 in order to accept a dimension as a meaningful cluster. Secondly, all dimensions in total must explain at least 50% of overall variance. It can be revealed from the table above that there are six dimensions which hold eigen value above 1. Secondly, all dimensions together, explained 73.635% of the overall variance. Hence, it can be concluded that question asked in this questionnaire are sufficient to explain minimum 50%.

**Table 5: Rotated component matrix** 

Rotated Component Matrix <sup>a</sup>										
	Compone	Component								
	1	2	3	4	5	6				
Price1			0.896							
Price2			0.909							
Price3			0.880							
Sec1	0.849									
Sec2	0.839									
Sec3	0.867									
Sec4	0.857									
Dur1	0.807									
Dur2	0.835									
Dur3	0.772									
Dur4	0.689									
Rel1	0.874									
Rel2	0.819									
Rel3	0.858									
Des1	0.864									

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Des2	0.853							
Des3	0.837							
Perf1	0.855							
Perf2	0.835							
Perf3	0.833							
Serv1		0.822						
Serv2		0.833						
Serv3		0.768						
Oil1		0.598						
Oil2		0.620						
Oil3		0.606						
MVal1						0.843		
MVal2						0.716		
MVal3						0.827		
PVal1					0.782			
PVal2					0.838			
PVal3					0.781			
Int1				0.748				
Int2				0.879				
Int3				0.816				
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 7 iterations.								
a. Rotation converged in 7 herations.								

Table above shows the clusters for each item under the concerning factor. Normally, eleven dimensions were planned while the questions have been developed. Besides, the analysis results show that there have been six dimensions extracted from the questionnaire. It was observed that reliability, safety, durability, and performance are one dimension. According to Garvin (1984) these dimensions are product quality constructs.

Table 6: Cronbach's Alpha for each dimension

	Reliability Statistics		
dimension	Cronbach's Alpha	N of Items	
price	0.894	3	
safety	0.942	4	
product quality	0.967	13	
serviceability	0.891	3	
oil consumption	0.915	3	
market value	0.763	3	
perceived value	0.778	3	
purchase intention	0.850	3	

Table above shows thee reliability analysis results. The analysis was conducted using Cronbach alpha methodology. For each dimension, Cronbach alpha was tested. It expected for each dimension Cronbach alpha would hold minimally 0.65 in order to consider the dimension as reliable. In this context, reliability can be defined as the same question will obtain as data in case they are asked to the same people in the same conditions. When the table is observed, it was seen that each dimension of the questionnaire held Cronbach alpha above 0.65. however, the dimension held value between 0.75 and 0.96. hence, it can be concluded that the questionnaire and the data are reliable enough to continue with the further analysis.

Table 7: Impact product quality on purchase intention

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	.085 <sup>a</sup>	0.007	0.006	1.26337			
a. Predi	ctors: (Constant), p	roduct_quali	ty				
Coeffic	Coefficients <sup>a</sup>						
		Unstandardized Coefficients		Standardized Coefficients			
Model		В	Std. Error	Beta	t	Sig.	
1	(Constant)	2.960	0.157		18.881	0.000	
	product_quality	0.088	0.041	0.085	2.138	0.033	
a. Deper	a. Dependent Variable: purchaes_intention						

Given in the Table 7, we tested the impact of product quality on the purchase intention. The results show that product quality explained 1% of the overall variance on the purchase intention. Secondly, it was that standardized coefficient value of quality on the value was 0.085. Further, this impact was significant as the purchase intention was less than 0.05.

Table 8: Impact oil consumption on purchase intention

rable of impact on consumption on purchase intention							
Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	.027 <sup>a</sup>	0.001	-0.001	1.26750			
a. Predi	ctors: (Constant), oi	l_consumption	on				
Coeffic	Coefficients <sup>a</sup>						
		Unstandardized Coefficients		Standardized Coefficients			
Model		В	Std. Error	Beta	t	Sig.	
1	(Constant)	3.179	0.152		20.927	0.000	
	oil_consumption	0.025	0.036	0.027	0.686	0.493	
a. Deper	a. Dependent Variable: purchaes_intention						

Given in the Table 8, we tested the impact of oil consumption on the purchase intention. The results show that oil consumption explained 0.1% of the overall variance on the purchase intention. Secondly, it was that standardized coefficient value of quality on the value was 0.027. Further, this impact was unsignificant as the purchase intention was more than 0.05.

Table 9: Impact price on purchase intention

		Tubic .	7. Impact price on po	ai chase intention		
Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.144 <sup>a</sup>	0.021	0.019	1.25473		
a. Predic	tors: (Constant),	price				
Coefficie	Coefficients <sup>a</sup>					
		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	4.107	0.233		17.624	0.000
	price	-0.167	0.046	-0.144	-3.645	0.000
a. Depen	a. Dependent Variable: purchaes_intention					

Given in the Table 9, we tested the impact of price on the purchase intention. The results show that price explained 2% of the overall variance on the purchase intention. Secondly, it was that standardized coefficient value of quality on the value was -0.144. Further, this impact was significant as the purchase intention was less than 0.05.

Table 10: Impact safety on purchase intention

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	.082ª	0.007	0.005	1.26372			
a. Predic	tors: (Constant	), safety					
Coefficie							
Unstandard		zed Coefficients	Standardized Coefficients	_			
Model		В	Std. Error	Beta	t	Sig.	
1	(Constant)	3.011	0.139		21.655	0.000	
	safety	0.075	0.036	0.082	2.054	0.040	
a. Dependent Variable: purchaes_intention							

Given in the Table 10, we tested the impact of safety on the purchase intention. The results show that safety explained 0.5% of the overall variance on the purchase intention. Secondly, it was that standardized coefficient value of quality on the value was 0.082. Further, this impact was significant as the purchase intention was less than 0.05.

Table 11: Impact serviceability on purchase intention

	1 4	DIC III	pact set viccubility	m purchase michigh			
Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	.256 <sup>a</sup>	0.066	0.064	1.22565			
a. Predictors	s: (Constant), ser	viceability					
Coefficients	Coefficients <sup>a</sup>						
		Unstandardized Coefficients		Standardized Coefficients			
Model		В	Std. Error	Beta	t	Sig.	
1	(Constant)	2.065	0.189		10.912	0.000	
	serviceability	0.275	0.041	0.256	6.632	0.000	
a. Dependen	a. Dependent Variable: purchaes_intention						

Given in the Table 11, we tested the impact of serviceability on the purchase intention. The results show that serviceability explained 6.4% of the overall variance on the purchase intention. Secondly, it was that standardized coefficient value of quality on the value was 0.256. Further, this impact was significant as the purchase intention was less than 0.05.

### **CONCLUSION**

There have been mainly five hypotheses in the current study which were; impact of product quality, serviceability, safety, price, and oil consumption on the purchase intention of a customer for a car brand. In this regard, the regression analysis was conducted to test each hypothesis.

Given in the results, it was observed that product quality had significant and positive impact on the purchase intention of customers. The result reveals that when the car has high performance, every car of the concerning brand is reliable enough, the car goes for long kms with no problem and being broken down, the intention of the customers is increasing to purchase this car. Based on this result, it can be suggested the car gallery owners to emphasize those aspects of the cars in order to convince customers to purchase a car.

Based on the result of second hypothesis which impact of oil consumption on the purchase intention. It observed that has insignificant impact on purchase intention. The result reveals that the importance of consuming oil by the people is not quite significant.

In terms of the third hypothesis which shows that the impact of price on purchase intention, which has significant and negative impact on purchase intention. As long as the price increases the purchase intention goes down vise versa is correct as well. As the result observed can be suggested the car gallery owners to decrease the price as much as they can in order to convince customers to buy and purchase a car.

The fourth hypothesis which says the impact of safety on the purchase intention. The result reveals that there is significant and positive impact on purchase intentions. As human being desires to have more safety life, safety life depends on the more safety car that people drive, which includes break, airbags and body.

The fifth hypothesis is to understand how the serviceability has impact on purchase intention, the result indicates that the serviceability has significant effect on purchase intention. Availability part of the car in the market, and

easy to fix any part that has been broken and having or finding an easy expert place that they can fix it very conveniently.

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