

Final Year Project Study Of Prototyping An Entrepreneurial Venture: A Multi-Purpose Micro Car Built By SMME. (Focusing On the Passenger Version of the Car)

MBA2k15

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1.0 INTRODUCTION

A Multi-Purpose Car which is an Entrepreneurial Venture developed by Consortium headed by SMME, NUST has two versions i.e. (a) Passenger Car and (b) Pick up (loader version). However, the scope of the following study focuses on 'pick-up' version. The product is currently in its developmental phase, soon to be ready to enter testing of prototype.

In order to commercialize this prototype, so the product can reach its end user, the researchers aims to study idea-product fit, marketing trends, competition and customer's expectations.

1.1 Scope

Scope of our project encompasses:

- To test the 'idea' by conducting
 - o Consumer Need analysis for New Product Development (NPD)
 - o And built a MARKETING PLAN that encompasses
 - Competitor analysis
 - Taxation & Govt. regulations
 - Financial aspect
 - Positioning
 - Branding
- Extensive market research (primary plus secondary) -Where secondary research will be in the form of industrial marketing automobile industry literature review.
- To find out the product fit in the automobile industry of the car understudy
- Aforementioned research would lead to aid in "Positioning the Product" where customer sees value in the product for exchange of money.
- Product costing, taxation rules and regulations will be studied to enable researchers
 crafting the right "Price" of the product with minimal tax, if not exempting
 completely from tax.
- Simultaneously, product feature, consumer requirements, and competition in the market will be taken in consideration in generating a "Marketing Plan" for the car.
- Also communication with spare parts' vendors and suppliers will be made in order to know the availability of spare parts in the market.

1.2 Objectives

- To establish the requirement of vehicle in Pakistan
- Conduct Consumer Need Analysis to test the Idea & Concept proposed by SMME engineers —An In-depth need analysis of product features & consumer requirements (Hisrich, Peters, Shepherd., 2005)
- Market research to develop technical costing and product commercialization plan

- To explore the proficiency of car mechanics and technicians and study the technical and mechanical aspect of the car in Pakistan
- Critical evaluation of the design and an assessment of the features that require modification/adaption according to Pakistani market
- Customer profiling to forecast potential buyers
- In-depth Car diagnosis by Car Mechanics & Technicians to
 - o Study Spare parts availability & economical alternatives
 - o evaluate what the design lacks and how to add more value to the design
- To study the macro environment that affect the automobile industry
- To determine approval/acceptance method of road worthiness i.e. road fitness and safety test

1.3 Research Methodology

As the heading dictate it's the process of finding information and results expected or a systematic approach towards doing any form of research work (Hamid 1996).

In this research the above objectives will be achieved and valuable findings and result will be churned out by the following steps:

- Discussion with supervisor, peers and folks for drafting the methodology for the research.
- The study conducted is an exploratory research which relies on secondary data.
 Secondary Research is carried out by reviewing the available literature acquired from
 - o Pakistan Automotive Manufacturing Association
 - o Research articles and Case studies by Howard
 - Case studies by prestigious business universities of Pakistan
- Primary research will be conducted by opting Qualitative approaches such as constructing a *questionnaire* (See Appendix-1) to test the need This questionnaire will be used to record the reaction of people to product features that the car possesses; an informal discussion with *focus groups* is done. The respondent group includes:
 - Marketers –for recognizing the right segment and crafting the right targeting strategy for it. Also, to understand the market dynamics for automobile industry to generate an appropriate marketing mix. And analyze the competitors functioning in the market.
 - *Technical experts* —to comprehend the mechanical aspect and other specifications of the car
 - Spare Parts' Vendors to know the availability and cost of spare parts

- *Potential Buyers* to understand the product preferences and hit the right segment. Also, to know competitive alternates of the potential buyers
- *Field Experts*—to get an expert review of the final product prototype available and what changes it may have to hit the selected target segment.

1.4 Limitations

Following are the limitations that were faced while conducting the project:

- Location: It is observed that the primary research was supposed to be done via mostly through focus groups therefore, Islamabad was chosen as it was convenient. The sample is taken from one city only which may provide biased results.
- Time Constraints: The car was on development stage and the project was supposed to be done within 3 and 4 months.
- Financial Constraints: The car is in development stage. The manufacturer is intended to make lot of changes in the car therefore, the costs would fluctuate accordingly.
- Unavailability of secondary data –No data was provided by SMME except the cost of Data material.
- Prototype could not get fully ready in the project's tenure due to which the scope of project was narrowed from 'commercialization' of the car to 'prototyping' only.

2.0 NEW PRODUCT DEVELOPMENT PROCESS:

Currently the plan is on the fourth step of the NPD process (fig1). To reach this point, we had to re-conduct need analysis in the idea stage and concept stage (fig2). For idea stage, need analysis was conducted by the method proposed by Robert D. Hisrich, Michael P. Peters and Dean A. Shepherd (2005) and further primary research for concept stage was carried out by following the learnings of Ford case (1999) written by Gigi Cothier, which suggests a thorough study of "need assessment of a car" by conducting focus group interviews.

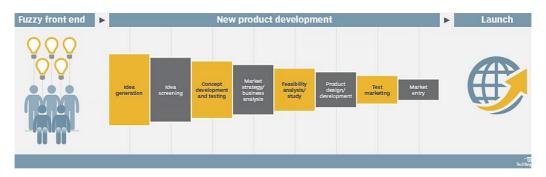


Figure 1: Product Development Process (Source: Marketing Richard Sandhu sen)

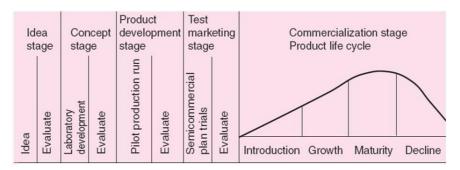


Figure 2: New Product Development Process & Lifecycle (Source: Marketing Management Paul Baines)

3.0 NEED ANALYSIS

First the product, in its *idea stage*, is analyzed (fig2). To gauge the marketability of the small car to consumers, an analytical technique is used to determine how the "idea" of the product i.e. car, addresses the needs of a human (Leo Sun, 2001). The section of need assessment aims to 'identify and evaluate needs' of the defined community or population. In order to find if the product fits to the need of any group, "identification of needs" is essential and defined as a 'process of describing "problems" of a target population and proposing possible solutions to these problems" (Allison L. Titcomb, 2000)

According to the entrepreneurial perspective of Robert D. Hisrich, Michael P. Peters and Dean A. Shepherd (2005), it is important to determine the need for new idea as well as its value to the market and company. If there's no need of the suggested product/service- no matter how advanced the technology is, how lucrative the idea seems - its development should not be continued.

To accurately determine the need for a new idea, it is helpful to keep these factors in consideration while defining the potential needs of the market. These factors are timing, satisfaction, alternatives, benefits and risks, future expectations, price versus product performance features, market structure and size, and economic conditions. A form for helping in this need determination process (Hisrich, Peters, Dean., (2005)) is indicated in the following table (1). The factors in this table should be evaluated not only in terms of the characteristics of the potential new product/services but also in terms of the strength of competitive capabilities. This comparison with current market's competitive products will indicate strengths and weaknesses of proposed idea of car. Each of these factors should be evaluated in terms of the characteristics of the new idea of car being considered and capabilities of present methods for satisfying the particular need. This analysis will indicate the extent of the opportunity available. The study suggests higher score in any of the two facets indicate if the new need should be catered or a company should stick to current competitive products in the market and abandon the new idea at the moment. The higher score of 'new product idea' depicts that opportunity for the new need exists.

attribute 1-5 to 5 being best	Competitive capabilities	New product idea capability
Type of Need		
continuing need		
declining need		
emerging need		
future need		
timing of need		
duration of need		
frequency of need		
competing ways to satisfy needs		
doing without		
using present away		
modifying present away		
perceived benefits/risks		
utility of customer		
appealing characteristics		
customer tastes & preferences		
buying motives		
consumption habits		
price vs. performance features		
price quantity relationships		
price vs. value		
market size & potential		
market growth		
market developments		
requirements		
threats to market		
Availability of customer funds general economic conditions		
-		
customer income		
financing opportunities		

Table 1Determining the Need for a New Product/Service Idea

The above form was filled by respondents with a chosen criteria that is mentioned in the methodology. A snapshot of excel sheet is attached in *Appendix-2*.

The result of above form revealed that "New Product Idea" has a higher score than "current competitive capabilities/alternatives" in the market. Results showed that idea of new product is an emerging need, product will be used frequently and has an ability to satisfy needs. Moreover, new product idea has a higher utility of customer but appearing characteristics are low. Customer tastes and preferences for a micro car are developed and seek basic features with an appealing outlook and utmost comfort. Therefore new product idea scored higher in 'prices v/s value' facet. Also, the consumer for 'motorbike' and local transport is high, which means the market has a great potential if prices plays a favorable role. Besides, availability of funds for such user is low, hence income is low and financing can play a pivotal role in gaining market share. These Respondents were considered prospective customers and hence a document of Customer profiling is attached herewith in *appendix-3*.

Furthermore, the Findings of focus group interviews that helped in segmentation and developing a marketing mix, and findings of the questionnaire survey are given in the passage below and the graphs are attached in *Appendix-4* as well.

3.1 Findings

Focus of our study was on the lower income group people aged between 20-30. Nonetheless focus group consisted of males than females wherein males were relatively bigger in number. Most of our focus group sample group have done intermediate, graduated class comes next, later comes people with primary education then comes people who do not have education and lastly, people with post-graduation. First group income level lies mostly in the range of Rs. 1000- Rs.29, 999. People with income level of Rs. 30,000- Rs.49, 999 come in the second number. Third group consist of students who are not earning and/or are totally dependent and fourth and last group are people with income level of more than Rs 50,000.

Most of these people have a family size of maximum 5 people. The family size of these groups is maximum 4 persons and/or then a person who lives independently

Married audience prefers hanging out with their families. Unmarried interviewee comes in second group and these people like to go out with their friends in free time. These people are willing to pay Rs 50,000 on 250 cc car. However it should be noted that many people who are willing to pay more than Rs 50,000 on a 250 cc car is according to their affordability and necessity.

Moreover lower class and middle class live from hand to mouth making it difficult to maintain living standards. Which makes affordability an issue for them. Hence, cannot afford much for

travelling and are dependent on bikes and other public transports which is very tough especially for people with children who are school going.

Even students who cannot afford a high class vehicle for their transport and are dependent on public transport are facing problems. When it comes to selecting a car, they consult their friends, print media and internet surfing for their selection. Large group of these people want to have a car for themselves (to go to their work), for shopping purposes and for their family members (for the purposes like pick up children from school, etc.). They need a car for daily usage or at least for using it thrice a week. But their financial level does not make it affordable for them. It is there basic necessities that dictate their preferences and crafts buying habits. These people see a car more as a transport tool than as a fashion item. While buying a car, their focus is mainly on fuel saving, they do not want a car with more power, space, and high technology or with fancy outlook but a simple car, which is fuel efficient, which can be used to carry out their daily activities and increase mobility with affordability. Thus they do not opt for a luxurious car, but a simple small car which can fulfill their purposes and which can be a better alternative than their current mode of transport.

Therefore, most of these people are willing to buy 250 cc car. Most of these people want to upgrade from bikes to car and are willing to pay 2 lac for moving from bike to car and their main reason for this upgrade is their family size. These are people with humble lifestyle, they don't need a car for a social status but as major transport tool so our proposed car with 250 cc engine would be able to serve these purposes.

For Further understanding, *refer* to Appendix 4. The results show the product features preferred as well.

4.0 COMPETITOR ANALYSIS

A brief Competitor Analysis is done keeping in view the target market and the USP of car i.e. economic value. Therefore, products/players are considered rival because of the price they are offering and the value such products provide against the price charged.

a) Primary Competitors

Bikes, Auto-Rickshaws or any closed vehicle with price ranging Rs. 120K – 200K are considered as the primary rivals. Also, there's a new auto-rickshaw by Sohrab which is closed from all sides like a car, is going to arrive in the market. But yet hasn't launched yet. (PakistanToday, June 4, 2017)

Name	Engine/Power	Price(Rs.)
Suzuki GS 150	150 cc	133,500
Honda CB 150 F	150 cc	159,000
Derbi ETX 150	150 cc	225,000
Derbi STX 150	150 cc	225,000
Road Prince Wego 150	150 cc	180,000
Road Prince Robinson 150	150 cc	200,000
Suzuki GD 1105	110 c	131,000
Suzuki GS 150 SE	150 cc	158,500
Yamaha YBR 125 G	125 cc	133,900
Sazgar Auto Rikshaw	200 cc	150,000
Sazgar Deluxe XL Mini Cab	200 cc	150,000
Sazgar Tempo Delivery Van	200 cc	150,000
Sazgar Deluxe 4 stroke mini cab	200 cc	150,000
Super Power Cng Rikshaw SP	200 cc	176,900
Super Power Double Shock 6 Seater	200 cc	176,900
Super Power RE 4S Cng	175 cc	176,900
Super Power front Engine SP200 4 Stroke	200 cc	177,000
Salaar Cargo loader rikshaw	200 cc	170,000
Electric Rikshaw	600 W	135,000
E-Rikshaw	650 W	135,000

Table 2: Primary Competitors

b) Secondary Competitors

Secondary Competitors are the ones with below 150cc engine and price up to 120K maximum.

Name	Engine	Price(RS.)
Honda CD 70	70 cc	63500
Honda CG 125 Dream	125 cc	196,400
Yamaha YBR 125 Z	125 cc	115,900
Unique UD 100	100 cc	85,500
Crown CR 125 Euro II	125 cc	69,500
Honda CD 70 Dream	70 cc	67,500
Metro MR 125	125 cc	76,500
Super Power SP 125	125 cc	75,000
Suzuki GD 110	110 cc	119,000
Metro Tez Raftar	98 cc	53,000
Suzuki Raider 110	110 cc	101,400
Suzuki Sprinter ECO	109 cc	98,400
Unique UD 125	125 cc	75,500
United US Euro II	125 cc	68,500
ZXMCO ZX 125 Stallion	125 cc	75,000
Ravi Piaggo	125 cc	85,000

Table 3: Secondary Competitors

5.0 SEGMENTATION

Michael P. Peters, Robert D. Hisrich (2005) declared that a firm or an entrepreneur should have a good idea of who the customer of the proposed product would be, either from the industry analysis or from the marketing research done prior to manufacturing a product. Unlike the ideal situation, this case established an idea prior to market research and hence figuring out the market essentials later.

Knowledge of the target market provides a basis for determining the appropriate marketing action strategy that effectively meets its need. The defined market will usually represent one or more segments of the entire market. Which is why it is imperative even before beginning the research to understand the market segmentation before determining or pitching the target market.

According to market researchers, Market Segmentation divides the market into small homogenous groups and allows the entrepreneur to more effectively respond to the needs of more homogenous consumers. Otherwise the entrepreneur would have to identify a product or service that meets the needs of everyone in the marketplace. (Hisrich, 2005)

According to the studies of Kotler (2007), Michael P. Peters (2005), Dean A. Shepherd (2005), this case has followed the process of segmentation and targeting customers by the following steps:

- 1- Defining the general market or industry you wish to pursue
- 2- Dividing the market into smaller groups based on characteristics of the customer or buying situations.
 - A) Characteristics of the customer:
 - Geographic (state, country, origin)

- Demographic (age, gender, occupation, education, income and race)
- Psychographic (personality & lifestyle)

B) Buying Situation

- Desired benefits (product features, expected value)
- Usage (rate of use)
- Buying conditions (time available &product purpose)
- Awareness of buying intensions (familiarity of product &willingness to buy)

All of these variables were considered while interviewing the focus group and establishing a questionnaire for a more detailed survey.

- 3- Select segment or Segments to target
- 4- Develop a marketing mix that aligns with the need of defined segments.
 - (Entrepreneurship. Robert D. Hisrich., Michael P. Porters., Dean A. Shepherds., 2005)

Based on the findings of focus group interviews and need assessment survey, below are the segments that emerged. The two segments that seem to have a greater potential i.e. (1 &2) will be targeted

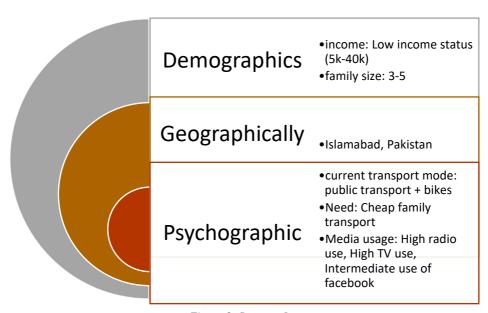


Figure 3: Segment-I

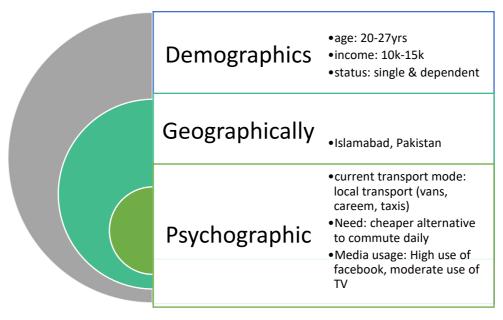


Figure 4: Segment - II

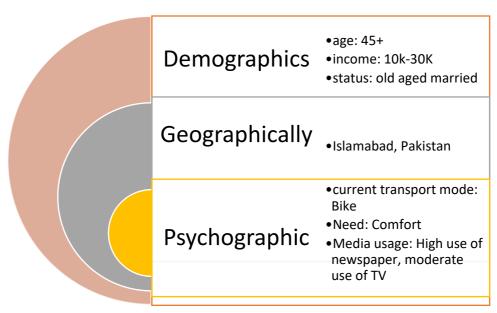


Figure 5: Segment -III

6.0 MARKETING MIX

The widely accepted 4P classification of "marketing mix" tools offer managers a simple framework of organizing marketing decision subjects around possible actions, and judgments on the objectives, interactions, and restrictions of a range of available tools for accomplishing marketing and business goals (Richard J. Varey). Instead of limiting the scope of marketing communication to a set of promotional activities defined in the 4th P of the mix, the post-modern marketing concept suggests to take "marketing mix as merely a tool for marketing communications" (Belch & Belch) (Grönroos, 1994; Constantinides, 2002; Goi, 2005; Möller, 2006).

Therefore, as Norton Paley puts it, "Marketing Communication is the big picture that a post-modern marketer should look for, while marketing mix is just a brush that you can paint the picture with" (N. Paley)

Here, in this section, Marketing of the car is defined to facilitate the exchange process and the development of relationships by

- examining the needs and wants of consumers (Need Analysis),
- developing a product or service that satisfies these need (recommending changes in the current product),
- offering it at a certain price that potential customers agree to buy it at,
- making it available through a place or channel of distribution
- and developing a program of promotion or communication to create awareness & interest

These four Ps—product, price, place (distribution), and promotion—are elements of the marketing mix. The basic agenda of marketing is combining these four elements into an effective marketing program to provide value to customers and capture value (\$) in return (Kotler, 1999).

The Pakistani market is analyzed through consumer research, and the resulting information is used to develop an overall marketing strategy and mix. (Belch & Belch). Each element of the Marketing Mix for the above mentioned two segments are explicitly discussed below:

6.1 Product

According to E. Jerome McCarthy (1960), A Product is an item that is built or produced to satisfy the needs of a certain group of people. The product can be tangible or intangible in case it is in the form of services.

In this case, the product that is proposed to launch in the market is a "micro 250cc Car" developed by SMME-NUST. As

marketers, the aim of this report is to have the right type of product that is in demand for the target market. So, during the product developmental phase, an extensive research is done to determine the product features that target market demands, product aspects that hold importance for the customer when willing to spend for such an economic alternative.

The market research done to identify 'need' concludes that there is a need for "car", an alternative to bike due to climate nuisance in recent times, is needed which is lightweight, extremely economic, environmental friendly, highly fuel efficient and provides a solution for traffic congestion. BEE has been designed taking into consideration the issues involved in intercity transportation. However, it is premature to conclude on its safety in the absence of 'prototype crash testing'. It is highly suggested to the manufacturer to test the prototype, do the validate learning and re-test till the BEE gets perfect to run on the road.

In efforts to generate a right product mix, it may be wise to expand the current product mix by diversifying and increasing the depth of the current product line C.L. Goi 2009). Furthermore, the fundamental benefit of the car, the basic value that it provides, and additional benefits that the car offers will be provided in the form of 'product levels' introduced by Philip Kotler (1999)

6.1.1 Product Level Classification

The basic version of product levels includes the core benefit, the basic product and the augmented product (C.L. Goi 2009). The levels according to the car's model are described below:

6.1.1.1 Core benefit:

Figure 6: Product Level Classification (Source: Principles of Marketing by Kotler)

It is the fundamental product, the functional benefit that the product offers. The focus is on the purpose for which the product is intended (C.L. Goi 2009). The benefit the customer is really paying for in order to fulfil the basic need (Sangeeta Debnath, 2004). In the case of car, the basic need it fulfils and the core benefit it provides it to 'transportation from one place to another'

6.1.1.2 Basic/Actual Product:

The marketer turns the core benefit into a basic product (P. Kotler, 1999). This defines the features of the car that makes the customer comprehend the major value proposition it offers (S. Debnath, 2004). In this case, the basic product that tends to fulfil above mentioned need of transportation is a four-wheel 250cc closed micro-car with weight less than 450kg. Furthermore, Actual product level comprises of the product attributes, quality, outlook, styling, design, brand name, and packaging (Kotler & Armstrong, 2009).

	Quick Facts
Brand Name	Bee
L/W/H	2.6m/ 1.3m/ 1.6m
Turning Circle	7m
Kerb Weight	400kg
Engine	250cc, petrol
Gearbox	5-speed; Manual
Top Speed	80kmph
Design & Style	Micro, Compact Size & contemporary
Colors	yellow, green, red, blue, black, white
Capacity	4 people
Mileage	20kmph
CO2 emission	Halves CO2 emission to 60gm/km
Steer	Regular – No Power Steering
Distribution	Direct Distribution – Rwp, Isb, Lhr
Windows	Plastic roll-ups –reduces weight & cost
Luggage-Space	Cabin in nose, Bins in doors
Spare parts	100% localized & easily available + Warranty of 1yr.
Comfort	Air sofa-come-bed in the rear seat for sheer comfort
Ventilation	Sunroof – (No Air-con)

Product Attributes

Product Attributes of BEE were specified by different engineers, local mechanics and technicians during its development. However, the final car diagnosis was done by a certified car mechanic expert of Dewan Motors, isb. The 250cc car is built through reverse engineering method. The design of Mehran has been used as a benchmark for its development because of its easily available spare parts in the country.

The specifications of the car in current version developed by SMME engineers are given below in contrast to improvements suggested by experts:

Current Version by SMME

- The **body** of the car is made of metal reinforced fiber glass. It has a compact design with width of around 1.3 m and 2.5m.
- It is a two-doored coupe car with a maximum capacity of four people.
- It has 250 cc engine capacity and a maximum speed of 80/km.
- Standard Hydraulic brakes have been installed effective uptil 70 Km/Hr and braking distance of 5 meter.
- The car has frontal lower air drag and main chassis is non-collapsible.
- Safety features include seat belt for all passengers, a column frame body and anti-roll frame.
- The car seeks to be environmental friendly with low emission levels.
- A heater has also been incorporated for winter which will work through exhaust gases. However, Air conditioner is optional.
- The battery and gears are fine. The spare parts of Mehran and other Japanese parts are readily available.
- They have front wheel real brakes. The disc brakes are most efficient ones for front and drum at the rear.

Improvements in BEE

After the detailed monitoring diagnose of the car the specialist, from Dewan motors suggested some useful recommendations:

- Engine compartment must be constricted. The frame must be strong and of good quality. Since the car size is small therefore, it is more prone to accidents. Hence, the specialist suggest that the passenger shall remain safe only if the car's weight is less and smooth.
- **Tyres** width must be small and area of mount must be strong. The Japanese tyres are highly recommended. They are less expensive and are widely available in the market.
- It is observed by the specialist that 20% increase in cost is expected after improving its structure and frame.
- The suspension test was conducted and independent suspension is recommended.
 This will help in avoiding the chances of collapsed and will make the car smooth and light weighted.
- **Electric Air** conditioned can be used and engine driven A/c's should be avoided. The conversion would increase cost up to Rs. 60,000.
- Fuel efficiency. It is highly recommended by the specialist that Electronic Fuel Injection system needs to be changed. Semi- EFI needs to install as it is also used by Mehran.
- The reduction of the car's weight would make steering soft and loose automatically. There is no need for power steering as it will increase the cost up to Rs.6000-8000.

- The idea of sun roof was proposed by the specialist. Hands and fixed sun roof to make it more graceful and attractive.
- The specialist recommended air sofa. He also suggested to have spring seats that would raise comfort level.
- The gears of scooty is highly recommended as it is easily available.
- The company should also work on its electric variant. It can be converted into electric car. As in 2020 electric cars will be more popular. The expected cost increase will be 80-90k.

6.1.1.3 Augmented product:

This refers to all the additional factors which set the product apart from competition i.e. brand identity and image. It also incorporates wants beyond expectations-best after sales service even though not required (S. Debnath, 2004). According to Kotler (2009), (Grönroos, 1994; Constantinides, 2002; Goi, 2005; Möller, 2006), the augmented product level makes the product exceeds customer's expectations. Competition usually takes place in this level, for which customer may or may not pay a premium, Customers consider the value they receive from a vendor after sales support, warranty, promise of free delivery or installation. (Kotler & Armstrong, 2009).

So in case of BEE, part of the augmented product would be:

- Warranty of 1yr for spare parts and in case any defect that emerges
- the customer service support offered by the car's manufacturer
- After sales service.
- Financing- provision of car on leasing. Installment packages of 5k-10k per month for 2years and so.

6.2 Pricing

Price is the amount the consumer must exchange to receive the offering (Solomon, 2009). Especially for third-world countries, the struggle for market share among competitors focuses critically on price (C.L. Goi 2009). Pricing strategies of competing firms are highly interdependent; the price one competitor sets is a function not only of what the market will pay but also what the other firms will charge. Prices set by individual firms respond to those of competitors but may also be intended to influence their pricing behavior. All of the marketing comes to focus in the pricing decision (E. Raymond Corey., HBS 1990)

The choice of pricing model depends largely on the nature of the product or service being sold and on buyer preferences. (E. R. Corey., 1990). Several pricing models have been proposed by marketing practitioners to choose the right pricing strategy which are listed below¹ (Mark Acutt, 2012., Kotler & Armstrong, 2009., Lutz, 1997).

- Cost-based pricing Strategy
- Competition based pricing strategy
- Demand-based pricing strategy
- Penetration pricing
- Skimming Pricing
- Promotional Pricing
- Neutral pricing

BEE's goal in terms of price is to reduce the costs through improving manufacturing and efficiency, while increasing its perceived value to the potential buyer of the target segment. Moreover, BEE's ultimate goal is to tap the segment which has low purchasing power.

Thus, it has to keep the prices as minimum as possible while squeezing lucrative profits out of it (E. Raymond Corey., HBS 1990)

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¹ For Details of the other pricing strategies, Refer to Appendix-5

The structure of commercial price of BEE is:

Price of car = Buying price + New registration of vehicle+ Income tax on registration + leasing cost+ withholding tax

- $= 200,000 + 2000^2 + 7500^3 + 6000^4 + 10,000^5$
- = PKR 220,000 approx. on road.

With car on road for PKR 220K, BEE's opting Penetration pricing considering bikes, autorickshaws, Japanese cars and Suzuki alto and mehran as rivals. BEE's price is set between bikes and the 660cc car available in the market.

6.2.1 Penetration Pricing

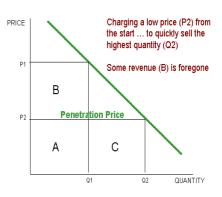
Such strategy suggests firms to take a very basic, minimal, low-cost approach to marketing –nothing fancy, just the bare minimum to keep prices low and attract a specific segment of the market that is price sensitive (E. R. Corey.,1990). When the quality of the product is high and price is low, this strategy is opted in order to capture market share by increasing sales volume



Figure 7: Pricing Strategies

so that a firm may reach its break-even earlier (fig.2) - (Mark Acutt, 2012)

With penetration pricing, the price of a new product, in this case BEE, is set at a price lower than the competitors' market price to quickly achieve a high volume of sales. This sort of strategy is not aimed at the luxury market at all. It is opted to cut-costs. Price of BEE is kept low such that it appeals to a broader range of people, low income families, or those for whom price is a major concern in their buying decision i.e. the target market of BEE. This way the profits would be shrunken



Graph 1: Penetration Pricing

at first for a period. But this sort of pricing can be viable in order to get more people buy the

² 1% of vehicle's original price

³ Tax memorandum 2017

⁴ 3% of selling price i.e. 200K

⁵ Tax memorandum 2017

car, increase sales volume since more people equals more money, hence profits are received with greater number of units sold (fig 3) (Anthony Presotto, 2011)

Kotler (2009) further proposes 9-pricing strategies which are exhibited in matrix with price and quality continuums on x-axis and y-axis. BEE lies in middle on quality continuum and low on price continuum. This proves BEE offering a 'good value' for less price.

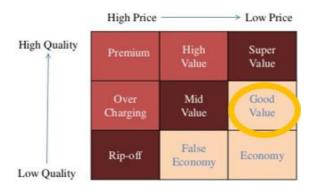


Figure 8: Porter's 9-strategies

Moreover, BEE's penetration pricing is chosen by keeping in view the demand-based pricing strategy.

BEE sets up its price after analyzing consumer desires and determines the range of prices acceptable to the target market. The need analysis revealed that the consumer who seek to buy a low cc engine i.e. 250cc is low income segment who would like to switch its current transport medium which is probably bike or local transport. It was found that the purchasing power of this segment is very weak. (Chong, 2003)

6.3 Promotion

Marketing communication has a pervasive, of particular messages inescapable presence in our day-to-day consciousness. Consumers can find meaning in almost any publicly accessible information about corporations, products, people, etc. All elements of the 'marketing mix' are (at least potentially) communicative. (Belch & Belch., R. J Varey). 'Promotion comprises of all the activities marketers undertake to inform consumers about their product and to encourage potential customers to buy these product' (Solomon, 2009)

BEE's promotion is proposed to be done by all the tools available to the marketer for marketing communications as suggested by Belch & Belch (2002). The tools for integrated marketing communication represents the essence of promotional mix of BEE. Whilst there is no absolute

agreement on specific mix for communication (Neil H. Borden), there are many components of promotions mix which are as follows:

- Sales promotion
- Advertising
- Sales force
- Public Relations
- Direct marketing
- Sponsorships
- User Trials- Experiential Marketing

The BEE car aims to pitch itself as first Pakistani people's most economical car and provides a 'good value' for money. Therefore pitches itself with lines like:

- Bee Pakistani, Buy Pakistani'-

BEE on its initial stage has stepped up for media class: newspaper and brochures for print ads , radio commercials in the Adverts' category, Video commercials on digital platforms like Facebook and YouTube and event sponsorships in game prize shows like Jeeto Pakistan, retail merchandising, Point-of-purchase display units and user trials for below-the-line promotion strategy.

The content of these promotions will be explained in the "branding" section of BEE, however the tools for communication of BEE in the market are summarized below.

Since the 'need analysis and customer profiling' done above, revealed that potential customers use print mediums and radio more than Digital mediums therefore BEE is tended to be promoted at such medium to reach the target customer. Also, one of the target segments is not very literate, so the print ads content would be in local language for Urdu newspapers, and most of the brochures too (L. Paul Dana, 1997., Meera M. Sunny, Veena Rajagopal., 2008) . However, the brochures will be targeted to both segments with less words and more visuals.

Moreover, BEE is going to be displayed at various malls where mid-low income footfall is high. As per personal observation, people from these income levels and social statuses visit these malls for rather 'entertainment' than 'shopping'. They take pictures around the mall for enjoying and 'aspired status'. BEE tends to target the segment by engaging them in different

activities happening at the mall intercepts. These activities would help engaging the customer and making up his mind to realize the problem and 'need' of a family car or a car for daily commuting purpose. Also, brand beliefs would be shaped. (Belch & Belch, Varey, Mitchell & Olson, 1989)

BEE aims to offer test drives to bikers and general public at point of purchase. Test marketing provides an experience to the potential customer without actually buying the product. And he builds a perception of the product without buying. Their feedback and reviews can help improving and disseminating word of mouth which is itself a very strong tool for marketing communication. (Borden, N.H, 2001)

6.4 Placement

Placement includes company activities that make the product available to target consumers (Kotler & Armstrong, 2010). It is considered as a mechanism through which goods and/or services are moved to the end user or consumer. Placement unfold details about channel, distribution or intermediaries. The competitive edge for companies lies in the process to make the product easily available to the customer. More the ease in distribution channel, more the value for customer. The placement strategies that explain the intensity of channel coverage are as follows⁶:

- Direct Distribution
- Intensive distribution
- Exclusive distribution
- Selective distribution
- Franchising

BEE plans penetrate through urban market and rural market eventually as well. Its aim is to have a simple channel distribution rather than a rigorous complex way to make the product available at different established retailers or vendors in the target cities. The company plans to manufacture the BEE car at first, take orders at its own retail outlets (one Lahr & Isb) and website, and deliver the car the smoothly at customer's door. This way, a swift and smooth channel of distribution is established. The financial analysis incorporate BEE's logistics' cost to compute breakeven

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 $^{^6}$ For further understanding on Distribution strategies, Refer to Appendix – 6

Website is available for the segment that is literate enough to use internet and Cash on delivery would be offered, whereas for the low-income group, small retail outlets will be established in each of the 2 cities in order to make the car BEE accessible to its target group.

From the above channel strategies, Bee's distribution channel is more likely following direct distribution, that it manufactures the car and retails it itself. Direct Distribution provides an advantage of swift streamlined channel distribution with no or negligible intermediaries in between.

7.0 POSITIONING

7.1 Perceptual Mapping

Perceptual mapping is a marketing technique that is used to compare different brands across two or more dimensions. (M. Krawcyzk, 2002).

The small car aims to enter the following market and position itself as the most economical car of the industry with swift movement at times of congested traffic, hence replace a two-wheeler that does not provide the comfort of a journey under shelter.



Figure 9: Perceptual Mapping

8.0 VALUE CHAIN ANALYSIS

Following is the overview of value chain of the Car-BEE w.r.t. the automobile industry's value chain. Discrepancies in the primary activities and support activities between the Bee's value

SUPPORTING ACTIVITIES



PRIMARY ACTIVITIES

chain and automobile industry's value chain are highlighted, if any.

Figure 10: Value Chain Activities

8.1 Primary Activities

8.1.1 Inbound logistics

This is the first step in the line of production. At the first step raw materials are received from the suppliers. It comprises of goods received from company suppliers. Its inputs normally comprise of Piston, Engine Values, Gaskets, Camshafts, Shock absorbers, Struts, Steering mechanism, Cylinder head, Wheel hubs, Brake drums, Wheels, Bumpers as well as Auto conditioners (Sturgeon, T.J., 2001)

It is also observed that the Pakistan is at tier three of suppliers. It clearly states that we do not supply directly to the OEMs. The manufacturing company of BEE believes in good relationship with its suppliers. The company also buys in bulk from its suppliers and able to achieve advantage of economies of scales.

In this stage, the raw materials are received from the suppliers and distributed among the manufacturing units as per the requirement. The remaining raw material is stocked in the warehouses for later use. (J Humphrey, O Memedovic, 2003).

8.1.2 Operations

This is the second stage that covers the main production stage. However, it can be divided into several parts from the chassis to the final vehicle. Operation is basically the process of converting the raw materials into the product. (R Kaplinsky, M Morris, 2001)

- Repairing and Maintenance
- Labor
- Marketing
- Distribution/supply logistics
- Customer services
- Finance

8.1.3 Outbound Logistics

"It is the process of the final goods being moved out of the manufacturing units to the retailers. Several of the auto makers have their own showrooms and several operate through franchisees" (J Humphrey, O Memedovic, 2003).

Bee's distribution channel is more likely following direct distribution, that it manufactures the car and retails it itself. The car will then be distributed either to its own car show rooms in specifically in Islamabad, Rawalpindi and Lahore. It has simple channel distribution rather than complex distribution.

Also, the simple channel distribution incorporates the order taking process through website for the segment that uses internet and cash on delivery service will be provided after filling up a security form over the website portal. The other segment can visit the retail outlets directly. (R Kaplinsky, M Morris, 2001)

8.1.4 Marketing and sales

"Marketing is a very critical part down the value chain of the vehicle producing companies. This part includes promotions, advertising, distribution, sales force management, customer relationship management etc." (J Humphrey, O Memedovic, 2003).

For, Bee, at this stage the company's aim is to ensure that the product reaches the targeted consumer segment and that the target market is made aware of product features and advantages. The focus of marketing is also to drive up sales and profitability. (Sturgeon, T.J., 2001)

The manufacturing company of BEE will have to spend a lot on advertising and marketing of their brands through the traditional and the online channels due to the increased competition in this field. The channels used for advertising are online marketing and traditional marketing

Communication channels can be:

- Newspaper Advertisements
- TV Commercials
- Social Media Marketing
- Demo Cars
- Exclusive Showrooms
- Website

8.1.5 Services

It is the final activity down the value chain that adds value to the product. It includes customer support after the sale of the product (Sturgeon, T.J., 2001). After the product has been sold, the customers are provided continued support regarding the maintenance of their vehicles. (R Kaplinsky, M Morris, 2001). Support activities also ensure customer retention. The better the customer support of BEE, the better will be its brand image and the higher its number of retained customers. It also has a website that carries out customer service and bank transfer is also offered. The availability of right spares at the right time is also ensured. BEE is basically offering 3s services that includes support, service and spare.

- Final Checking
- Complaint Handling
- On-call Services

8.2 Support Activities:

Support activities that support primary activities are:

- a) Infrastructure: This activity includes corporate and strategic planning, Manufacturing plants, Machineries, etc. (Sturgeon, T.J., 2001). Infrastructure includes warehouses for stock inventory, office setups and workshops. Warehouses are located in Rawalpindi, Islamabad and Lahore. Our office setups have customer support service and market and finance personal.
- b) *Human resource management:* Employees are an expensive and vital resource. It manages recruitment and selection, training and development, & rewards and remuneration. For e.g. Toyota motors consider their employees as human capital. (Sturgeon, T.J., 2001). Their human resource includes sales people, finance personal, marketing personal, indirect and direct manufacturing labor (supervisors at plants and labor that converts inputs into outputs.

- c) Research and Development: Important sources of competitive advantage. Companies need to innovate to reduce costs and to protect and sustain competitive advantage. (R Kaplinsky, M Morris ,2001) Design and branding of Bee is done by Nust Business School (NBS) and it is based on market demand. The idea and concept of Bee is given by School of Mechanical and Manufacturing Engineering (SMME). Its safety and crash testing is yet to be done.
- d) Procurement: This function is responsible for all purchasing of goods, services and materials. Aim is to secure the lowest possible price for the purchases of the highest possible quality (J Humphrey, O Memedovic, 2003). It includes suppliers and vendors of spare parts and distribution market. Our vendors include Habib Rafique Pvt and Milo Tractors. Distribution market includes show rooms.

8.3 Competitive Advantage

The major achievement for any firm to gain competitive edge by providing value in the channel distribution or between any activities in the value chain. (J Humphrey, O Memedovic, 2003).

Cost Advantage

Cost advantage can be gained by

- Developing international contacts. The company has cost advantage currently by using local parts for the vehicle but it can get even more if they go for globalization and get cheaper parts from other countries (where currency is depreciated).
- Develop efficient Assembly Line

Differentiation

- Fuel efficient car
- Easy mobility
- Easy to park
- Easily carried at noisy roads.

9.0 PRICE REGULATIONS AND GOVERNMENT POLICIES ASSOCIATED

a) Government Policies

New government policy (Automotive Development Policy 2016-2021) has given incentives to the new entrants. According to the new policy, it is allowed to have one time duty free import of a plant and machinery that is required to set up a manufacturing facility. Import of the 100 vehicles of the proposed model variant in the form of completely built units (CBUs) at 50% is also allowed.

b) New Registration regulations

The motor vehicles ordinance 1958 along with income tax ordinance gives these values below for taxes on motor vehicles: The following criteria is used based on the types of cars.

Category	Rates
Up to 1000CC	1% of the value of the vehicles
Exceeding 1000cc but not more than 1500 CC	2%
Exceeding 1500cc but not more than 2000cc	3%
Exceeding 2000cc	4%
Motor cycle/scooter, tractors, trucks, buses,	1%
rickshaw, taxies	

Table 5: New Registration Charges for Motor vehicles

c) Withholding Tax for New Registration cars:

Engine capacity	Non-filers	Filers
Up to 850 cc	10000	10,000
851cc to 1000 cc	20,000	25,000
1001 cc to 1300	30,000	40,000
1301 to 1600	50,000	10,000

Table 6: Withholding Tax for new registration cars

9.1 Income Tax Regulations applied on the car - BEE

The Income Tax Ordinance clearly depicts the rates of taxes imposed on the buyer of a new auto vehicle. The following taxes are levied on the purchaser of the new motor vehicles.

Tax on registration	1% of the value of the vehicles
Rate of withholding tax	Up to 850 CC for filers and non-filers are Rs. 10,000
Rates on token tax	Up to 1000 CC for filers is 10,000 and non-filers RS. 7500
Leasing cost rate	The non-filer pays 3% of the value of motor vehicle

Table 7: Govt. Tax regulations applied on BEE- summary

Since our car falls below 660 CC category therefore it is assumed that the company is a non-filer and the car it falls under the above mentioned category which is defined by the motor vehicle Act 1958 and also income tax ordinance 2001.

10.0 BRANDING

Lately, Branding personality as a branding construct has received considerable interest, which has led to a significant effort to develop tools to measure the personality of brands (Melike Demirbag Kaplan, oznur Yurt, Burcu Guneri, Kemal kurtulus, 2008). Branding is now widely acknowlwedged as a potent tool for firms to use their advantage in achieving competitive strength in the market, as it generates value both for the producer and consumers (Keller, 2003). The strategic power of brands has triggered plethora of studies in this field and has enriched branding with various concepts like brand image, brand identity and brand personality (Aaker, 1996. Carpenter, 1994., Kapferer, 1992. Upshaw, 1995).

This report explains the applicability of branding concepts on the micro-car i.e. BEE. The report entails discussing point of parity and differentiation, branding the car with a name and logo and the rationale behind it, constructing a brand image and design brand activities for the car.

According to study of Biel (1997), brand personality is related to brand image as it necessarily grasps the emotional side of the brand personality construct. Therefore, only the brand image of BEE will be built through various promotional activities.

Moreover studies reveal that consumers have a high preference of brands that they perceive to possess a personality that reflects their self-identity or a slice of their life. This preference is given due to the fact that the personality traits associated with a brand provides 'consumers expression of their actual or ideal dimensions of themselves or their lives. (M.D Kaplan., O. Yurt, B. Guneri, K. Kurtulus., 2008.; Plummer, 1985., Belk, 1988., Sirgy, 1982). Furthermore,

potential customers are unconsciously tempted towards the products where brand has a

reflection of their own personalities or lives (Schiffman & Kanuk, 2004)

The literature suggests that brand image is rooted in hard and soft associations evoked by

product attributes, where hard associations refer to tangible properties (e.g. functional or

physical) while the soft associations refer to intangible properties (Biel, 1992; M.D Kaplan., O.

Yurt, B. Guneri, K. Kurtulus., 2008)

The car has been linked to softer image while utilizing the concept of brand associations.

Brand name: Bee

Reasoning with brand association:

1. Bee is adaptable to all weather and Bee –the car, does the same. It's provides a solution

to climate nuisances in recent times as compared to its current market rivals bikes,

cycles, auto-rickshaws etc. (Temnov, V.A., 1944. Bee world)

2. Bees are defensive, so is the Bee car. (Gong, Y.F., 1983) It is defensive in terms of

road safety and stability. It has an independent suspension which helps reducing the

chances of crash and collapse plus it makes the car smooth and flexible (conclusion of

suspension test)

3. Moreover with a smaller body, bees perform more efficiently (Temnov, V.A., 1944).

The Bee car does the same with better fuel economy i.e. mileage of 50kmph that no

bike provides, and it possesses a lighter bodyweight of 400kg as compared to that of

rivals i.e. Suzuki mehran, alto etc.

4. Furthermore, like a bee makes its way through the crowd, micro-size of the Bee car

easily gets through the congested paths and traffic congestion

Bees are environmental friendly and instead of harming, they give back honey to the

society which is a source of many health benefits (Vaughan, Shepherd, M., Kremen,

C. and Black, S.H., 2007). In a similar fashion, Bee –the car is environmental friendly

and reduces it carbon emission to 60gms/km which is half to what the rivals emit.

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10.1 Brand Mantras:

Keeping the above literature in consideration, BEE has been branded with an underlying notion of people's car and its brand image has been tried to develop through various campaigns depicting various slices of life of the target segments. The following brand image and activities will elucidate the associations that brand has tried to make above.

10.1.1 Catchphrases:

Catchphrases for the brand BEE and the logic behind them is given below:

- Bee Powerful
- Bee Efficient
- Bee Fast
- Bee –part of a local tale
- Pakistan's first people's car –Join the buzz!

10.1.2 Strapline/Slogan:

--Bee Pakistani, Buy Pakistani--

Across a bend, past a cattle heard in the passenger seat, my Bee takes me places.....

10.1.3 Points of Differentiation:

POD are decided by comparing the Bee to its competitors i.e. bikes, small cars, autos etc.

- Price
- Hassle-free, swift driving through traffic congestion
- Mileage 20kmph
- Size

10.1.4 Target Audience

Demographics

- income: Low income status (5k-40k)
- family size: 3-5

Geographically

• Islamabad, Pakistan

Psychographic

- current transport mode: public transport + bikes
- Need: Cheap family transport
- Media usage: High radio use, High TV use, Intermediate use of Facebook

Demographics

- age: 20-27yrs
- income: 10k-15k
- status: single & dependent

Geographically

• Islamabad, Pakistan

Psychographic

- current transport mode: local transport (vans, careem, taxis)
- Need: cheaper alternative to commute daily
- Media usage: High use of Facebook, moderate use of TV

10.1.4 Ideas for print Ads:

1. For some, the little things mean the most.

[A family, 2 parents and 3 kids, on a bike ...shifted to the Bee due to capacity and affordability]

2. Little things make the big things happen.

[A newlywed couple standing next to the Bee, later the car occupied with little kids]

[A student in his graduation cape holding a degree talks, First car that my dad bought me was BEE –that helped him commute daily to uni]

- ⇒ Creating an image by tapping the emotional appeal.
- ⇒ Triggering the need for achievement (nAch) –(David McClelland, 1960., Maslow, 1943)

3. Little things, make big days memorable. (Isabel Marant)

[A family of 5, saying "today when we attend a relatives' wedding, we go with prestige. On our bike, when we travelled from the village...usually our makeup and clothes got dirty. With Bee, we don't feel that way... Thank you Bee ©]

- ⇒ Creating an image by triggering the need for social status–(D. McClelland, 1960; Maslow, 1943)
- ⇒ Tapping emotional appeal

4. it's the little things that makes life wonderful...

[A low-middle class woman who works and helps her husband to make both ends meet. Every day she goes by a congested bus loaded with people. On anniversary, before she wakes up, husband makes a breakfast for her and leaves the key of BEE on the table beside breakfast]

- ⇒ Tapping the emotional appeal
- ⇔ Creating an image by triggering the need for affiliation & affection. –(David McClelland, 1960, Maslow, 1943)

5. Sometimes the smallest things make up the most room in your heart -Winnie the pooh

[A low-middle class woman who works and helps her husband to make both ends meet. Every day she goes by a congested bus loaded with people. On anniversary, before she wakes up, husband makes a breakfast for her and leaves the key of BEE on the table beside breakfast]

- ⇒ Tapping the emotional appeal
- ⇒ Creating an image by triggering the need for affiliation & affection. –(David McClelland, 1960; Maslow, 1943)

6. Transition of images of people having accidents on bike... ending up with a line "It's always the balance in life that comes with 4-wheels" – Bee Safe.

=> creating an image by triggering the need for safety. – (Maslow, 1943)

7. Fueling a cleaner environment of Pakistan:

[BEE emits low carbon emission than its rivals. Bee as the lungs of cleaner environment- now you can contribute to make Pakistan breathe clean air.]

8. Bee Car greenhouse gas emissions are less when compare to emissions of a cow.

[-Research reveals that cow emissions are more damaging to planet than CO2 from a car that emits emissions less than 65gm/km. A UN report (2006) reveals that world's rapidly growing herds of cattle as the greatest threat to the climate, forest and wildlife]

11.0 FINANCIAL ANALYSIS

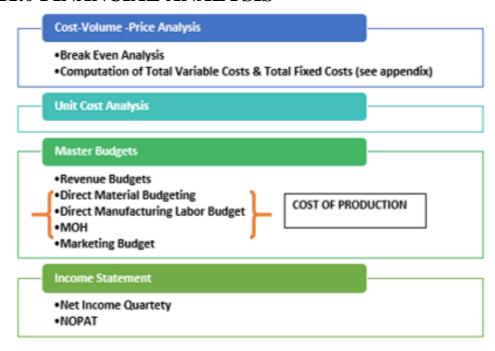


Figure 11: Financial Analysis - Summarized

11.1 Breakeven Analysis

The breakeven Analysis clearly shows the quantity at which the company will neither gets profit nor loss. To carry out this analysis the analyst identified some basic variable and fixed costs and selling price/unit. All these costs are mentioned below:

Table 8: Breakeven Analysis of Bee-the car

Selling Price/ Unit	Rs. 220,000
Variable Cost/Unit	210,219
Contribution Margin	9,781.00
Fixed Cost	42,754,977
Breakeven Unit	4371
Breakeven in Rs.	Rs. 961,670,068.50

The breakeven is the breakeven is 4371 units which depicts that the company needs to produce units above this level for profit. It has also been observed that the breakeven quantity has been calculated for a year. The variable costs and fixed costs that helped computing breakeven are mentioned in detail below

Variable and Fixed cost

Table 9- List of variable costs

Variable Costs (Rs.)/Units				
Direct Material	209,124			
Direct Manufacturing Labor	1082			
Manufacturing Overheads				
Material Handling costs	7.7			
Lubricant costs	5.55			
Total	210,219			

Table 10- List of fixed costs

Fixed Costs (Rs.)				
Dep- plant equipment	1,500,000			
Indirect manufacturing Labor	150,000			
Dep- building	1,350,000			
Electricity	20,833,440			
Factory Maintenance	1,000,000			
Marketing salaries	1,800,000			
Distribution costs	1,920,000			
Point of Purchase	280,000			
Brochures	300,000			
Radio Add	1,167,660			
Customer support staff	40,000			
Training and development	90,000			
Research and development	50,000			
Customer services costs	2200			
Facebook & YouTube ads	11,487,510			
Total	42,754,977			

11.2 Unit Analysis

Assumptions - Source of Data:

- VC per unit is calculated from the Direct Material (spare parts) data provided by SMME, Labor and other detailed manufacturing costs given by the manufacturer (MCO-Dr Irfanul haque)
- MOH is calculated by analysis of other relative products (bikes) & cars
- **FC** is calculated by visiting 2workshops and a manufacturing plant at MCO, to evaluate their financial analysis.
- Units are assumed based on intension of the manufacturer to start from a small scale at first

The unit analysis depicts that the breakeven unit will be around 4000 to 5000 units as shown by highlighted region. Before this the company is getting losses and after the shaded region it has started to gain profits. It is also shown in the table below:

Table 11: Unit Cost Analysis of BEE -The Car

Units	VC per						Total	Profit=TR-
produced	unit	Total VC	Total FC	Total Cost	Unit Cost	SP	Revenue	TC
	240 240	240 240	40.754.077	42.055.405	42.055.405	220 000	220 000	(42 745 405)
1	210,219	210,219	42,754,977	42,965,196	42,965,196	220,000	220,000	(42,745,196)
3000	210,219	630,657,000	42,754,977	673,411,977	224,470.66	220,000	660,000,000	(13,411,977)
4000	210,219	840,876,000	42,754,977	883,630,977	220,908	220,000	880,000,000	(3,630,977)
4100	210,219	861,897,900	42,754,977	904,652,877	220,647	220,000	902,000,000	(2,652,877)
4310	210,219	906,043,890	42,754,977	948,798,867	220,139	220,000	948,200,000	(598,867)
5000	210,219	1,051,095,000	42,754,977	1,093,849,977	218,770	220,000	1,100,000,000	6,150,023
6000	210,219	1,261,314,000	42,754,977	1,304,068,977	217,345	220,000	1,320,000,000	15,931,023

11.3 Master Budgets

11.3.1 Revenue Budget

	January	February	March	April	May	June
Budgeted sales (units)	1261	1286	1311	1338	1364	1392
Selling Price (p)	220,000	220,000	220,000	220,000	220,000	220,000
Breakeven Revenue	277,420,000	282,968,400	288,627,768	294,400,323	300,288,330	306,294,096
(Rs.)						

The selling price of BEE is inclusive of all taxes. These taxes are comprising of:

Tax on registration	1% of the value of the vehicles				
Rate of withholding tax Up to 850 CC for filers and non-filers are Rs. 10					
Rates on token tax	Up to 1000 CC for filers and non-filers RS. 10,000				
Leasing	The non-filer pays 3% of the value of motor vehicle				

Assumptions

- Based on reports of Mehran, Alto and Honda bikes sales. We took an average increase and predicted the Sales.
- We cannot forecast because we do not have historical data of our own sales. Therefore, predicted sales based on an average increase of demand in market for automobiles (vehicles under 1000cc).
- Sales are not declining.
- We are intended to make quarterly Income statement therefore; these revenue budgets are shown on monthly basis.

11.3.2 Total Manufacturing Cost

The cost of production comprises of:

- a. Direct Material
- b. Direct Manufacturing Labor
- c. Manufacturing Overhead

A. Direct Material

Assumptions

To minimize the direct Material Variable Cost, the vendor has agreed to provide discounts in case manufacturer places a bulk order (Source MCO- Dr. Irfan-ul-Haque)

- 1. If order quantity (q) is increased by 10%, then vendor will provide discount of 20% on spare parts rates.
- 2. If order quantity is increased by 20%, then 30% discount on spare parts will be offered.

DM Schedule

However, we took direct material as Rs. 194,124. The data was provided by SMME (Attached in appendix-7). These discounts will be used in future but not now.

The beginning inventory is zero for January. It is formulated by the multiplying the cost of direct material per unit with beginning inventory calculated in Production budget above.

This budget helped us to figure out the direct material that needs to be produced based on the number of cars being produced in all four months respectively.

(Vendor's details were kept confidential by MCO- the manufacturing)

Table 12: Direct Material Purchase Budgeting Schedule

	January	February	March	April	May
BEE needed to	1518.244	1291.36488	1317.192178	1343.536021	1370.406742
produce					
Cost of producing	294,727,598	250,684,916	255,698,614	260,812,587	266,028,838
(1513,1291,1317units)					
Deduct Beginning	0	49,937,234	50,935,978	51,954,698	52,993,792
Inventory (Rs.)					
Direct Material to be	294,727,598	200,747,681	204,762,635	208,857,888	213,035,045
purchased (Rs.)					

B. Direct Manufacturing Labor

Assumptions

According to the Budget 2016-2017

- 1. The minimum wage rate in Pakistan is PKR 15,000.
- 2. Working days in a month= 26 day
- 3. Normal working days= 8 hrs. (48 hrs. a week) (Factories Act 1934)
- 4. Assumptions
- 5. The factory has 20 workers.
- 6. who are working for 48 hours a week

DML Schedule

Table 13: Schedule for Direct Manufacturing Labor

Months	Output Produced	DML hour per unit	Total Hour	Hourly Wage Rate	Total
	1	15	15	72.115	1,081.73
Jan	1518.244	15	22773.7	72.115	1,642,322.49
Feb	1291.36488	15	19370.5	72.115	1,396,901.67
March	1317.192178	15	19757.9	72.115	1,424,839.71
April	1343.536021	15	20153	72.115	1,453,336.50
May	1370.406742	15	20556.1	72.115	1,482,403.23

Table 14: Data Assumed for DML

Minimum Wage rate	15,000	
Working days in a month	26	
Normal Working days	8	hours a day
Hours worked in a month	208	
Wage rate/hour	72.11538462	

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C. Manufacturing Overhead

Table 15- Budgeted manufacturing overhead Cost Schedule

	January	February	March	April	May
Fixed Cost					
Dep- plant equipment	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Depreciation on Building	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000
Power/Electricity	1,736,120	1,736,120	1,736,120	1,736,120	1,736,120
Factory Maintenance	83,333	83,333	83,333	83,333	83,333
TFC	4,669,453	2,850,000	2,850,000	2,850,000	2,850,000
Variables Costs					
Factory Maintenance					
Materials-handling cost	7.78	7.8	7.9	8.0	8.0
lubricants and coolants	5.56	5.6	5.6	5.7	5.7
Indirect manufacturing Labor	150,000	150,000	150,000	150,000	150,000
TVC	150,013	150,013	150,014	150,014	150,014
Cost of production	4,819,466.67	3,000,013.47	3,000,013.60	3,000,013.74	3,000,013.87

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Assumptions

- o Factory Maintenance is considered as fixed costs
- o BEE needed to produce 1518 for the month of January
- Electricity and factory maintenance are divided by 12 to calculate monthly expenses

1. Indirect Manufacturing Labor

Following computations are based on the data available on Suzuki Mehran and alto.

- Values are churned out from income statements and divided by units produced to figure out these costs spent per unit. Then the per unit cost is multiplied with the number of units our manufacturer tends to produce the car
- 2. Indirect manufacturing labor is calculated by dividing the total value of Suzuki mehran plant per total supervisors hired.
- 3. Seems like they provide 18k 25k per supervisor and had 6 supervisors on 2 plants. We are supposing 4 supervisors on a plant with 20K per month

2. Material handling cost and Lubricants and Coolants

Table 16: Material Handling & Lubricants - Overhead cost

Units	Material Handling	Lubricant etc.
Cost	900,000	27780,000
Per unit	Rs. 7000,000	5,000,000
Cost/ Unit	7.778	5.556

3. Depreciation plant Equipment and Building

According to Tax Memorandum 2017. Sales and excise budget reveals 15% of the Depreciation of company's assets are allocated to each product line when computing budget individually.

4. Factory Maintenance

The total Factory maintenance charges is Rs. 10,000,000. (2% is of allocated to the area where maintenance is done)

11.3.3 Production Budget

	January	February	March	April	May	June
Budgeted Sales	1261	1286.22	1311.944	1338.183	1364.947	1392.246
Target Ending Inventory	257.244	262.3889	267.6367	272.9894	278.4492	
Available	1518.244	1548.609	1579.581	1611.173	1643.396	
Beginning Inventory	0	257.244	262.3889	267.6367	272.9894	
Needed to produce	1518.244	1291.365	1317.192	1343.536	1370.407	

Assumption

- We are selling all that we are producing,
- Ending inventory should be 20% of next month to meet the next month demand.

11.3.4 Marketing Budget

It has been observed that the marketing budget comprises of promotion, Brochures, Radio ads, Digital ads- (Facebook and YouTube ads), Mall intercepts and Marketing Salary. The below pie chart clearly demonstrates the distribution of budget in each medium. More budget allocated to print media because most of our target audience use newspaper and read than using virtual mediums.

Assumptions- Sources for marketing values

Salaries	20-25K per work
Mall intercept displays	25-35k per display per month (Based on an insight by metro Marketing Associate)
Brochures	15000*20/per unitMarketing expert
Radio Ads	Cost of one ad X 15 days a month i.e. one day two days for a year
Print media	www.advertiseinpakistan.com/
Facebook and YouTube adds	For automotive industry, the Facebook ads CPM (Cost per Impression) \$4.50. The cost per1000 Impression or (1000 viewers). Data from Salesforce advertising Index.

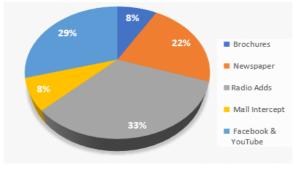
Exchange rate 1\$= Rs. 105.39

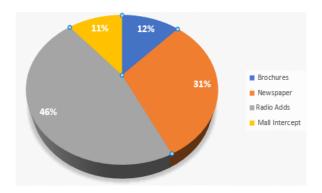
Viewers on Facebook 2000 viewers/ Months

The pay per view on YouTube is \$0.10 till 0.30 depends on the quality and target market. (We shall pay \$0.10).

https://www.bluecorona.com/blog/how-much-does-it-cost-toadvertise-youtube

Graph 2: Marketing Budget Allocated for promotions of BEE-the car





It is observed that for first 5 months the promotions shall be done through newspaper and radio ads. The team would incorporate Facebook and YouTube ads Once the car has developed its position in the market. However, it must be notified that digital marketing is mostly done by an established brand and most commonly done for luxury cars. Therefore, we need to show vigilance while deciding about it.

1. Print Media Adverts:

These exhibits showcase the detailed costing of each marketing promotion component

A. Newspaper

Table 17: Costing of Newspaper Adverts -BEE

Urdu		Express	Jung	Duniya	Total
Lahore		704.974	1505.698	755.47	
	color	100%	100%	100%	
	Front page	200%	50%	200%	
Cost of 1 ad		2819.89	3764.2455	3021.918	9606.06
Islamabad		603.96	1086.922	629.211	
	Color	100%	100%	100%	
	Front page	200%	50%	200%	
Cost of 1 ad		2415.851	2717.3065	2516.862	7650.02
Total					17256.08
English		Dawn	The nation	Tribune	
Lahore		2840.94	631.32	654.4684	
	Color		75%	75%	
	Front page		150%	100%	
Cost of 1 add		2840.94	2051.79	1799.788	6692.518
Islamabad		2840.94	526.1	603.9628	
	Color		75%	75%	
	Front page		150%	100%	
cost of 1 ad		2840.94	1709.825	1660.898	6211.663
Total					12,904

Assumptions: Cost of 1 ad in English and Urdu once, every week 2 Months, every 2 weeks for a year

Cost of 1 ad in English & Urdu once	30,160.26
Cost of 1 ad every week for 2 months	241,282.1
Cost of an ad every 2weeks for a year	784,166.8

B. Radio Adds

Table 18: Budgeted Costing of Radio Ads - BEE

[<u> </u>	FM103	FM106.2	cityfm89
cost per 30sec ad		Rs	Rs	
	Lahore	1262.64	1811.888	2104.4
	Islamabad		1308.937	-
Total				6487.86
		6am-10am	prime time	7-2:30pm
		4pm-11pm		5-10:30pm

This cost is per day ad. Cost. For every day cost multiply, the value by 30days and 12months for a year

C. Brochures

Table 19: Budgeted Costing for Brochures

Number of Brochure	15,000
Cost per Brochure	Rs.20/ Brochure
Total Cost	Rs. 300,000

D. <u>Digital Media Ads</u>

Table 20- Cost of Facebook ads

Cost per impression	4.5
Cost of 2000 Impression	9000
The cost in rupees	948,510
Cost/year	11,382,120

Table 21- Cost of YouTube ads

Pay per video views	\$0.10
Pay per video view (RS)	10.54
The no of viewers	10,000
Total Cost	105,390

E. Others Cost Include (yearly)

Marketing Salaries	1,800,000
Pop sales units	280,000

11.3.5 Cost of Goods Budget

The cost of goods sold comprises of direct material, direct manufacturing labor and manufacturing overheads. The whole figures are taken from the above-mentioned tables made for each heading. We are assessing 5 months data only.

	January	February	March	April	May
Beginning Finished Good Inventory	0	51,040,291.68	52,068,215.32	53,091,574.33	54,151,259.50
DM Used	294,727,598	200,747,682	204,762,635	208,857,888	213,035,046
DM Labor	1,642,322.49	1,396,901.67	1,424,839.71	1,453,336.50	1,482,403.23
MOH	4,819,467	3,000,013	3,000,014	3,000,014	3,000,014
COGM	301,189,387	256,184,889	261,255,704	266,402,813	271,668,722

Deduct Ending	51,040,291.68	52,068,215.32	53,091,574.33	54,151,259.50	56,326,085.33
Finished Goods Inventory					
COGS	250,149,095	204,116,673	208,164,129	212,251,553	215,342,637

Assumptions:

	Finished goods (units)	Cost/units	Finished Goods
January	257.244		
		198,411.98	51,040,291.68
February	262.38888		
		198,439.11	52,068,215.32
March	267.6366576		
		198,371.83	53,091,574.33
April	272.9893908		
		198,363.97	54,151,259.50
May	278.4491786		
		202,284.98	56,326,085.33

11.4 Quarterly Income Statement

Since the car has not been developed and is still in developing stage. Therefore, we developed only quarterly Income Statement. The detailed income statement carries values based on some basic assumptions. Those assumptions are as follows:

Assumptions

- Electricity charges will increase by 1% Due to Inflation.
- Material Handling Cost is 1%
- Lubricants and coolants is increase by 1%
- Depreciation Building and plant and Equipment will remain Constant
- Factory Maintenance increase by 2%
- Marketing salaries will remain constant
- Distribution cost will remain constant
- Point of purchase Sales units, radio add brochures, Facebook and YouTube ads customer, Newspaper adds support staff training and research and development are same throughout these 5months
- Electricity Charges

The data has been taken from IESCO. Since this falls under industry supply so all these rates have been taken from B 4 category.

Data has been also taken from SMEDA engineering and manufacturing pre-feasibility reports.

- Unit consumed 800,000 in off peaks
- Units consumed 36,000 in peak.
- Fixed charges 500,000/ month (IESCO)
- The rate/unit consumed
- Rs. 18/KWh Off peak
- Rs.12KWH Peak
- Customer sale services is 2% of Sales.
- The total Factory maintenance charges is Rs. 10,000,000.
- (2% is of allocated to the area where maintenance is done)
- Training and Development Monthly salary of the trainer is 90,000.
- Research and Development cost is Rs. 50,000.
- Corporate Tax 31%

For a detailed Income statement, See Appendix-8.

12.0 MACRO OVERVIEW OF PAKISTAN'S

AUTOMOBILE INDUSTRY

Pakistan with its rapid development is declared amongst the eleven potential countries to become the world's largest economies in the 21st century. Pakistan's auto market is considered among the smallest, but fastest growing in South Asia. The automotive industry accounts for 4% in countries GDP. Automotive industry is said to be amongst the fastest growing industries in Pakistan. The auto policy is geared up to make an investment of \$ 4.09 billion in the next five years thus, making a target of half a million cars per annum. (Competitive Analysis of Auto Sector in Pakistan and China, 2017)

Table 22: Pakistan Automobile Industry

Facts	Figures	
Workforce	192,000	
Sector Employ (Direct and indirect)	3.5 Million	
Automotive Plants	3200	
Vehicle Assembler	82	
Auto-parts Manufacturer	500	
Motorcycle Production	1.8 Million (annually)	
Vehicles Production	179,944 (annually)	
GDP Contribution	2.8%	
National Exchequer Contribution	PKR. 50 Billion	
Contribution to Manufacturing Sector	16%	
Total Gross Sales	PKR, 214 Billion	
Net Paid Taxes	PKR. 63 Billion	
Source: (Pakistan Automotive Manufacturers Association)		

12.1 Current Market Dynamics

Despite of Pakistan being sixth in population is small player in world automobile market with 1% (Internet World Stats, 2017). Industry is still using globally retarded models without any safety features in place. The major component manufacturers, which are crucial for automakers, have repositioned to follow production and register strong levels of profitability (Euler Hermes, 2014).

The automobile sector of Pakistan consists of numerous assembly and manufacturing units of cars, tractors, truck and buses and two and three wheelers. Pakistan's local market is normally dominated by Japanese brands: Honda, Suzuki and Toyota. Furthermore, there is variety of products that are produced in Pakistan:

Table 23: Automobile Brands operating in Pakistan

Cars	Motor Cycles
Honda	Honda
Toyota	Yamaha
Suzuki	Suzuki

In the car segment, the Pak Suzuki has 50% market share whereas Toyota and Honda has 32% and 29% market share respectively. The share of the 1300-1800 cc capacities is 52% followed by 800 cc capacity is of 36%. This shows the automotive industry of Pakistan is normally dominated with 1300CC-1800cc cars. On the hand, the Suzuki is the only car manufacturer, which produces below 1000cc Therefore, Suzuki has the monopoly in small car segment.

In addition to the small and large car segments, the two and three wheelers also have a good market share. It has been observed that the production of motorcycles and rickshaws has increased tremendously over the past few years (1,697,819 in 2014 to 1,699,764 in 2015 to 2016). The three wheelers that are commonly known as auto rickshaw is the mostly used by the lower income groups of Pakistan. They are thirty-one manufacturers that produce auto rickshaw in Pakistan, producing 100 cc and 200 cc engine capacity vehicles.

There has been increasing demand for motorcycles mostly in lower income groups. It is because the middle-income group has emerged in Pakistan and most importantly, lower interest rates from government have encouraged people to buy motorcycle via bank financing. Furthermore, it is also observed that young boys of age 24 to 30 years have motorcycles and bikes for commuting purposes. Moreover, due to traffic congestion many people are opting for motorcycles as their second options, especially in Lahore and Karachi.

Source: (Pakistan Automotive Manufacturers Association)

12.2 Auto Policy 2016-21

Pakistan passed the "Auto Policy 2016-21" on 19 March 2016. The said policy offers tax incentives on establish manufacturing plants to new entrants in the country. However, Pakistan has not enforced any automotive safety standards or model upgrade policies.

a) New Entrants

The Auto-policy 2016-21 opened doors for international car manufacturers. Companies like Renault-Nissan, Kia Motors, Audi, Volkswagen and Hyundai expressed interest in entering the Pakistani market. Stated hereafter are two of the giant manufacturers.

i) Kia

Kia in collaboration with Lucky Cement will set up its operations in Pakistan through an investment of PKR. 12 Billion. Kia is ranked as the most reliable car manufacturer in 2016 and is one of the top 20 most valuable car brands.

ii) Renault

Renault a big name auto company from Europe, announced to start assembling cars in Pakistan by 2018. However Renault will aim to focus on SUVs and sedan cars. Moreover, Nissan cars will also be revived after the plant is completely set up.

b) Existing Manufacturers

With the new entrants hauling their way in the market, the existing giants including Suzuki, Honda, Toyota and Audi decided to bring out new car models. Give below are some of the cars, which were announced in 2016.

Table 24: New Cars announced in 2016 by Existing Manufacturers

Model	Description			
	Two Variants GL+ and GLX.			
	• 1.6ltr engine.			
Suzuki Vitara	 Low 86kW at 6000rpm and 156Nm of torque at 44000rpm. 			
	• Use between 5.8 liters and 6.3 liters per 100km			
	• GL+ price Rs. 3.490 million & GLX, Rs. 3.799 million.			
	Replacing Cultus is Suzuki Celerio.			
	Price of PKR 1.25 million			
Suzuki Celerio	Same features as Cultus.			
	• 1,000cc Celerio expected to be launched in March 2017.			
	• 1.0-liter 3-cylinder engine, by the name of K10B.			
	Price PKR 11.25 million.			
	• 2.4-liter DOHC i-VTEC engine with 4-cylinder and 16-valve			
Honda Accord	• 175 horsepower at 6,200 rpm.			
	 Available in five different colors. 			
	 Booking to be commenced by 17th December 2016. 			
	• Hilux Revo 8 different variants, 4×4 drive, 2×4 drive, single,			
Toyota Hilux	double cabin, automatic and manual included.			
Revo	 All variants carry 3.0L 1KD engine. 			
 Price PKR 6 to 6.5 million in the local market. 				
Source: (ProPakis	tani, 2017)			

c) Passenger Car Segment

3 Japanese companies Toyota, Honda and Suzuki heavily dominate this segment. According to PAMA in 2014-15, Following are the companies operating in Pakistan in the passenger cars segment:

• Pak Suzuki Motors:

Pak Suzuki Motors is the leader for small cars (800cc-1000cc). They are assembling Suzuki Mehran in the 800cc category, Suzuki Cultus and Wagon-R in the 1000cc category while also assembling Suzuki Swift and Suzuki Liana in 1300cc category. (Pak Suzuki Motors)

• Indus Motor Company (IMC)

IMC is the leader of the industry in the sedan car category in Pakistan. IMC assembles passenger cars for Toyota.

 Honda Motor Corporation: Honda assembles 1300cc Honda City and 1600cc Honda Civic. In this category Honda trails behind IMC. (Indus Motor Company)

FAW Motors

Faw Motors is also assembling 1300cc passenger car V2, which has a V2 engine. They have recently started marketing their vehicle also.

• Adam Motor Company

Adam Motors launched Adam Revo in Pakistan which was the country's first indigenously designed car but ceased production in 2006 due to a lack of working capital as the government did not fulfill its promise to buy cars from Adam Motors. (The Express Tribune)

• Nissan Pakistan

Nissan initially produced Nissan Sunny but discontinued it when it failed to compete on price basis with Toyota and Honda. It also did not change its model frequently and the customers shifted to other alternatives. Now it is selling SUV's in Pakistan. (Competitive Analysis of Auto Sector in Pakistan and China, 2017)

Dewan Farooque Motors Ltd

Dewan Farooque Motors used to assemble Hyundai Santro in its Sajawal plant, which they were not being able to utilize fully. Hence they were not achieving economies of scale and could not compete on price with Suzuki.

12.3 Auto Spare parts Industry

They are about 200 auto manufacturers out of which they are 400 to 500 situated in organized sectors. The auto parts industry has been two segments:

- 1. Selling to Original Equipment Manufacturer (OEM) for assembly of cars
- 2. The replacement Market

The OEM's fulfill the desired requirements of the local firms based on the blueprint that is provided. There is an absence of research and development in the manufacturing process.

Demand

The auto mobile spare industry is unable to cater the demand at the domestic and international level. It is further observed that 0.4% of the global production is being manufactured in Pakistan. This clearly shows that the auto parts are being imported from other countries drastically.

The demand could be met if there is availability of resources, infrastructure development thereby, expansion of existing vendors.

Supply

The organized sector comprises of mostly registered vendors to assemblers and manufacturers of automobiles. However, the unorganized segment comprises of 1200 establishments. The units produce wide range of products for replacement markets. However, it is also observed that the replacement market witnesses the shortage of units as they are supplied to the assemblers and manufacturers as per the agreement.

12.2 PESTEL ANALYSIS

12.2.1 Political Factors

Political cartel in Pakistan is very high. These large political giants don't let any new product, business flourish easily. These don't welcome new comers and let them make their mark easily. This had led manufacturers to avoid investing in this sector despite increasing demand.

Furthermore, the manufacturers are continuously under pressure by the government to make the car more affordable for common man despite increasing costs as automobile sector has been a big source of revenues for the government.

12.2.2 Environmental Factors

Environment has been affected greatly due to automobile sector. As for now, there has been an introduction of economically friendly car which has reduced market share but in future, the demand of such cars is increasing. Bee is ecofriendly as compared to its rivals. The carbon emission normally in cars is above 80gram/km and Honda civic 120 SS SE Plus Navi is 94 g/km. Whereas, the carbon emission of Bee is 60gram/kilometer which is better than its competitors that is, Mehran, Suzuki, auto-rickshaws, etc.

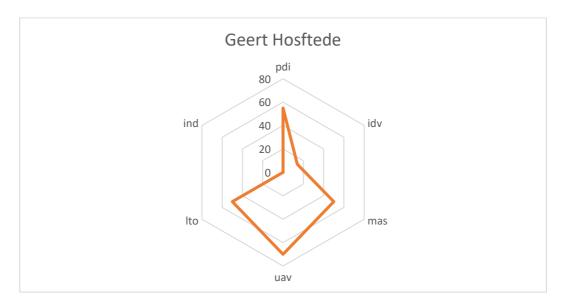
The noise pollution of auto rickshaws is very high due its rigid frame and heavy structure. But Bee's noise is very low due to its flexible frame and light weight structure.

12.2.3 Social Factors

By analyzing the behavior of Pakistani culture through Geert Hofstede, looking at the six dimensions that Hofstede studied to identify the differences in cultures, the results show that the scores of Pakistan in uncertainty avoidance is 70 which tells that most of the people in the country prefer to avoid uncertain situations. This is basically due to their rigid code of behavior. People are intolerant towards new ideas and behaviors. They are threatened by unknown situations and hence, try to avoid these. Because of this uncertainty avoidance, people will take time to accept Bee, as security (in sense of investment) is an important element in individual motivation thus innovation may be resisted. Pakistani's take time on technical brands. Pakistani's are not confident 1) new things 2) technical things. Cost is involved as it is a long-

term investment. Also, fear of not being sold, company shut down in the future, fear of parts not available

Power Distance in Pakistan is also very high (scores 55), which explains the fact the individuals in the society are not equal. Decision in families are taken by adults mostly fathers. Due to which the less powerful members (economically) of the society have accepted that power is not distributed equally. The less powerful people mostly then depend on other alternatives instead of cars (e.g. bikes, auto rickshaws, etc.) due to affordability issues. Bee can serve this segment of the society as well.



Masculinity is also very high in the country (scores 50) that indicates that there is competition, need for success in the society, need to get the best, and to improve the status to best fit in the society. This value system forms at a very young very age in a person. Wanting the best is the motive here. So an individual who cannot afford a car also wants to upgrade from a bike (and other alternative) to a car.

Pakistan also scores high on long term orientation (50) which shows that people often link their own past while dealing with the challenges of present and future. As investing in car is a long term investment, people think consider a lot of factors before spending in automobiles

Automobile industry plays a very important part in the progress of economies worldwide and automobiles are part of everyone's life nowadays.

12.2.4 Technological Factors

As customers are becoming more and more aware of the technology they expect manufacturers to equip automobiles with latest features that has become challenging for the automobile manufacturers. T has become difficult for them to keep pace with the technological

advancements. That won't be the case with Bee's manufacturers as the technology use is very conventional and state of the art is not followed (As the car is not a performance vehicle (to travel across countries, off roading), the cost of the car is not to be increased). When high technology is used in cars, main problem comes at the time of maintenance of the car as the backup technology is not readily available, which will not be the case in this car as the technology used in the car is very conventional and easily available. Maintenance and repairing is easy.

12.2.5 Economic Factors

Current auto policy of the country does not support the manufacturing of this vehicle, so the laws need to be revisited to make the import and export of the car possible.

Pakistan faces challenges like energy crises. Electricity is expensive in the country. Labor is expensive (as compared to china.) The minimum wage rate is Rs.15, 000 (according to the budget 2016-2017) Production and assembly is also expensive. The industry has been highly affected from the economic conditions. In the past, these crises have affected the sales of the cars adversely.

12.2.6 Legal Factors

New government policy (Automotive Development Policy 2016-2012) has given incentives to the new entrants. According to the new policy, it is allowed to have one time duty free import of a plant and machinery that is required to set up a manufacturing facility. Government laws do not allow the production of plant for machinery. So we can manufacture plants from China. The compliance rate is 5% and the tariff rate is 9.9% (in 2015)

a. Safety regulation

Policy focuses on the safety mandatory development and enforcement of safety regulation in vehicles during the manufacturing process. Compulsory installation of immobilizers is required, which are electronic security devices that prevent the engine from running unless the correct key is used in cars.

b. Vehicle Delivery Time Policy:

According to the new policy, cars can be booked at maximum 50% advance payment and within the approved timeline, delivery must be made and should not exceed two months. Buyers will receive interest payments in case of delay that is, KIBOR (Karachi Inter Bank Offer Rate) plus two percent on their advance for the time the vehicle is not delivered.

c. Policy related to targets for localized parts:

According to this policy, penalties are on all the manufacturers for missing deletion standards, that hoped to encourage vendors and manufacturers to increase the localization of parts to overcome failing targets.

d. Taxation

The Income Tax Ordinance clearly depicts the rates of taxes imposed on the buyer of a new auto vehicle. The following taxes are levied on the purchaser of the new motor vehicles.

Tax on registration	1% of the value of the vehicles
Rate of withholding tax	Up to 850 CC for filers and non-filers are Rs. 10,000
Rates on token tax	Up to 1000 CC for filers and non-filers RS. 10,000
Leasing	The non-filer pays 3% of the value of motor vehicle

Since our car falls below 660 CC category therefore it falls under the above-mentioned category which is defined by the motor vehicle Act 1958 and income tax ordinance 2001.

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APPENDIX

Appendix –	(Questionr	naire)
Tipponani.	(V GCDGGIII	14110,

QUESTIONNAIRE

Email

DEMOGRAPHICS & CUSTOMER PROFILING

1		α		.1		
ı	. (lτ	en	a	eı	r

Male	Female

2. Age

18 to 30	31 to 40	41 to 50	51 to 60	

3. Check all that meets your profile

<u> </u>						
Single Married		Independent	Dependent	Have Kids		

(Identifying customer groups & needs associated, pg. 6, table3)

4. Which of the following do you own?

Bike	Mini Van	Small Car	Lower Medium Car	Upper Medium Car	Executive Car	Luxury Car	Others

5. What is your monthly income?

o. What is your monding	y income.			
10,000 and below	20,000 - 50,000	50,001 - 100,000	100,001 - 500,000	500,001 and above

6. What is your AVERAGE TRAVEL COST monthly (PKR)?

0	5.000	10.000	15.000	20.000	25,000 30,000	& above	

SEGMENTATION & PSYCHOGRAPHICS

7. Mark the category that best describe you:

virtual and entogoly that west describe your							
Outgoing, social &	Innovators, your opinion	Value traditions and	You watch TV everyday				
Active- hangout more	matters to your friends a	dislike change,	+1hr., you buy what meet				
than 2times in a week	lot, you like your things	Feel burdened of your	your needs, do not spend				
	to standout.	responsibilities, you do	extra carelessly on				
		not like taking risks.	unwanted things				

(Attitudinal segmentation, pg. 10)

8. Which of the following sources you take advice from while deciding the purchase? Can choose more than 1.

Print Media	Electronic	Traditional	Modern Media (Expos &	Online	Others
	Media	Media	Brand Activations)		(Mention)

9. If you own a car, who uses car the most?

Yourself	Your husband/wife	Your parents	Other family member	Other people in the company or friends	Others (Mention)

10. Do vou see a car only as a transport tool?

10. Do you see a car only as a transport toor.								
Strongly disagree	Disagree	Neutral	Agree	Strongly agree				

11. Do you see a car as a fashion item?

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

NEED ANALYSIS⁷

12. Suppose you are going to purchase a car. What would you look for in your car? (1 being least and 5 being most) 4 5 Space Outlook Technology Interior Comfort \bigcirc \bigcirc 0 \bigcirc Power Fuel efficiency (General specs preferred in a car) 13. On what frequency you use car for the following chores? Never Once a week Twice a week 3-4 times a week Everyday Shopping Pick up family members Social Activities Travelling Work 14. Do you prefer cars which can travel long distance over luxurious car? Yes No 15. Do you prefer luxurious cars over cars which can travel longer distance? Yes No

⁷The traditional product categories were based on Size, Engine Output, Price & Features – Christian Digoin, Ford.

-Size-

16. For what following reasons you would opt a small car? Please check the three most important reasons that would trigger your purchase for small car?

Also, Rank the following 1-6, 1 being most important

Reason of choosing Small Size	Ranking 1-6
Increased traffic & congestion on road	
Economic alternative to transport	
Seeking a better alternative (that's bike, or the current	
transport you're using)	
Problem of parking	
Low Fuel consumption	
Reduced toxic emissions	

-Engine output-

17. Considering price increases with engine output, What CC car would you prefer on bike for daily usage?

220CC	600CC	660CC	1000CC	1300CC	1300CC above

[-Price & features-]

18. If you own a bike how much will you be willing to raise your budget to upgrade to a car?

PKR 50,000	1 Lac	2 Lacs	2.5 Lacs	None

19. Which of the following category, you would want your small car to lie in? You must consider the price against the type. (Also, if you want to suggest any other price for the category that you select, mention in the box next to it)

Category	Attribute Description	Price	Suggested Price
1-	Less than 360cm long Compact Good value for money Good performance Basic / Regular Features	120k – 170k	
2-	Better performance (power) More added features: -improved driving dynamics -360cm to 400cm long -improved safety features (airbags) -robustness -more space -power steering -greater comfort (AC)	200K – 250K	
3-	Outlook of Luxury and sports derivatives -outlook of sports coupes	300K-500K	

-small sports utility vehicle with	
above mentioned added features	

(Table2: Emerging Product categories in small car mkt – Breaking the categories to identify underlying need, reqd features & price, pg. 5, "Breaking the normal categorization" by Christian Digoin)

20. Check one of the following

Link your intension to buy the above mentioned type of SMALL car with your need for:

- Independent Luxury Use [you are looking for features of large car in small car]
- Family [looking for a primary transportation for a small family at cheap rates] ___
- **Independent Urban Use** [looking for maneuverability and urban transport with distinct and greater functionality] _____

(Identifying customer group, pg6, 7)

- 21 According to the following choices what do you prefer?
 - SUV
 - Mini Van
 - Small Car
 - Lower Medium Car
 - Upper Medium Car
 - Executive Car
 - Luxury Car
 - Others
- 22. How does having a car add value to the following aspects of your life?
- Improve Social Status (Not affected To some extend Greatly)
- Increase Mobility (Not affected To some extend Greatly)
- Enables day to day commute (Not affected To some extend Greatly)

Appendix – 3 Customer Profiling

	Haider Ali Works at NUST	Sarfaraz Hussain	Ahmed Ali	Zahida	Yaseen majeed	Abdullah hameed	Omair Arshad	Sul Na
Demographics								
What is the typical age range of this customer?	41	35	30	28	35	36	40	32
What is their gender?	Male	Male	Male	Female	Male	Male	Male	Ma
What is their level of education?	Intermedi ate	Intermediate	Bachelors	Nil	Nil	Intermediat e	Intermedia te	Bac
What is their occupation?	Guard	Runs a small shop	Administer	Maid	Electrician	Clerk	Gardener	Nu
Where do they live?	Rawalpin di	Rawalpindi	Rawalpindi	Islamabad	Rawalpindi	Rawalpindi	Islamabad	Isla
What is their household composition?	Married Family Size: 5	Married Family Size:	Married Family size: 5	Married Family Size: 5	Married Family Size: 6	Married Family size: 5	Married Size: 5	Sin Siz
What is their monthly income?	Rs. 30,000	Rs. 10,000	Rs. 50,000	Rs. 10,000	Rs. 10,000	Rs. 18,000	Rs. 20,000	Rs.
Psychographics								
What are their hobbies and interests?	Reads Newspap er.	listen to radio on phone	Surfing internet	Listen to music on phone.	Likes to radio.	Listen to radio. Use social media.	Likes to search on different types of flowers.	Go for wit frie
What do they do in their free time?	He takes his daughters to public parks.	Spend time with his family	He takes his family out daily.	She likes to watch Tv	Hangout with family on weekends	Takes his children to park on weekends.	Listen to music	Lis mu pho

What problems are they facing with their current means of transport?	Depende nt on public transport	He needs to travel a lot to get his supplies for his shop. Also for	Currently he has a motor bike. For family use.	The family owns a motor bike. Husband's duty to pick and drop her.	Own just one bike and taking family out is not always	He has a bike.	He must drop his mother daily to hospital.	He bike doe help fam
TT 1	D	family use	D 50,000	-	feasible	D 40.000	D 50,000	D
How much are they willing to spend on 250 cc car?	Rs. 40,000	50,000	Rs. 50,000	Rs. 20,000	Rs. 40,000	Rs. 40,000	Rs. 50,000	Rs.
What lifestyle do they have?	He lives a simple life. Low middle- income group.	Simple. Mediocre. Works at his shop from 10-8pm.	Mediocre, Simple. He works 9- 5pm. Traditional set up at home.	Really simple. Lowe middle group. Spend on necessities	Lower middle class. Sole earner.	Lower middle class. Sole earner. Traditional.	Lower middle class. Works daily. live a simple life,	Low mid class Wo day Fan orie
Personality	Conformi st. Tradition al code of conduct	Introvert	Conformist agreeable	Conformist	Agreeable conformist	Introvert	Conformis t	con

Customer Profiling

		G1 1 1	T	D 1:	T	T		Τα .
!	Asma	Shahab	Haji	Rabia	Yasin	Humayun	Zafar	Sol
	Masood	Malik	Abdullah		Ahmed		Mazhar	An
Demographics								
What is the typical age range of this customer?	27	26	58	26	35	36	40	32
What is their gender?	Female	Male	Male	Female	Male	Male	Male	Mai
What is their level of education?	Bachelor s	Intermediate	Primary	Bachelors	Nil	Intermediat e	Intermedia te	Bac
What is their occupation?	Student	Student	Guard	Job seeker	Painter	Clerk	factory laborer	Acc offi NU
Where do they live?	Rawalpin di	Rawalpindi	Rawalpindi	Islamabad	Rawalpindi	Islamabad	Islamabad	Isla

What is their household composition?	Single Family size:5	Single Family size:5	Married Family size:4	Married Family size 4	Married Family size 5	Married Family size:6	Married Family size:6	Sin Fan Siz
What is their monthly income?	Depende nt on family	Dependent on family	Rs. 10,000	Family dependent	Rs. 15, 000	Rs. 18,000	Rs. 20,000	Rs.
Psychographics								
What are their hobbies and interests?	She likes to go out for shopping with family.	Travel, Explore different places.	Listen to Radio.	Shopping	Likes to listen. Music. Intermediat e use: social media	Surf internet	Listen to radio. Read Newspape r.	List mus Fac
What do they do in their free time?	Usually use social media	family, Use Facebook	Spent time with his family	Use Facebook.	Spend with family on weekends	Takes his children to park on weekends.	Go out with his friends	Spe tim fam
What problems are they facing with their current means of transport?	She uses Careem and other public transport means	He uses a bike for commuting purposes.	He uses public transport.	Husband takes the car for his own work She uses Careem for purchasing groceries.	Own just one bike and takes family out.	He has a bike.	He owns a bike. With 6 family members.	He bik Far me use trar
How much are they willing to spend on 250 cc car?	Rs. 50,000	50,000	Rs. 20,000	Rs. 60,000	Rs. 40,000	Rs. 30,000	Rs. 30,000	Rs.
What lifestyle do they have?	Middle class family, Healthy lifestyle, middle income group, Broadmi nded	Simple. Mediocre. Middle income group.	Mediocre, Simple. Low income groups. Sometimes night shifts Traditional set up at home.	Simple. Middle income group, healthy lifestyle.	Lower middle class. Work from 9 to 6pm. Sole earner. Simple lifestyle,	Lower middle class. Work from 9 to 6pm. Sole earner. Traditional code of conduct.	Works daily. Live a simple life.	Lov mic clas Wo day Far orio
Personality	Extrovert, like to explore.	He is introvert.	Conformist , agreeable	Agreeable. Conformist	Agreeable conformist	Introvert	Conformis t	cor

Focus Groups

Questions	Respondent 1	Respondent 2	Respondent 3	Respondent 4
Gender	Male	Male	Male	Female
Age (18 to 30, 31 to 40, 41 to 50, 51 to 60)	41-50	31-40	31-40	18-30
Check all that meets your profile (Single, Married, Independent, Dependent, Have Kids, Widowed/Divorced)	Married and have three daughters and all are school going.	Single	Married and lives with parents	Single
Which of the cars do you own? (Bike, Mini Van, Small Car, Lower Medium Car, Upper Medium Car, Executive Car, Luxury Car)	He used a rental car.	Lower Medium Car	Small car	Careem
What is your monthly income? (10,000 and below, 20-50,000, 50,000-100,000, 100,000 and above).	Rs. 20,000- 50,000	Rs.20,000-50,000	Rs.50,000- 100,000	10,000 above
What is your AVERAGE TRAVEL COST monthly (PKR)?	Rs.300 to 500 (Public transport & car on rent for few days)	Rs.3000-6000	Rs 10,000- 12,000	Rs.15000- 20,000
Mark the category that best describe you (Introvert, Extrovert, Conformist and Innovator)	Conformist	Extrovert	Conformist	Extrovert
Which of the following sources you take advice from while deciding the purchase? Can choose more than 1. (Print media, Electronic media, Traditional media, Modern media, Online, friends, Family, field experts, Others	Family and friend	Field experts	Online	Online
If you own a car, who uses car the most? (Self, Your husband/wife, Your parents, Other family member, Other people in the company or friends)	Self.	Self.	Parents	Self
Do you see a car only as a transport tool?	Yes.	Yes.	Yes.	Yes
Do you see a car as a fashion item?	No.	No.	No.	No.
Suppose you are going to purchase a car. What would you look for in your car? (Space, outlook, technology, Interior, Comfort, Power, Fuel efficiency)	Space rate 5 Outlook 1 Comfortable as far it is providing help. Power 4 Fuel efficiency 4	Space 5 Outlook 2 Comfort 4 Travelling 5 Fuel efficient 5	Space 3 Outlook 1 Technology 2 Interior 2 Comfort 5 Power 2	Space 4 Outlook 1 Interior 5 Comfortable Fuel efficiency 4

			Fuel efficient 4	
What do you use car for? (Shopping, pick up family members, Social activities, travelling, Work)	Pick and drop of his children for family purposes.	Travelling and Shopping	Shopping	Shopping & with friends
On what frequency you use car for the following chores? (Never, Once a week, Twice a week, 3-4 times a week, Everyday)	He would use car for family only. He needs for his children pick and drop. (Everyday)	Everyday	Everyday	Everyday
Do you prefer luxurious cars over cars which can travel longer distance?	No luxurious car	Cars which can travel longer distance	No luxurious car	
. For what following reasons you would opt a small car)? Please check the three most important reasons that would trigger your purchase for small car? (Increased traffic & congestion on road, Economic alternative to transport, seeking a better alternative (that's bike, or the current transport you're using), Problem of parking, Low Fuel consumption, Reduced toxic emissions.	He would prefer small car to avoid increased traffic &congestion on roads. And even better than travelling on public transport.	Increased traffic 5 congestion on road, Problem of parking, 66low fuel consumption	Increased traffic 6 Seeking a better alternative 4 Problem of parking 2 Low fuel consumption 6	Traffic congestion Parking problem
Considering price increases with engine output, What CC car would you prefer on bike for daily usage? (220CC, 600CC, 660CC, 1000CC, 1300CC, 1300CC above)	220 CC	600 CC	1000 CC	220 cc
If you own a bike how much will you be willing to raise your budget to upgrade to a car? (PKR 50,000, 1lac, 2lac.2.5lac and none)	He would upgrade till 50,000	2.5 lac	2 lac	1.5 to 2 lac
Which of the following category, you would want your small car to lie in? You must consider the price against the type. Category 1- Less than 360cm long, Compact, Good value for money, Good performance, Basic / Regular Features, Price range (120k-170K) Category 2 Better performance (Power), More added features: Improved driving, dynamics 360 cm to 400 cm long, improved safety (airbags) Robustness, More space, Power, Steering, Greater comfort (AC) Price 200k-250K	Category 1. He wants a car which provides ease to his family. His family is totally dependent on public transport	Category 2. He wants a car with good engine, fuel efficient and that can travel him to longer distance. He also prefers AC in the car.	Category 1. Wants a car for daily use, for parents especially which can save his time and is fuel efficient.	Category 1 If safety aspects are added
Category 3: Outlook of Luxury and sports derivatives -outlook of sports coupes, small sports utility vehicle with above mentioned added features				

Check one of the following Link your intension to buy the above- mentioned type of SMALL car with your need for:		Independent luxury use and family use.	Family use	
Independent Luxury Use [you are looking for features of large car in small car] Family [looking for a primary transportation for a small family at cheap rates] Independent Urban Use [looking for maneuverability and urban transport with distinct and greater functionality]	Family use			Independent use
According to the following choices what do you prefer? SUV, Mini Van, Small Car, Lower Medium Car, Upper Medium Car, Executive Car, Luxury Car and others	He would prefer small car.	Lower Medium Car.	Small car.	Small car
How does having a car add value to the following aspects of your life? Improve Social Status (Not affected To some extend Greatly), Increase Mobility (Not affected To some extend Greatly), Enables day to day commute (Not affected To some extend Greatly)	The respondent wanted to have car for his ease. He is least interested in improving his social status.	Enables day to day commute and which can make him travel longer distance.	Enables day to day commute.	Day to day commute
Do you prefer conversion from bike to car? Yes, No, Don't know	Yes	Yes	Yes.	yes
Reasons for conversion from bike to car? Family size, Cost effective, Changing lifestyle and others	Family size	Cost effective and changing lifestyle.	Cost effective	Cost effective

Appendix – 5 Pricing Strategies

Cost-plus pricing	Setting a price by adding a fixed amount or percentage to cost of making product
Penetration pricing	Setting a very low price to gain as many sales as possible
Price skimming	Setting a high price before other competitors come into market
Predatory pricing	Setting a very low price to knock out all other competition
Competitor pricing	Setting a price based on competitors prices
Price discrimination	Setting different prices for same good, but to different markets e.g. peak and off peak mobile phone calls
Psychological pricing	Setting a price just below a large number to make it seem smaller e.g. £9.99 not £10

Appendix- 6 Placement Strategies

Characteristics	Exclusive Distribution	Selective Distribution	Intensive Distribution
Objectives	Prestige image channel control and loyalty, price stability and high profit margins	Moderate market coverage, solid image some channel control and loyalty, good sales and profits	Widespread market coverage, channel acceptance, sales volume and profits
Channel members	Few in number, well-established reputable stores	Moderate in number well-established better stores	Many in number, all types of outlets
Customers	Few in number, trendsetters, willing to travel to store, brand loyal	Moderate in number brand conscious somewhat willing to travel to store	Many in number convenience- oriented

Appendix – 7 Direct Material Cost Given by SMME

		Q	P	Cost
Items	A/U	Qty	Rate	Amount
MS Strip 3"x6mm	Ft	10	126	1,260
MS Pipe 2"x2"(14 SWG)	Ft	60	138	8,250
MS Pipe 1"x2"(16 SWG)	Ft	50	80	4,000
Spare Parts	Set	1	19,330	19,330
Checked Sheet Aluminum (14 SWG)	Nos	1	10,000	10,000
Electrode No. 12	Kgs	5	140	700
Bumper Frt/Rear	Nos	2	650	1,300
Door Rubber Complete	Nos	1	1,450	1,450
Channel Rubber	Nos	4	120	480
Door Lock Complete	Set	1	1,500	1,500
Dash Board	Nos	1	1,050	1,050
Wiper Machine	Nos	1	2,500	2,500
Frt Door Machine	Nos	2	500	1,000
Rear Door Machine	Nos	2	380	760
Catcher Door	Nos	4	300	1,200
Wiring Complete	Nos	1	4,300	4,300
Wiper Rod	Nos	1	590	590
Lock Wire	Nos	1	480	480
Handle	Nos	4	80	320
Handle Inside	Nos	4	50	200
Handle Door Glass	Nos	4	50	200
Pipe Banding Charges	Nos	4	150	600
Electrode No, 10	Kgs	10	190	1,900
U Clamp	Nos	4	60	240
Shock Absorber Bush	Nos	8	25	200
Road Spring Bush	Nos	4	30	120
Road Spring Foundation	Nos	2	120	240
Wheel Nut	Nos	16	35	560
Bolt Frame	Nos	4	50	200
Road Spring Disc	Nos	2	140	280
Oil CL	Nos	1	300	300
Diff Assy	Nos	1	17,000	17,000
Road Spring Assy	Set	1	4,000	4,000
Silencer Assy	Nos	1	1,550	1,550
Washer Silencer	Nos	2	65	130
Bolt Silencer	Nos	2	60	120
Fuel Tank	Nos	1	850	850
Fuel Tank Cover	Nos	1	130	130
Fuel Cock	Nos	1	140	140
Jula	Nos	2	125	250
Propeller Shaft	Nos	1	450	450
Complain Rubber	Nos	1	135	135
Coupling Bolt	Nos	6	32	190

Foundation	Nos	1	153	153
Hub	Nos	1	550	550
Hose Pipe	Nos	1	120	120
Jubilee Clamp	Nos	2	23	45
Complain Seal	Nos	1	210	210
Silencer Washer Nut	Nos	1	35	35
Chimta Bush	Nos	4	50	200
Washer	Nos	50	10	500
Bush	Nos	2	150	300
Cotton regs	Kgs	10	50	500
Shock Absorber Frt	Set	1	5,300	5,300
Front Shock Coil Spring	Nos	2	550	1,100
Rubber Bush Shock	Nos	1	175	175
Front Shock Foundation Upper	Nos	2	325	650
Shock Bolt	Nos	6	90	540
Shock Gali	Nos	2	250	500
Ball Joint	Nos	2	475	950
Bolt Allen Key 10x50	Nos	12	30	360
Nut M10	Nos	12	4	48
Wheel Stud	Nos	12	40	480
Wheel Nut	Nos	12	30	360
Nut	Nos	12	5	60
Nut No. 12	Nos	6	3	20
Nut 1.2"	Nos	6	5	30
Die ½"	Nos	1	600	600
Seat Cut Strip	Nos	2	50	100
Strg Strip	Nos	2	40	80
Seat Cut Bush	Nos	8	15	120
Strg Cut Bush	Nos	2	50	100
Bolt	Nos	2	80	160
Nut	Nos	2	60	120
Nut	Nos	8	5	40
Front Wheel Bearing	Nos	4	375	1,500
Box Grease	Nos	2	175	350
Wheel Studs (B)	Nos	8	120	960
Wheel Nut (B)	Nos	8	80	640
Disc Plate	Nos	2	1,350	2,700
Disc Pad	Nos	4	325	1,300
Engine Foundation	Nos	2	475	950
GI Foundation	Nos	1	450	450
Strg Box Assy	Nos	1	4,500	4,500
Strg Boot	Nos	2	275	550
Tie Rod End	Nos	2	625	1,250
Strg Rack End	Nos	2	575	1,150
Strg Wheel Gray	Nos	1	1,580	1,580
Strg Horn Pad	Nos	1	550	550
Wheel Seal	Nos	2	225	450
Strg Column Bush	Nos	2	190	380
Strg Lock	Nos	1	100	100
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Strg Pipe Assy	Nos	1	1,780	1,780
Strg Long Rpd Assy	Nos	1	2,050	2,050
Strg Lock R Move Shaft Assy	Nos	1	1,950	1,950
Front Hub Knuckle Assy	Nos	2	1,550	3,100
Patty Fitting	Nos	1	450	450
MS Disc 7"x1/2"	Nos	1	600	600
MS Round Bar ½"	Nos	1	230	230
Hacksaw Blade	Nos	1	100	100
MS Disc	Nos	1	480	480
Brake Pipe	Nos	1	80	80
Steering Bolt	Nos	3	50	150
Silencer Rubber Set	Set	1	200	200
MS Pipe 1"x1"x16 SWG	Ft	10	99	990
Silencer Bolt	Nos	2	60	120
Brake Oil	Nos	1	130	130
Engine Oil	Nos	1	300	300
Brake Pipe	Nos	1	240	240
Fuel Filter Pipe	Nos	2	73	146
Accelerator Paddle Assy	Nos	1	250	250
Frt Wheel Brake Pipe Large	Nos	1	130	130
Frt Wheel Brake Pipe Med	Nos	1	120	120
Frt Wheel Brake Pipe Small	Nos	1	110	110
Frt Wheel Brake Pipe Assy	Nos	2	475	950
Tee ½" Plastic	Nos	2	10	20
Rubber Pipe	Nos	1	280	280
Rubber Pipe	Nos	1	300	300
Silencer Rubber Set	Set	1	200	200
Master Cyl Assy	Nos	1	1,450	1,450
Fuel Pump Assy	Nos	1	1,250	1,250
Clutch & Brake Paddle Assy	Nos	1	1,750	1,750
Brake Main Line Pipe 8' Length	Nos	2	375	750
Brake Caliper Nut with Washer	Nos	2	74	147
Rear Wheel Brake Pipe	Nos	1	350	350
Main Fuel Line Rear Large	Nos	1	650	650
Mould for Main Structure (Right/Left)	Nos	1	15,000	15,000
Mould for Bonnet	Nos	1	2,500	2,500
Mould for Doors (Right/Left)	Nos	4	2,750	11,000
Mould for Rear Hood	Nos	1	3,500	3,500
Mould for Front Show	Nos	1	2,500	2,500
Mould for Mudguards	Nos	4	2,250	9,000
Mould for Bumpers	Nos	2	2,250	4,500

Direct Material for one car is Rs.194,124

Appendix -8 Detailed Quarterly Income Statement FY017 -

	January	February	March	April	May
Sales	277,420,000.00	282,968,400.00	288,627,768.00	294,400,323.36	306,294,096.42
COGS	250,149,095.73	204,116,673.22	208,164,129.64	212,251,553.12	215,342,637.09
GM	27,270,904.27	78,851,726.78	80,463,638.36	82,148,770.24	90,951,459.33
OP Expense				, ,	, ,
Marketing salaries	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
Distribution costs	1,920,000	1,920,000	1,920,000	1,920,000	1,920,000
Mall intercepts	280,000	280,000	280,000	280,000	280,000
Brochures	300,000	300,000	300,000	300,000	300,000
Radio Add	1,167,660	1,167,660	1,167,660	1,167,660	1,167,660
Digital Ads	15,819,337	15,819,337	15,819,337	15,819,337	15,819,337
Customer support	40,000	40,000	40,000	40,000	40,000
T&D	90,000	90,000	90,000	90,000	90,000
R&D	50,000	50,000	50,000	50,000	50,000
Marketing Promotion	784,167	784,167	784,167	784,167	784,167
Dep- plant equipment	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Indirect manufacturing Labor	150,000	150,000	150,000	150,000	150,000
Dep- building	1,350,000	1,350,000	1,350,000	1,350,000	1,350,000
Electricity	1,753,481	1,753,481	1,753,481	1,753,481	1,753,481
Factory Maintenance	85,000	85,000	85,000	85,000	85,000
Customer Services Cost	2200	2200	2200	2200	2200
Total Operating Expenses	27,091,845	27,091,845	27,091,845	27,091,845	27,091,845
EBT	179,059.63	51,759,882.14	53,371,793.72	55,056,925.60	63,859,614.69
Taxation @31%	55,508.49	16,045,563.46	16,545,256.05	17,067,646.94	19,796,480.56
Earning After Taxation	123,551.14	35,714,318.68	36,826,537.66	37,989,278.67	44,063,134.14