The automotive industry, one of the largest and most important sectors of the global economy, is vital to production, innovation, trade, and transportation. It covers the design, development, manufacture, marketing, sales, and after-sales support of motor vehicles, including passenger cars, trucks, buses, motorbikes, and increasingly electric and driverless vehicles. Large international manufacturers, also referred to as “Original Equipment Manufacturers” or OEMs, have historically controlled the market. These companies are supported by vast supply chains of manufacturers of parts and components. Mass production, economies of scale, and dealership-based sales were given top priority in traditional auto business models. Nonetheless, a modern revolution in the industry is being propelled by changes in the consumer, environmental, and technology spheres.

The following are some of the main trends affecting the business environment:

• Electrification: EVs are expanding quickly as a result of stricter pollution standards and rising demand for environmentally friendly transportation.

•Automation & Connectivity: Creation of intelligent features, autonomous driving, and connectivity between vehicles and infrastructure.

•Shared Mobility: The growth of subscription-based ownership models, ride-sharing, and car-sharing.

Standards for Automated

1. Quality and Safety

• Adheres to all safety regulations and industry standards (such as ISO and NCAP crash ratings).

• Zero or very few defects per unit are the goals of Six Sigma/lean quality.

• Dependable operation across a range of conditions (trail, load, and weather).

1. Cost & Efficiency

• The car or component was manufactured within the budgetary constraints;

In comparison to industry norms, the cost per unit was competitive.

Efficient use of energy, materials, and labor.3. Customer Satisfaction

• Meets customer needs for design, comfort, and usability. High consumer satisfaction index (CSI) or net promoter score (NPS).

Few warranty claims or recalls.

1. Sustainability.

Compliance with environmental regulations (e.g., emissions, recycling standards).

A reduced carbon footprint both during production and consumption.

The application of environmentally friendly or recyclable materials

.5. Delivery & Timeliness

• Milestones for prototype, testing, and production launch were accomplished.

Timely delivery to clients and dealers.

• Fast turnaround times for repairs and replacement parts. 6. Innovation & Competition

Making use of advanced technology (EV, self-governing systems, intelligent features);

distinguishing oneself from competitors by design, performance, or characteristics;

obtaining positive comments from industry professionals and the media.