IJBES
Business Ecosystem & Strategy

Business Ecosystem & Strategy

IJBES VOL 3 NO 4 ISSN: 2687-2293

Available online at www.bussecon.com
Journal homepage: https://www.bussecon.com/ojs/index.php/ijbes

The role of digitization in automotive industry: The Indian perspective

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ARTICLE INFO

Article history:
Received 03 November 2021
Received in rev. form 12 Dec. 2021
Accepted 17 December 2021

Keywords:
Automotive; Digitization; Industry; Original Equipment; Manufacturers.

JEL Classification:
D22, D23, D61, L62

ABSTRACT

The automotive industry is standing on the edge of the digital era. Digitization is the motivating force behind this change and is influencing every aspect of consumer behavior. Forces behind this digital transformation are the new technological possibilities which range from comprehensive connectivity, 3D printing, and the social network of virtual solutions as well. The impact of digitization can already be seen in today's world and also in the automotive industry of India. Digitization will play an imperative role in the upcoming years such as artificial intelligence. This paper is primarily concerned with the recent trends of digitization and it also tries to measure the impact of digitization on the automobile supply chain between automobile manufacturers and suppliers. It is discussed the thrust on the potentialities of digitalization in the automobile industry of India and its impact on the overall performance of the industry. The study concluded that digitization has a significant impact on the automotive industry of India. Today, all the business practices become digitalized and foreign players use advanced technology in their products as compared to the national automotive players. The selling of automotive products is increased after the adoption of more advanced technology. It upgrades the quality of products and its service after sale which ultimately leads to the customer and brand loyalty used by the consumers.

Introduction

Digitization is the process of converting analogue information like text, picture, sound etc. into digital format. As digital competencies augmented, it became easier to capture and store every aspect of life in some digital form; we have been getting nearer towards the networked interdependence of everyday objects. The digitization has proven impact on contemporary world in the form of worldwide exchange of information among multiple connected devices. In fact, digitization is the automation of a process by conversion of analogue information into digital format. Digitization consists of technology up gradation, information and data transfer and online payment system (Mehta, S. & Rastogi, A.K. 2017).

Demonetization has played a major role in promoting the cashless economy in India, it has boosted up the trend of payments through digital portals like Paytm, Freecharge, Mobikwik, and more. People are now more into using application, from paying bills to book tickets to purchasing from supermarkets, they want everything just a click away. If we talk about how industries are adapting digital methods for example, banking sector, they have changed the way they bank, by introducing facilities like online banking by which customers can check their account status without going to banks, advanced payment systems, 24*7 Service. In E-commerce, people now search and gain knowledge online about products instead of going to the respective retail outlets, if they do not like the product, they try and return and it's also cost effective because it eliminates the levels in the distribution channel. In Education, everyone uses laptop and tablets to study, learn, grow and teach to make complex processes simpler by showing videos or through searching on the internet which gives access to the real time information, smart boards and even online classrooms, so one can access it anytime they

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http://dx.doi.org/10.36096/ijbes.v3i4.277

Citation: Khan, R., Taqi, M., & Saba, A. (2021). The role of digitization in automotive industry: The Indian perspective . *International Journal of Business Ecosystem & Strategy (2687-2293),* 3(4), 20-29. https://doi.org/10.36096/ijbes.v3i4.277

want to learn. Most of the industries including automotive industry have also taken steps towards the way of digitalization, and it has been massively influenced by the digital technology like 3D Experience, Car customization, Product information, Sound of the engine, VR enabled motion platform, In order to meet demands of the customer according to the changing business environment, companies have adopted new techniques to approach customers, making and implementing new business models and Touchpoint strategies (Prabhjit Didyala, Accenture 2016), but with new opportunities, there are certain challenges which comes with it. In context to India, as it is still a developing economy and faces some infrastructural issues within the country like lack of digital infrastructure, Security of datais very important because digital medium is very unsafe and data vulnerability is a big issue especially in financial transactions, Improving IT Literacy is a great task in two or three tier cities (DigitalIndia.gov.in). In general, the industry is facing, loss of control over the customer relationship, threat of commoditization and increased competition. To deal with challenges companies should start developing end to end response (Ernst and Young, 2011).

Digitization plays a significant role in automobile manufacturing, but digitized automobile industry manufacturer. OEMs dealers have been forced by digitized automobile world to reconsider their conventional strategies and business paradigms. In this digital world, it is necessary for Indian automobile industry to stand with world automobile industry. Automotive industry consists of four main parts they are the manufacturer, OEM's, Dealers and the customer. Digitization enables manufacturer, OEMs as well as customers to get connected in real-time and get benefitted. Automotive manufacturers balance itself at its value prepositions like its product design and utility, mass customization and product characteristics. The OEM's make balance between demand and supply of equipment to the manufacturer. The dealers complete the process of selling product to the customers and ensure satisfaction regarding vehicle. Everything should be digitized so it'll be easy for the customer, manufacturer, OEM's, and dealers to make decision (Kalsi, R.S., 2016).

The increasingly connected automotive will alter business strategies and paradigms from selling a product to providing a customer experience centric value preposition. In the next five years, advanced automotive applications will play a crucial role in upgrading consumer experience in automotive industry. Automotive digitization consists of all quality requirements such as usability, performance, safety and security, cyber security and adaptability, neglecting to meet any of above quality requirements can result in expensive recalls and lawsuits. Artificial intelligence will help business to ameliorate the bottom line of an automaker (Frost & Sullivian 2016). Digitization is unlocking more than US$2.3 billion in new value. OEMs acknowledged the power of digitization to modify their brands.

Many automobile companies have made moves towards digitizing their core areas of their existing value chain but this alone will not lead them towards long term success. Some companies are moving to implement fully digitized business models and preparing themselves for future perspective, when customer will buy final outputs and services not only a product. If OEMs fail to digitized themselves, they could go down 15 per cent of existing profitability and a significant extent of future opportunities (Koushik, 2015).

Even partial digitization will only buy them time. But by also moving at speed to build new digital business models, If OEMs fail to digitize themselves, they could go down 15 per cent of existing profitability and a significant extent of future opportunities (Accenture Report). Digitization contributes to GDP larger than standalone technologies. It asserts that 10 points rise in digitization yield and 74 per cent rise in per capita GDP, made an enormous share between rural and metropolitan India and the digital haves and have nots. Digitization will be essential to maintaining India's growth, global competitiveness employment generation, innovation and research and development (Columbia University Report). Digitization Strategy for automotive Supplier, underlying framework conditions needed to be created in order to fully utilize the potential and benefits of digitization, to recognize the associated risk as early as possible and to initiates counter measures to avoid those risks. Further the recommended action, the starting point is for the automobile industry its own digitization (Horvarth, 2015).

Digitization is an emerging issue among researchers, academicians, policy makers and government for its multi-disciplinary usefulness. India is also experiencing digitization process in nascent stage. The government has started various programmes and policies which are related to the digitalization process and its applicability among all the spheres of the life. There are numerous studies have been conducted on digitalization and its socio economic aspect at national as well as international level. As far as the present study concern, there is no specific study has found on the impact of digitalization on automotive sector of India. The present study is concern about the measurement of impact of digitization on Indian Automobile sector of India.

This study aims to (i) measure the impact of digitization on automotive industry of India, (ii) observe the challenges in the path of digitization in automotive industry, (iii) discuss the requisites of modern technology in automotive industry of India.

This paper will define the role importance of the digitization and how it can be implemented in the Indian automotive industry.

The purpose of the study is to figure out what effect digitization has on automobile service dealers. This will be conducted by investigation of what challenges service dealers are facing and how digitization affects their business patterns.

i. What type of issues are automotive service providers confronting in compliance with the digitization?

ii. How digitization affects automotive service dealers and their business models?

Literature Review

Automotive Industry of India

Indian automotive industry contains two wheelers, cars, trucks, buses, three wheelers etc plays a prominent role in the growth of the Indian economy. India has established itself as Asia's 4th largest automobile exporter. India is anticipated to get top of the world on car volume by 611 mi. automobiles on the nation's road by 2050. Indian automobile industry is the 7th largest automobile industry in the world. In order to enable them for digitized business, manufacturers, OEM's and dealers must address a number of issues that ranges from expediting vehicle development, lowering complexities. Capital spending in digital technologies and benchmarking customers experience traditional methods and processes hold established manufacturers, OEM's and dealers get back on their way to establish a digitized business (Murthy, M., 2016).

Manufacturer and OEMs are required to consider the digitization as an essential part of their organization's DNA if they are able to take advantages of the potentialities that digitization has to offers. Tesla is a prime example in this regard. Tesla designs their car advance; they place application programs and customer expectations at the cutting edge of design. The connected automotive has been developed into an app on wheels; customer-oriented products are viable for large-scale production and open development forums promote innovation. Tesla customers are contented because they don't need to visit the dealer to access diagnostics on their cars instead networks are put into practice to prognosticate problems, disperse updates and upgrade existing application and even make new functions accessible.

In 2020, India was the fifth-largest auto market, with 3.49 million units combined sold in the passenger and commercial vehicles categories. It was the seventh largest manufacturer of commercial vehicles in 2019. The two wheelers segment dominate the market in terms of volume owing to a growing middle class and a young population. Moreover, the growing interest of the companies in exploring the rural markets further aided the growth of the sector.

India is also a prominent auto exporter and has strong export growth expectations for the near future. In addition, several initiatives by the Government of India and major automobile players in the Indian market is expected to make India a leader in the two-wheeler and four-wheeler market in the world by 2020.

Domestic automobiles production increased at 2.36 per cent CAGR between FY16-20 with 26.36 million vehicles being manufactured in the country in FY20. Overall, domestic automobiles sales increased at 1.29 per cent CAGR between FY16-FY20 with 21.55 million vehicles being sold in FY20. In FY21, the total passenger vehicles production reached 22,652,108.

In September 2021, the total production volume of passenger vehicles (except for BMW, Mercedes, Tata Motors & Volvo Auto), three wheelers, two wheelers and quadricycles reached 2,125,304 units. Two wheelers and passenger vehicles dominate the domestic Indian auto market. Passenger car sales are dominated by small and mid-sized cars. Two wheelers and passenger cars accounted for 80.8 per cent and 12.9 per cent market share, respectively, accounting for a combined sale of over 20.1 million vehicles in FY20.

In July-September 2021 quarter, the luxury car market registered sales of 8,500 units. Overall, automobile export reached 4.77 million vehicles in FY20, growing at a CAGR of 6.94% during FY16-FY20. Two wheelers made up 73.9 per cent of the vehicles exported, followed by passenger vehicles at 14.2 per cent, three wheelers at 10.5 per cent and commercial vehicles at 1.3 per cent.

Indian automobile exports stood at 1,419,430 units from April 2021 to June 2021 as compared to 436,500 units in April 2020 to June 2020. EV sales, excluding E-rickshaws, in India witnessed a growth of 20 per cent and reached 1.56 lakh units in FY20 driven by two wheelers. According to NITI Aayog and Rocky Mountain Institute (RMI) India's EV finance industry is likely to reach Rs. 3.7 lakh crore (US$ 50 billion) in 2030. A report by India Energy Storage Alliance estimated that EV market in India is likely to increase at a CAGR of 36 per cent until 2026. In addition, projection for EV battery market is forecast to expand at a CAGR of 30 per cent during the same period.

Premium motorbike sales in India recorded seven-fold jump in domestic sales, reaching 13,982 units during April-September 2019. The luxury car market is expected to register sales of 28,000-33,000 units in 2021, up from 20,000-21,000 units sold in 2020. The entry of new manufacturers and new launches is likely to propel this market in 2021.

Empirical Review

Johansson, S., (2017) discussed that the automotive aftermarket is an integral part for many automotive companies, however it faces several challenges in the coming years. The digital development and shifting customer behavior are disrupting the industry and threaten the long-term profitability of service dealers within the automotive industry. The study aimed to understand what impact digitalization has on automotive service dealers. This research identified a clear difference between independent and authorized service dealers, not only in terms of business model composition but also in the nature of relationship and information sharing with Original Equipment Manufacturers. The research further found ways for service dealers to increase their digital presence with comparatively low effort. Mehta, S. & Rastogi, A.K. (2017), in their study tried to measure the impact of digitization on Indian Automotive industry of India. It also focused on the challenges in respect to India's economy faced by industries like Low Purchasing Power as compared to other economies, acceptance of purchasing vehicles online, delivering delightful customer services and values.

It also aims to discuss the viable solutions like bringing customer awareness, educate the customers in technical aspects & some practices to promote the usage of digital methods in the purchasing process of automobiles.

A study highlighted that effective business performance depends on digital competitive factors and abilities for transformation in the light of digitalization. Their study also demonstrated the role of digital technologies on an effective supply chain management system with new technological components, cyber-security and automated vehicles in Automobile industry (Hacioglu and Sevgilioglu, 2019). In a novel study, the practical implications of blockchain and artificial intelligence for the digital transformation process of business organizations have been explained with contributions from the fields of accounting, management and human resources (Hacioglu, 2020).

Steven Peters et al (2016) in their study focused on scenarios for future manufacturing and the role of Digitalization of automotive industry. The study used the scenario technique to illustrate possible answers to the question, how future value chains of automotive industry will look like. In almost all cases, information and communication technology (ICT) plays a major role in future strategies to cope with the aforementioned challenges. On the one hand, ICT can boost the way to more efficient production of variants by utilizing smart manufacturing approaches, on the other hand ICT enables new features such as autonomous driving. Khan et al (2015) discussed about the conversion of print sources into digital format has improved speedily with couple of years ago. The social transformation began with the large implementation digital technology to come up with Procedures, sharing and controlling digital info. Conversion is a comprehensive method of conservation and access by which all the institution's assets are rearranged /converted into digital technology and making high grade/ superior quality replicas in digital format. Maiti, M. et al (2017) in their study stated that the performance of the services sector improved considerably since 2000 ahead.

Development in IT and ITES modify and automatic the business method. This resulted in overall improvement in each producing and services sectors. India's service sector and MSME phase have the high potential for future growth with digitization. The comprehensive growth of each India's services sector and MSME phase will provides a boost to the degree of trade and India's share with the assistance of digitization. Shukla, M. (2017), comments that the digitalization is not simply regarding concerning the business dealing from face to face to on-line, however it's concerning transformation of several sides of the business interactions and dealings and fragmented up into innovations too.

Growing technology, large purchasing power and rising competition mean that all industries will face/ confront development threat. India stands on the sting of growth in web and e-commerce activity. The digital economy has modified the operating of business in today's world. Kaul, M. et al (2017), stated that the impact of digitization on any country may be assessed through the idea of its effect on the government and on the economy, and on society as well. A significant amendment has been seen in each sector with emergence of digitization. The digitization has generated new job opportunities, led to the innovation and conjointly drove to the expansion of the economy i.e., GDP growth of the economy.

Developing a Critical Approach to Digitalization in Automotive Industry

Automotive manufacturing service dealers' approach to digitalization: Impacts on business models

The research has been conducted as a qualitative study with minor quantitative elements. The focus has mainly been on understanding how automotive manufacturing service dealers' approach to digitalization and how it will impact them and their business models. This study is exploratory and quantitative in nature. Secondary data is used for the purpose of presentation of data and analysis of the problem. Secondary data is originated from the various sources like reports of different automotive sector companies, report of special investigation team, newspaper and internet sources. The data collection sources are interviews of the industry officials; some published reportson the research topic; previous Research Papers on the research topic; web Searches; various Surveys on Consumer behavior; video references from Conclaves and Forums. These are the collection methods which are used as research instrument.

Digitization in Automobile Industry of India

The face of Indian automotive industry is being transformed through digitization. It has been changing the way of manufacturing and other process like marketing, sales and after sales services. Social media is influencing all kinds of industries, it influences consumer at every step of buying process, as well as industries could turn their customers into loyalist and proponents that they impact others decision in favor of particular brand (Batra, R., 2016).

OEMs and manufacturers must understand the significance of person-to-person marketing where peoples' recommendations are more valuable than conventional marketing. Social media must be an integral part of marketing strategies. Digitization enables producers and OEMs to create a fully customized experience for potential buyer which can turn them a potential client into a certain brand. OEMs who don't transform will lose touch with consumers and get in touch more with third parties (Kalsi, R.S. 2016).

Corporations could renovate their sales and marketing capabilities and could convert their digitally inclined consumers into loyal long – standing customers if only they keep in touch with their potential buyers across a range of channels.

Figure 1: Role of Digitization in Automotive Industry of India; *Source: Researcher Compilation*

Manufacturers and Original Equipment Manufacturer (OEM): Manufacturer is the Automaker and OEM refers to/is the acronym for Original Equipment Manufacturer. OEM is the authentic producer of component parts like tyres, headlamps etc. Role of digitization between manufacturer and OEM is that the manufacturer needs parts for manufacturing automobiles regularly so, after the adaptation of digitization, order of required parts automatically is placed to OEM when stock is low and OEM supply those parts on time. Also, payment will be on time with the help of digitization. Hence, manufacturing will remain smooth. If an automobile maker uses traditional methods, then the production will be affected because it will take more time. Use of digitization, thereby, reduces the working time as well as the work load.

Manufacturer and Dealer: Digitization plays an important role between manufacturer and dealer because a manufacturing unit fulfills the demand of several dealers. With the help of digitization manufacture has all the knowledge of demand of every dealer, because dealers upload their supply information on manufacturer cloud servers. Therefore, manufacturer does not require a dialogue with the dealer as the dealer receives the stock directly through the cloud servers of manufacturers. Other functions between manufacturer and dealer will be uncomplicated, like new product information, payment of stock, demand of product etc. and making use of digitization.

Dealer to End-customer: Today is the era of internet. If customer wants to buy anything he doesn't need to go to market. Like any other product, a customer can buy automobiles online. Dealer provides all required information and 3D pictures of the product on internet. Hence, a customer can access the information, can place order, get further information about the product and also make online payment. A dealer can provide these facilities to the customer with the help of digitization.

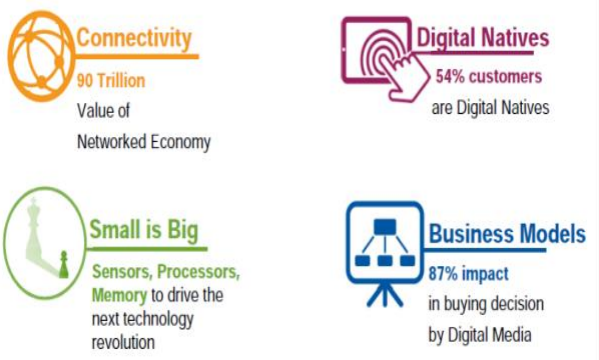

Figure 2: Key Drivers of Digitization; *Source: Gissler & Oertel (n.d.). Are you ready for pole position Accenture Report.*

The major key drivers of digitization are connectivity, digital natives, sensors, processors and different business models. These are the major components which help in overall manufacturing, supply, marketing, selling and servicing of automotive products. The technological advancement in global competitors make Indian automotive industry to take step towards digitization and technological enhancement in manufacturing sector. There are different business models and other digital native's make the automotive sector more advance and the competitors are very well developed in technology and other areas of manufacturing. The possible impacts of digitization on automotive sector in coming years have been shown in the following figure:

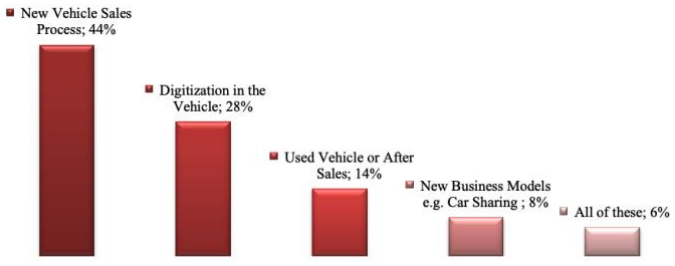

Figure 3: Future Impact of Digitization; *Source: Accenture Report on Automobile Sector*

The above figure shows the possible areas of automotive sector where the digitization may cause the significant impact in future. The effect of digitization will be shown in sales process of automotive sector as it reveals 44 per cent increase in selling after digitalization. The mechanism of operating the vehicles will be digitalized and it will affect positively and will lead to the positive advancement of operating system of automotive products. The service after sales is an important segment of automotive industry where the maintenance of vehicle is very crucial for the consumers and it makes the ultimate goodwill of the manufacturer. It will be increased by 14 per cent if the manufacturer adopts the full digital technique. The digitalization process will lead to the manufacturing of new business models and it will increase by 8 per cent.

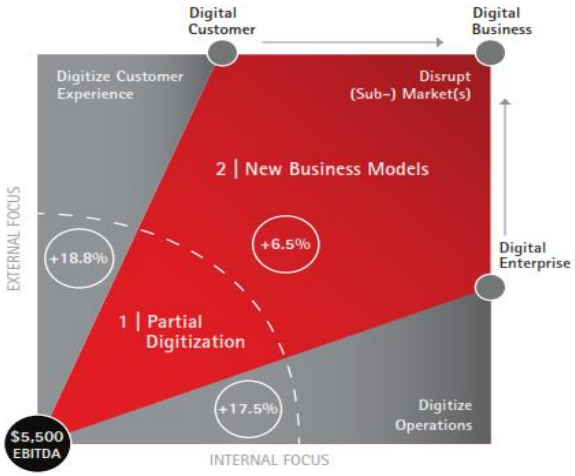

Figure 4: Digitization in Automobile Industry of India; *Source: Accenture Report on Automobile Sector*

Digitization in Automobile Industry of India

Partial Digitization: Be aware of/recognize EBIDTA possibilities through the digitization of extent value chain New/modern business patterns

New Business Models: Realize EBIDTA opportunities through development of new revenue streams enabled by a new value chain.

Digital Client: Implement digital technology to approach customers in a more sophisticated way to raise revenue and return.

Digital Enterprise/undertaking: Reduce the expenses of primary functions of extent value chain e.g. R&D as well as supporting function e.g. HR

Digital Business: Digitization of current business model or development of new business model is to generate profit based on digital technology.

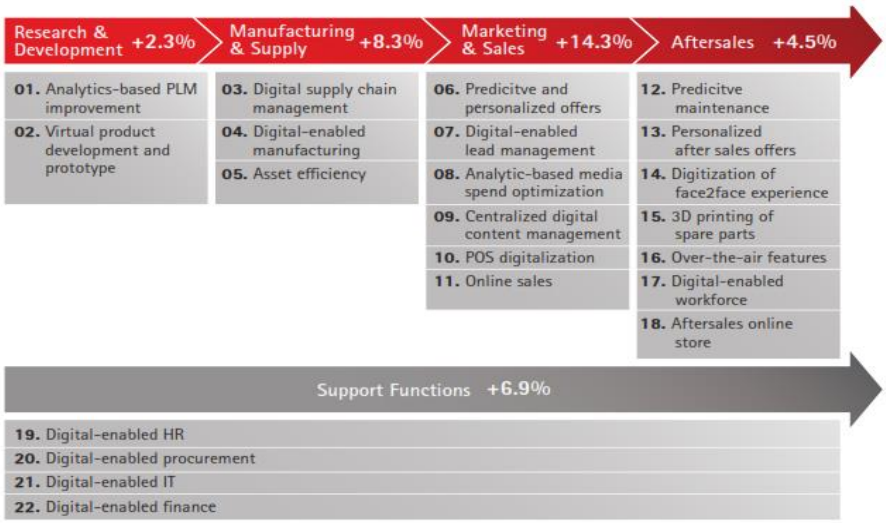

Figure 5: Segments of Automotive of India; *Source: Accenture Report on Automobile Sector*

Parially digitization of the existing value chain is critical to achieve true potential of digital value chain. We estimate, indeed, that by 2020 it could raise OEMs profitability/economic viability by 36.03%. Two dimensions need to be considered. First, the digital customer and his or her interaction with the OEM: digitizing the customer experience in marketing & sales and after sales contributes 52 per cent of the overall potential for partial digitization. And second, the digital enterprise: professionalizing such internal processes as R&D, manufacturing and supply, and support functions by digitizing them contributes 48 per cent. Even so, carmakers that limit themselves to partial digitization are unlikely to get as far as the finish line. And that's because, just as they have in other industries, digital disruptors are redefining what business success looks like in the auto industry.

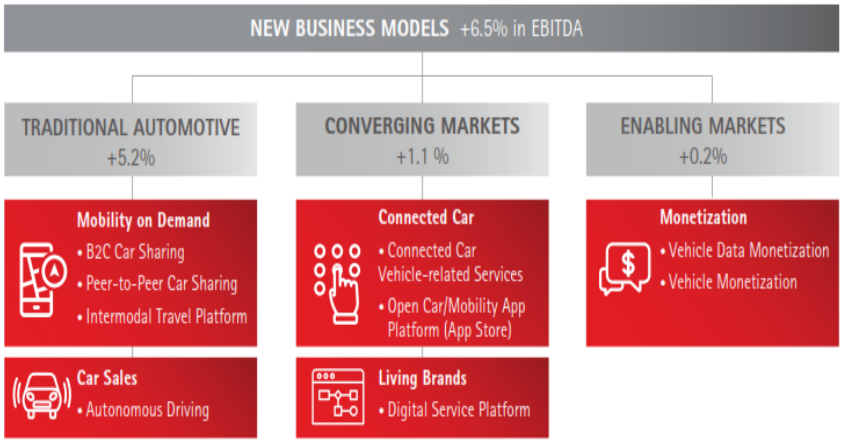

Figure 6: New Business Models in Automotive Sector *Source: Accenture Report on Automobile Sector*

The above figure presents the status of automotive industry of India after digitization. The traditional automotive industry has an impact of digitization where it increased by 5.2 per cent and mobility of demand is increased by leaps and bound. The sales of car in traditional automotive industry becomes more as compare to other segment of the manufacturing sector. The converging markets have slowly increased then performance as it was upgraded only by 1.1 per cent after digitization. It introduced many new tools and techniques in vehicle operating system like car mobility app, digital service platform, vehicle related services etc. The enabling markets are showing a constant growth in digitization at it was increased only by 0.2 per cent.

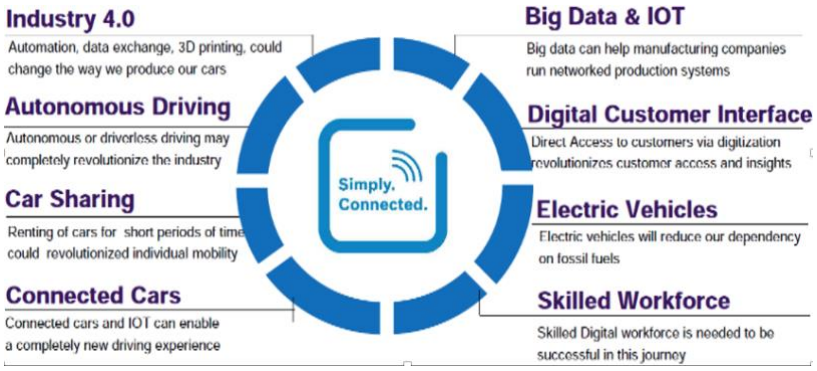

Figure 7: Technology is enabling the Digitalization Transformation; *Source: BOSCH Report on Automobile Sector*

Challenges Faced by Automotive Industry of India

The study identified many challenges which automotive industry of India faced during digitization:

i. Lack of Digital Infrastructure
ii. Low Paid Economy
iii. Security of Data
iv. Information Technology Literacy
v. Increased Competition
vi. Threat of Commoditization
vii. Existing Channel is not ready
viii. Additional cost with no returns
ix. Loss of control over Customer Relationship

Impact of Digitization on Automotive Industry of India

The impact of digitization on automotive sector is usually argued in a context of consumer, but the future digital revolution will not about consumer but productivity. There are yearly savings of Rs. 16.32mn awaiting to be achieved for the domestic automotive manufacturing in India. Manufacturing companies' digitization delivers various possibilities to enhance efficiency and to diminish cost. The saving capacity is stretch over the full value chain from manufacturing to logistics. To maintain cost concerned with the conventional automotive production plants digitized factories can manufacture a larger number of derivatives and varieties on the same assembly line excluding major shifting costs with quicker time to market and a greater quality. This results in an optimum utilization of capabilities and well-balanced plant and staff mobilization. OEM needs to indulge their capital is new plants and technology opt for digitized plant and factory will surely meet the expectations of coming years ahead.

Technology: India is one of the major IT centers and established itself as technology hub alike Silicon Valley.

Infrastructure: Infrastructure close physical vicinity will be required as it exists in automotive hubs like

Labor: There is a strong talent war in India and it needs to be addressed closely.

Government Support: India is an alluring market to invest in digitized factories due to the amount of national as well as local incentives. The Indian Government has also launched a flagship program namely 'Make in India' to promote the digitalization in all the major sectors of the economy. Automotive industry is one of the key manufacturing sector which is focused in this program.

Research & Development: The digitalization process has an impact on research and development in manufacturing industry especially automotive industry where it increased by 2.3 per cent during the recent digitization scenario. Virtual product development and prototype design is being developed in automotive industry of India.

Manufacturing and Supply: The automotive industry has a significant player in Indian economy. The digitization process enhances the manufacturing pattern and supply of original equipment by 8.3 per cent in recent digitization process.

Marketing & Selling: Marketing and selling in automotive sector of India has an impact of digitization where it was increased by 14.3 per cent after digitalization.

After Sales: The services after sales of automotive sector in India increased by 4.5 per cent in recent digitization process.

Conclusion

The present study is focused on one of the most trendily topic digitization and its consequences on manufacturing sector of India with special reference to automotive industry. Recently, the Indian government has taken initiatives towards digitization of all the sectors or industry of India. 'Make in India' is flagship program of the government in order to digitalize the key sectors of the economy. Automotive sector is one of the significant manufacturing industries where technology plays a crucial role because of globalized business and international competitors. The digitization has a significant impact on automotive industry of India. Today, all the business practices become digitalize and foreign players use advance technology in their products as compare to the national automotive players. The selling of automotive products is increased after adoption of more advance technology. It upgrades the quality of products and its service after sale which ultimately leads to the customer and brand loyalty used by the consumers.

In the initial stage of digitization both the approaches have to go hand in hand with taking advantages of both traditional and digital. India, right now lacks in efficient digital infrastructure, and it cannot be improved overnight, it will take some time to stable servers and providing high speed internet in the country. This study has discussed all the possible challenges which will be faced by the automotive companies, dealers and customers. It also considers the changing customer behavior towards buying process, entry of new technologies and the types of opportunities it will going to get.

In the present study, first and foremost a primary agenda for digitization in automotive industry has been developed. Based on the concept of connected cars, service digitization and platoformisation, it is recommended that research issues are business patterns, platform and consumer issues. It is apparent that the practical pertinence of these research issues already assured pursuing the topics we also discuss that complicated nature of the automotive industry can drive to new hypothetical insights. The existing transformation in automotive sector sets out an opt example of physical and digital conversions varying clock speeds between swiftly evolving flourishing IT industry and the slow car industry arises challenges before new BMs and platform, as do the uneven life-time cycle. The physical safety and security and digital risks on security offer an opportunity for conducting security and confidentiality research. It takes as a signal for the absence of maturity in this research domain. Some process is trying to fix the issue between the cyber physical systems especially from a business and ecosystem outlook.

This study suggests that (i) Government initiatives could only be successful if only people get indulge in transformation. Therefore, school and colleges could create awareness about the initiatives and could endow knowledge among people of locality/society; (ii) To transform the business, people must possess the knowledge of program and how to get benefits from the facilities offered by the government; (iii) community centers could be established by people who are more literate about the issues could help the society and experts could visit those centers to supervise them time to time; (iv) organization could train their employees and make them more

efficient in financial perspective; (v) many steps should be taken by Reserve Bank of India and Securities and Exchange Board of India to spread awareness about the importance of financial literacy among people and also offered the online modules for financial Literacy on their websites, (vi) making buyers mind set towards using digital methods rather than traditional one, (vii) people must be aware of the factors affecting their savings, and the must know how to maximize their savings or the techniques or possibilities by which they could do so.

Another study would be conducted to investigate how digitalization affects the automotive industry in post covid period. This study focusses mainly on the vehicle market and how digitalization affects service dealers within this area. However, since commercial actors in general work business to business and the vehicles within the commercial area are more capital intense, it would be a slightly different but highly relevant topic to research. It would be of interest to conduct a study with similar format to validate the results and findings from this study. A study could be performed with a greater geographical spread and possibly include several other countries. A larger sample of service dealers and manufacturers could further validate and strengthen the findings of what impact digitalization has on the automotive aftermarket.

Author Contributions: Conceptualization, R.K., M.T., A.S.; methodology, R.K., M.T., A.S.; Data Collection, R.K., M.T., A.S.; formal analysis, R.K., M.T., A.S.;writing—original draft preparation, R.K., M.T., A.S.; writing—review and editing, M. All authors have read and agreed to the published the final version of the manuscript.

Institutional Review Board Statement: Ethical review and approval were waived for this study, due to that the research does not deal with vulnerable groups or sensitive issues.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to privacy.

Conflicts of Interest: The authors declare no conflict of interest.

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