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### **A Study on Innovative Business Models in Automotive Manufacturing Sectors in Chennai District**

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#### **ABSTRACT:**

Business model design is a key decision for a new firm entrepreneur and a crucial one. Finding innovative business models for managers charged with re-thinking an old model with new technology. This article provided briefly insights into the current innovative business models, components and the relationships with other matters. Automotive industry in Chennai introduced emerging and innovative business models located in the district area companies. Chennai is 'Detroit of Asia' due to the presence of major automobile manufacturing units and allied industries around the city. Heavy Vehicles Factory has been established in Avadi to produce military related vehicles with sensors. Also launched Combat Vehicle Research & Development Establishment (CVRDE) for engine testing facility. The present study focus on the Major Automotive Manufacturing companies and its new business strategies to perform in the future. The present study focuses on innovative business models adopted by various plants and sales volume forecasting up to the year 2020. And finds that the total volume may completely depends on Chennai plant of 60% only. It also covers the export volume from the Chennai plants. The study also explores the adopting technology in present automobile industries. Chennai is hub for transport in South India. The present location chooses for this study is exactly suitable for the new inventions and advanced technologies for Automobile Industry and attracts the FDI from other countries competitively. Now, government of India allocate budget for accepting innovative models adopted by some MNCs also.

**KEY WORDS:** *Business model, innovation, entrepreneur, strategies, manufacturing units.*

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## **INTRODUCTION:**

Chennai is home to around 35-40% of India's total automobile industry. The automotive industry in India is one of the largest in the world with an annual production of 23.96 million vehicles in FY (Fiscal year) 2015-16, a growth of 2.57% over last year. The automobile industry accounts for 7.1% of the country's gross domestic product (GDP). The two wheelers segment, with 81% market share is the leader of the Indian automobile market, growing middle class and a young population. Government of India and the major automobile players in the Indian market are expected to make Indian a leader in the Two wheeler (2W) and Four wheeler (4W) market in the world by 2020.

**Market Size:** The industry produced a total 14.25 million vehicles including PVs, Commercial vehicles (CVs), three wheelers (3W) & (2W) in April-October 2015, as against 13.83 in April-October 2014, registering a marginal growth of 3.07%, year-to-year. The sales of PVs grew by 8.51% in April-October 2015 over the same period in the previous year. Medium & Heavy commercial vehicles (M&HCVs) registered very strong of Light Commercial Vehicles (LCVS) declined by 5.24% during April-October 2015, year-to-year.

**Investment:** In order to keep up with the growing demand, several auto makers have started investing heavily in various segments of the industry during the last few months. The industry has attracted Foreign Direct Investment (FDI) worth US\$13.48 billion during the period April 2000 to 2015, according to data released by Department of Industrial Policy and Promotion (DIPP). Major investments and development in the automobile sector in India are as follows:

- Ford plans to manufacture in India two familiar of engines by 2017, & 2.2 liter diesel engine code named panther, expected to power 2,70,000 Ford vehicles globally.
- General Motors (GM) plans to invest US \$ 1 billion in India by 2020.
- BMW (Bayerische Motoren Werke AG's) local unit has announced to procure components from several India based auto parts makers.

**Government Initiation:** The government of India encourages Foreign Investment in the automobile sector and allows 100%. FDI under the automatic route.

- Indian government aims to make automobile manufacturing the main driver of "Make in India" initiative, as it expects the passenger vehicles market to tripe to 9.4 million units by 2026.
- Government has announced plans to provide credit of Rs.8,50,000 crore (US \$127.5billion) to farmers, which is expected to boost sales in the tractors segment.

- Plans to promote eco-friendly cars in the country.
- Government has formulated a scheme for faster adoption and manufacturing of electric and hybrid vehicles I India under the National Electric Mobility Mission 2020.

**Manufacturing facilities:** The majority of India’s car manufacturing industry is evenly divided into three ‘clusters’ around Chennai is the Southernmost and largest, with a 35% revenue share, accounting for 60% of the country’s automotive exports and home of the operations of Heavy Vehicles Factory, Engine Factory , Avadi, Ford, Hyundai, Renault, Mitsubishi, Missan, BMW, Hindustan Motors, Caparo, Mini and Datsun.

### **Passenger Vehicles**

BMW-Chengalpattu, Chennai

Ford-Maraimalainagar, Chennai

Hyundai Motors-Sriperumbatur, Chennai

Mitsubishi-Tiruvallur, Chennai

Renault Nissan-Oragadam, Chennai

### **Commercial Vehicles**

Heavy Vehicles Factory, Avadi

Engine Factory, Avadi

Bharat Benz-Oragadam

TAFE Tractors- Chennai

**Exports:** India’s automobile exports have grown consistently and reached \$4.5 billion in 2009. By 2011 & 2012 Ford and GE announced its plans to export about 50,000 cars in Chennai only.

#### **Top 10 export Destinations:**

<b>Rank</b>	<b>Country</b>	<b>Value US \$</b>	<b>Share</b>
1	United States	1.2 billion	8.4%
2	Mexico	1 billion	6.9%
3	South Africa	888.8 million	6.1%
4	United Kingdom	637.4 million	4.4%
5	Srilanka	596.9 million	4.1%
6	Bangladesh	592.1 million	4.1%
7	Turkey	580.4 million	4%
8	Nigeria	546.8 million	3.8%
9	United Arab Emirates	433.6 million	3%
10	Colombia	428.9 million	3%

***Innovation Business Model:*** Many manufacturers and models (GMs Volt, Fords & others) despite being relative late comers to the green sector. However, the commercial vehicles sector has been vehicles developed based on alternative fuels.

***1. Green Revolution:***

- Availability of customers who are early adopters in certain markets, willing to pay a premium price for such leading edge technologies.
- Celebrity endorsements to hybrid vehicles
- Consumer activism increase environmental awareness among consumers leading to demand for green vehicles.

***2. From car ownership to mobility:***

BMW noticed that car ownership is getting more and more difficult in large cities. Executing a business model that is about selling cars is quite challenging in such markets. BMW business model is enabling mobility in different ways.

***3. Business model validation:***

Ford & General Motors the drive now service in Sanfrancisco is a large business model validation experiment.

***4. Partnerships:*** Hyundai chooses to work with multi key partners to provide value to the customers. It's a win-win relationship.

***5. Organized as a start-up:*** The drive now business model has been set up through the ventures capital company, having the ability of a start-up. This is a good example of how corporate innovation and entrepreneurship can be organized.

***6. Bricks and Clicks model:*** A bricks and clicks business model or called as clicks and bricks is one where a company conducts business both offline and online. Offline refers to doing business in person having store locations or buildings, called as bricks. The word 'clicks' relates to the clicking of a computer for online purchases and transactions.

***7. Bait and Hook model:*** The Bait and Hook business model also called Razor and Blades business model is founded on the premise that a company can stimulate customer excitement and interest by giving away or offering low prices on products. The goal of this model is to generate more profit through making products seem to applying "Baiting" and then "Hooking" customers into liking your products.

**8. Subscription business model:** A subscription business model is where a company charges you monthly or annually fee that gives you access to their goods and services.

**OBJECTIVES:**

- ⇒ To identify various business models in the field of Automotives plants in Chennai location.
- ⇒ To find the support of high technology and diffusion strategies adopted by the R & D.
- ⇒ To find the sales volume forecasting.

**METHODOLOGY:** Exploratory and qualitative research is selected for this study and various articles, research papers have been studied in this regard.

**Study Area:** Ennore, Maraimalainagar, Chengalpattu etc.,

**Sample Size:** 20 employees from each plant related to Technical Designers and R & D Employees. (6 X 20 =120)

**Tool:** Direct contact in the plants for some R & D people sent mails.

**Innovative business models adopted by various plants:**

Sl. No.	Name of the model	Ford (n=20)		BMW (n=20)		Hyundai Motors (n=20)		Mitsubishi (n=20)		Renault Nissan (n=20)		Total (n=100)	
		Tot	Mean	Tot	Mean	Tot	Mean	Tot	Mean	Tot	Mean	Tot	Mean
1	Innovative strategy	102	5.01	81	4.05	102	5.1	102	5.1	51	2.55	438	4.38
2	Mechanisms	51	1.275	92	4.6	62	3.1	104	5.2	62	3.1	371	3.71
3	Applying Techniques	87	4.35	82	4.1	100	5	101	5.05	93	4.65	463	4.63
4	Better Design	93	4.65	54	2.7	102	5.1	108	5.4	90	4.5	447	4.47
5	Validation	55	2.75	49	2.45	90	4.5	67	3.35	42	2.1	303	3.03

**Sales volume forecasting:**

Region/Year	2001	2005	2010	2020
North America	19.6	21.5	23.0	24.0
Western Europe	16.6	15.0	15.0	15.0
Asia Pacific	12.4	18.5	21.7	30.0
Central Europe	2.5	3.0	4.5	10.0
South America	2.4	3.0	4.0	7.0
Middle East	1.3	2.0	3.0	3.0
Africa	0.8	1.0	5.0	12.0
TOTAL	55.6	64.0	26.2	101.2

**FINDINGS:**

From the Above table the researcher find that the sales forecasting all over the world shows North America is majorly demanded for automobiles from Chennai area in 2001 and expected 24.0% in 2020. And African Countries shows least in 2001 and estimated to increase 12.0% in 2020. Also the

researcher finds that the R & D employees and plant Technical Engineers, Designers adopted high level of technologies from Japan, Mexico, Brazil etc., This study finds that the total export volume may completely depends on Chennai plant only i.e. 60% of Indian Automotives are exported from Chennai plants only.

**CONCLUSION:** The creation of a corporate innovation process, a new organizational structure and focus for the R & D center portfolio management of R & D work, collaborative research partnering-ensure that above plants are well positioned to provide critically needed technologies. These developments supports the company's renewed thrust toward innovative products, process, and services etc. that will meet the needs of and delight customers around the world.

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