

## Can Leasing of Automobile be a Sustainable Way Out?

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### **Abstract:**

This has been seen in last few years, that government is searching a way out for the control of air pollution caused due to automobile transportation. Various steps are taken by the government and National green tribunal (NGT) to cope up with the menace of air pollution. At the same time academia and Industry is also focusing on the issue largely through adopting various business models. This paper is based on the review of various business models adopted by industry and there pros & cons. In this paper focus is on the less talked business model i.e. leasing of car, which is making its ground in Indian automobile market. The paper attempts to highlight the benefit of leasing in sustainable development of society and review the working of leasing operator in India.

**Keywords: Air Pollution, Automobile, Leasing, Sustainability.**

### **1. Introduction**

Today, the road transport sector is used daily by people and business across the globe and it generates nearly 2% of the European GDP. (Lisiana et al, 2016) In India the conditions are approaching the same .Road transport is therefore a vital part of any countries economy. At the same time road transport contributes to the increase in fossil fuel prices and unsustainability. It increases emissions and places a large amount of pressure on natural resources. There is a growing consensus that fossil fuel use in the automobile industry needs to be vastly scaled down from what it is today in an effort to reduce air pollution and carbon footprints. Emissions from the transport sector also contribute to various other environmental and health effects, such as respiratory diseases, allergies and cardiovascular disease (Curtis et al, 2006)

The World Health Organization (WHO) estimates that as many as 1.4 billion urban residents in the world breathe air exceeding the WHO air quality guidelines. The health consequences of exposure to dirty air is around 2.0 to 5.7 laces representing about 1.4 to 1.1 percent of total annual deaths. The adverse effects of air pollution are more pronounced in the developing countries. Currently, in India, air pollution is widespread in urban areas where vehicles are the major contributors and in a few other areas with

high concentration of industries and thermal power plants. The rapid increase in urban population has resulted in unplanned urban development, increase in consumption pattern and higher demands for transport, energy, other infrastructure, thereby leading to pollution problems. It is the vehicular pollution, both diesel as well petrol-induced, which continuous to be the major problem for the Indian cities, which has the highest number of automobiles in the country. Vehicular emission constitutes a very important component in air pollution in Indian cities which emit air pollutants at a very low height. In Indian cities there are vehicles continuously increasing on the roads. In India, the number of motor vehicles has grown from 0.3 million in 1951 to approximately 50 million in 2000, of which, two wheelers (mainly driven by two stroke engines) accounts for 70% of the total vehicular population. Two wheelers, combined with cars (four wheelers, excluding taxis) (personal mode of transportation) account for approximately four fifth of the total vehicular population. The problem has been further compounded by steady increase in urban population (from approximately 17% to 28%) during 1951-2001 and larger concentration of vehicles in these urban cities specially in four major metros namely, Delhi, Mumbai, Chennai and Kolkata which account for more than 15% of the total vehicular population of the whole country, whereas, more than 40 other metropolitan cities (with human population more than 1 million) accounted for 35% of the vehicular population of the country (CPCB) . The total number of vehicles in major Indian cities in 1990 is 19152 thousands, 30287 thousands in 1995 and 53100 thousands in 2000. And now about 80000 to 85000 thousands of vehicles exist in major Indian cities. (Kumar, 2012)

In order to make up with the present situation ,industry and academia is trying to build an business environment which can be based on the principles of sustainability and the search of solution will be based on the Environment, Social and Economic viability i.e. as per the principles of sustainability .With the introduction to the current scenario the next part of the study covers the various business models adopted with their pros & cons in the second part ,while the third part of the study is concentrated on the various concerned issue along with the suggestion of way out with the aid of leasing .the section also deals with the knowhow of leasing and its benefits .The last section belongs to the conclusion part which favors the implementation of automobile leasing in India.

## 2. Current Business models

The solution to the situation can be tracked with the elementary knowledge of the various business models being adopted to fulfil the need of the consumer. Most of the models discussed are popular in Indian automobile market where as few business models are still not so popular .It is not only the types of cars and financial models that are different; the variation of how they are accessed and used by the customers i.e. Business model also bring their particular challenges and opportunities. Now we will focus on a few well-known and established alternatives for daily transport.

*Regular purchasing or owning a car:* This means that the users are not locked into any limited ownership period, so the car is always available for their own use or to sell at any time. However, when the car is driven, the depreciation (reduction in value) burdens the car owner (Clark, 2015). As a private person, purchasing a car could include a “subscription” for service and maintenance, but the owner is as a whole responsible for the various expenses involved like insurance, maintenance, parking, Taxes etc. This model helps the consumer to have the feeling of ownership, but at the same time it leads to various uncertainties like frequent modification by manufactures, fast depreciation of

product, risk involved in the residual cost at the time of switch over and regular government reforms regarding emission control. Compared with the other models, in this model the cars running with conventional fuel like gasoline, causes the most emission from the manufacturing and use phases of the life cycle.

One of the solution to this problem is to switch over to the ownership of Plug-in hybrid vehicle (PHEV) or the Battery Electric vehicle (BEV), but the problem with this type of popular adaption is that still the electricity needed to charge the battery is taken from the conventional source of power generation which emits high levels of CO<sub>2</sub>. Also the negative contribution from electric cars is caused by the use of scarce materials in lithium batteries.

*Car Sharing or Car Pooling:* It exploits the strategy of a membership-based service that offers the user short-term access to a top quality well-maintained, new car with a minimum of fixed costs and other obligations. Members can reserve a car from fleet that is parked at central locations within a city, usually near metro and train stations (Baptista et al., 2014). This model is quite successful in big cities of foreign countries. Various companies are working on this module.

Car pooling means that people should plan their travel routes, which often results in decreased mileage by itself, where they could plan to use car pooling combined with the use of alternative means of transport, such as train, bike or walking to reach their final destination. A benefit of car pooling in bigger cities is the opportunity to park within the city at certain assigned free parking slots for car pooling cars. In smaller cities and towns, though, this advantage is smaller due to the relative high accessibility of parking slots. At the same time persons involved in this type of models still need some other source of transportation for activities other than the routine activities for which they have gone through the pooling pact. This again need the personnel transportation means. (Lisiana et al, 2016)

*Taxiing:* It is a service that includes a car and a driver for a small group of passengers, quite often as a non-shared ride. The driver brings passengers from door to door with high flexibility. This also makes the taxiing a good complement to public transport (Aarhaug and Skollerud, 2014). Still this does not fulfil the requirements as and when required.

*Car Leasing:* Car leasing offers cars for an agreed amount of money at a fixed period where the cost of leasing demands upon the driving range in the agreement. Leasing is often seen as an alternative way to finance the car rather than a new business model. Nevertheless, in this article leasing means “operational leasing” that includes a fixed monthly payment including a guaranteed residual value, service, maintenance, etc. For the buyers, the leasing option provides lower individual payments, and its contract is often easier to qualify for than a car loan. Leasing allows the buyer to return the car and select a different model when the lease term is expired. It also allows a buyer to drive a new car for a few years without being exposed to the risk of selling a used car and allow them to buy the used car when the leasing period has ended. For the seller leasing generates regular income for a longer period of time compared with a regular purchase and allows them to sell the car for remaining value after the leasing period. (Lisina et al, 2016)

This section of paper has highlighted the various business models adopted for the personnel transportation need along with its pros & cons. The next part of the study

deals with current problems and a way out for the same, through the detail understanding of the car leasing.

### **3. Understanding Car Leasing:**

In an automobile lease contract a financial institution (lessor) buys a new vehicle from the manufacturer's franchised automobile dealer and leases it to a person or a firm (lessee) in exchange of a series of lease payments.

The most common type of automobile lease contract embeds two options: an American put option giving the lessee the right to extinguish the contract before expiration(cancellation option): a European call option to buy the vehicle for a predetermined residual value at the final date, in place of returning the vehicle to the lessor(purchase option)( Gamba and Rigon,2008)

Several factors can be attributed to the growing popularity of leasing; the most common of which is that it allows consumers to purchase a vehicle with more features and with greater constraints on consumers' discretionary income, the benefits of leasing make sense. But consider the following—vehicles are also becoming more technologically sophisticated. Options that used to include power windows, door locks and cruise control have given way to keyless entry and ignition systems, navigation technology and integrated ports for mobile devices—Beginning in mid-2014 in the U.S, and Canada, General Motors is planning to incorporate Wi-Fi technology through an embedded 4G LTE connection on several of its 2015 models to make each vehicle a “hot spot” on wheels. Developments in technology go well beyond “gadgets”, however. Consider the “practical” development of an automatic start/stop function in the 2013 Audi A6 that boasts improved fuel economy. These functional advances that are occurring with increasing frequency are reminiscent of the personal computer industry and will likely contribute to shorter cycle times between vehicle acquisitions for many consumers. And since automobile technology developments are only likely to accelerate, the leasing option will continue to provide consumers with the most appealing means to drive a new car, more frequently, with leading-edge technology.

Of course, a potential downside of technology is an increase in the probability that more things could go wrong as the vehicle matures. Potential repair bills that could result for many consumers further underscore the value proposition associated with leasing.

With the number of projected leasing customers continuing to increase, banks and captive auto finance companies must ensure they have a well-designed customer experience lease strategy throughout the entire customer journey. Such a strategy can help support long-term customer retention and loyalty and serve as a springboard to capture additional market share as well as help to offset potential regulatory risk issues. Automobile leasing is on the rise in US and European market. In 2012, 22% of all new vehicles registered in the U.S. were leased, according to Edmunds.com—that figure has jumped to 26% through the first five months of 2013. Furthermore, ALG, the Santa Barbara, California based organization that provides residual value services for the industry, estimates the lease penetration for the brands it tracks will increase by 15% over 2009 levels between now and 2016. (www.pwc.com)

### **4. Aims and Objectives:**

The purpose of this study is to understand the problem presently faced by the consumers of Indian car industry and to find the way out with the help of car leasing. For this reason first the problem is tried to understand.

The focus of today's automobile sector especially passenger car division is mainly on the environmental pressure. In metros like Delhi & NCR, the pollution status is on alarming stage, various reports focus that the main culprit is the transportation pollution. The issue is pointed with the reference of the ban on the all diesel vehicles over ten years old from plying in Delhi and NCR. This order of NGT [National Green Tribunal] is in furtherance of the NGT's order dated November 26, 2014 by which it had directed that "all vehicles, diesel or petrol, which are more than 15 years old shall not be permitted to ply on the roads".

Automobile manufacturers are dealing with dual problem of reducing the emission as well as facing various government regulations imposed, making the automobile market ambiguous. Along with this the main supply chain partners i.e. consumers which previously coping up with the problem of shorter product life due to frequent technological advancements, are also get effected majorly due to new government regulations regarding the life of vehicles. The various problems can be summarized as follows:

- Environmental Issue regarding Transport pollution due to Automobiles
- Government legislation
- Shorter product life cycle in Automobile sector
- Unorganized secondary market

Getting solutions of the problem stated, through Sustainable approach which aims to reduce pollution effects, reduce the impact of government regulation on end customer, reduce the effect of shorter Product life and proper closing of loop without entering to unorganized secondary market.



**Figure 1. Sustainability through Leasing**

The solution could be through adopting leasing as business model in India automobile sector as leasing works on the product –servicing system (PSS) thinking. In traditional business models selling product (physical goods) used to be the normal way to do the business. PSS on the other hand, offers not only a product but also the provision of the "function", where you pay for the result rather than the product. (Lindahl et al., 2014). PSS offers new business model designs, where companies might not offer any ownership in these PSS-models but are responsible for maintenance, repair and control (Tucker and Tischner, 2014).

Few companies in India are adopting leasing as the business model and are working on the approach of PSS i.e. they are not only providing cars on lease but also making efforts like Green plan as adopted by Lease Plan India (LPIN) a leading company providing cars on lease. Green Plan is based on the belief that companies can, and should, play a vital role in the reduction of carbon emissions and other greenhouse effects. Besides creating awareness, LPIN will like to take tangible steps to contribute to

the environmental sustainability– one of the missions being: A tree for every car. Along with this companies are providing basic services like maintenance, repair, Insurance service, road side assistance etc.

### Conclusions:

With the understanding of the various business models, this paper attempts to build a general awareness about the car leasing in Indian perspective. An effort has been made to understand the effect of air pollution caused by automobiles and the various steps taken by the government through legislations. The paper also summarizes the various problem associated with the car consumer and supports car leasing for getting solution for the said problems.

This paper is purely based on the review of various literature and needs to be validated through designing and evaluating a business model involving car leasing in Indian perspective. An improved model is to be design which includes basic PSS principles and along with that a better method of vehicle return will be planned. This work is the initial part of research and further work is in progress and will be presented in feature.

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