

ROLE OF E-COMMERCE IN EXPEDITING BUSINESS DEALINGS BETWEEN AUTO OEMS AND SUPPLIERS

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ABSTRACT

The Indian Automobile industry has seen some steady growth over stretches of periods between 3-5 years in the last two decades. Though year on year numbers across different segments have shown variance, the cumulative numbers show rise. In the same period the usage of E-commerce tools by Auto OEMs (Original Equipment Manufacturers) and their suppliers have undergone significant changes. The Indian Auto Industry has witnessed rolling of larger production numbers of new vehicles and new vehicle launches as unveiled in the Auto Expo Show. Increase in Production and increase in new vehicles launch signify the strengthening of the whole Auto Industry environment. A major contributing factor in this

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OEMs and Ancillary suppliers.

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strengthening process is the rise of use of E-commerce tools in the overall working in the Automobile Industry. Usage of E-commerce tools has increased the speed of interactions leading to an increase in the speed of substance-oriented responses. The study is aimed at deciphering as to how the usage of E-commerce tools actively ensure that interactions are directed towards a quantifiable objective and how these are concluded in step by step process so as to finally meet the desired outcome. It is crucial to understand how speed of response cuts unnecessary the steps and layers of followup and reduces the cost and time incurred therein. Researcher has attempted to establish whether the electronic exchange of data really increases the speed of response in communication and also tried to ascertain whether such speed of response is observed in both techno commercial discussions and that too at various levels of professional hierarchy and across all working functions. Also the research is focused on understanding whether such phenomenon is observed at both, the Auto OEMs and the Ancillary suppliers and what factors can test the correlation, if there is any. After the data analysis it is found that the speed of decision making is reasonably influenced by the precise and apt use of E-commerce tools. Also it is observed that such acceleration in decision making leads to successful closures of the day to day operational matters and bigger and mega deals too. Additionally such electronic data exchanged is by and large stored for further analysis and retrieval which leads to a spiralling effect in closing the next dealing swiftly.

I. INTRODUCTION:

1. Overview & Performance of The Indian Auto Industry

The Indian Auto Industry has continued to be a growth story in this 21st Century till now. With 48 numbers of OEMs in the Two, Three and Four Wheelers segments and over 780 numbers registered with ACMA. (Automotive Components Manufacturers Association) as Auto Ancillary and components manufacturers, total 29Mn vehicles have been produced in 2017-18 (Source Society of Indian Automobile Manufacturers – SIAM).

Table No 1. : Indian Automobile Industry – Domestic Sales Trends

Category	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Passenger Vehicles	2,665,015	2,503,509	2,601,236	2,789,208	3,047,582	3,287,965
Commercial Vehicles	793,211	632,851	614,948	685,704	714,082	856,543
Three Wheelers	538,290	480,085	532,626	538,208	511,879	635,698
Two Wheelers	13,797,185	14,806,778	15,975,561	16,455,851	17,589,738	20,192,672
Total	17,793,701	18,423,223	19,724,371	20,468,971	21,863,281	24,972,878

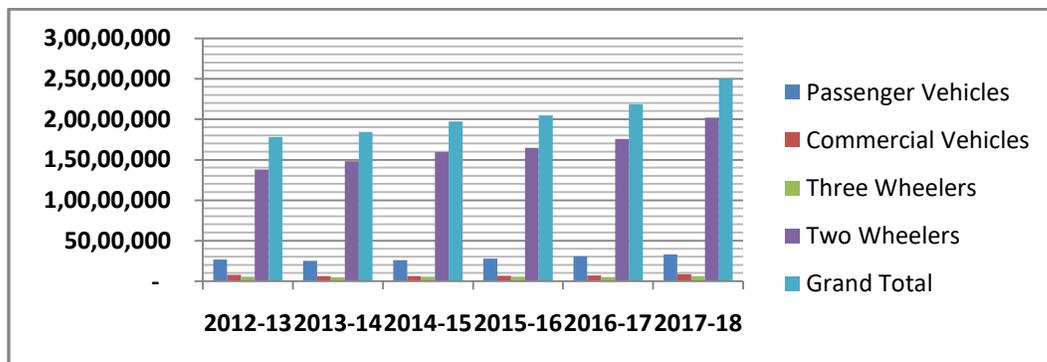
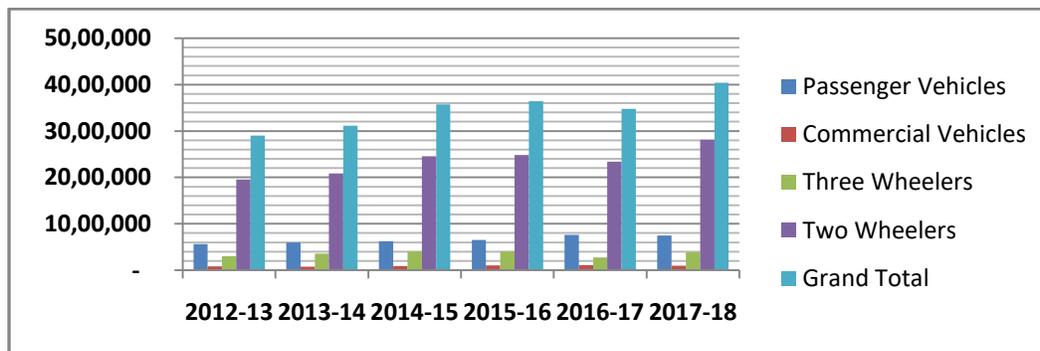


Table No 2. : Indian Automobile Industry – Exports Sales Trends

Category	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Passenger	559,414	596,142	621,341	653,053	758,727	747,287

Vehicles						
Commercial Vehicles	80,027	77,050	86,939	103,124	108,271	96,867
Three Wheelers	303,088	353,392	407,600	404,441	271,894	381,002
Two Wheelers	1,956,378	2,084,000	2,457,466	2,482,876	2,340,277	2,815,016
Grand Total	2,898,907	3,110,584	3,573,346	3,643,494	3,479,169	4,040,172



(Source SIAM)

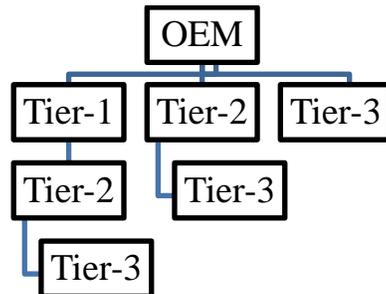
2. OEMs & Ancillary Suppliers

Companies like Piaggio vehicles, Bajaj Auto, TVS Motor company (Two and Three Wheeler segment) Hero Motocorp, Honda Motorcycle & Scooter India (Two-Wheeler segment), Atul Auto(Three Wheeler Segment), VE Commercial Vehicles, Scania Commercial Vehicles, Tata Motors, Ashok Leyland, Mahindra & Mahindra, Man Trucks India, Volkswagen India, Hyundai Motors India, Maruti Suzuki India (Four Wheeler Segment) are registered members of SIAM.

Suppliers to such OEMs are the Auto Ancillary suppliers, classified as the Tier-1, Tier-2 and Tier-3 Suppliers. This classification is based on the position of the company in the supply value chain. Tier -3 suppliers are normally the raw material (RM) suppliers, as steel billets and Polymer granules and Rubber etc. These supplier normally supply to the Tier 2 suppliers producing the components and smaller sub-assemblies. These are then in turn supplied to the Tier-1 suppliers as constituting elements for the bigger assembles and aggregates. The Tier-3 supplier however attains a status of a Tier-1 supplier when it supplies RM to the OEMs directly. So there is nothing hard and fast about being a Tier-1 or Tier-2 or Tier-3 supplier, but by and

large the status gives a clarity about the various capabilities and competencies of the organisation. The figures below explains this in short

Figure No. 1: OEM & Suppliers Relationship (Tier-1, Tier-2, Tier-3)



(Source – self interpreted and arranged by the researcher)

3. Industry specific Functional Areas

Every Industry has the core functional working divisions as Design, Purchase, Planning, Production, Quality Control, Sales & Marketing, Finance and Logistics. The study undertaken focuses on the Automobile Industry specific functional areas.

The Product Design and development revolves around Failure Mode and Effect Analysis (FMEA) of two types. The DFMEA (Design Failure Mode and Effect Analysis) and the PFMEA (Process Failure Mode and Effect Analysis). The DFMEA is developed by cross functional teams (CFTs) from multiple disciplines to evaluate and assess the failure modes of any product due to any inconsistency of any type in the design with respect to the final desired product. The PFMEA is similar exercise but directed exclusively on the process and the intricate steps to be followed diligently and consistently to carry out the operations in the framework of the standard operating procedure (SOP). Engineers and officials of all ranks from all relevant offices constitute the teams in development of both the DFMEA and PFMEAs. This necessitates exchange of voluminous communications on both technical and commercial fronts within the Organisation and externally with all related suppliers, service providers and Governing bodies and can be successful only if these are concluded swiftly and on time.

The Vendor (supplier) Audit and Assessment team and the supplier quality upgradation and improvement team are two such other areas of prime importance in the Automobile Industry. The Vendor (supplier) Audit and Assessment team works closely with the supplier to assess their technical competence and levels of knowledge along with the capabilities of the infrastructure to supply quality material on time and may times recurring basis with specific periodicity. This is conducted prior to allocating the vendor code and then at regular intervals and prior to new development again. The supplier quality upgradation and improvement team works regularly with multiple levels at the supplier's end to keep them apprised of the expected levels of quality, support them on any technical issues, jointly ensure that the process and systems are set for regular supplies and ensure zero-defect parts.. In both these cases there is a heavy exchange of data and information and it needs to be two-way, bilateral and again swift and on time

4. Communication Options & Frequency

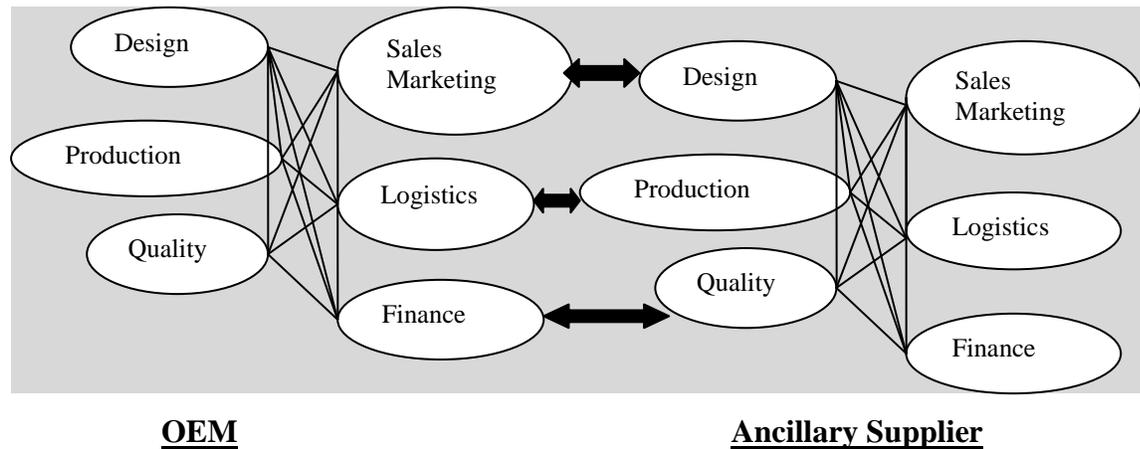
All the functional divisions discussed are found at both the OEMs and the Ancillary Suppliers with minor change in division titles. So there is a lot of communication exchange within these team members from same division in the Organisation and within the team members from different divisions in the same organisation and within different team members from different organisations. Communication happens in various forms as personal meetings, telephonic conversations, text message exchanges and E-mail exchanges.

Though personal meetings are many times more effective for various obvious reasons these are costly and time consuming and at times need people to travel a lot. So frequency of such meetings is restricted or minimal. Telephonic communication can be more frequent and have the advantage of being more interactive, but on the flip side these are not documented for falling back upon. Trust element in such interactions is not underrated while making this statement but at times professionals need to take commitments in black and white as there are too many interlinked activities involved and it's not easy to memorise and recall frequently. Exchange of Text messages is definitely very convenient but again it can be rarely reproduced as these are many times more informal and personal convenient forms of communicating. The mail exchange

and data uploaded on portals for frequent and recurring activity then becomes the most easiest form of communication to attend and address many issues, many times.

Any communication is treated as fruitfully concluded only once the responder replies to the query or completes the assigned task and confirms in his reply to the initiator. This calls for a speed in the whole matter by the responder and his/her ability to respond quickly can be supported by the access to the Electronic exchange of communication. Such speed in response then has a cascading effect on the whole process as it minimises or eliminates followup, reduces time lag between two stages of moving ahead to close the matter, ensures that the focus remain on the matter without any diversion of energies and many more situational advantages. Overall the speed of response in all stages and phases is vital

Figure No. 2: Communication Flow between OEM & Suppliers



(Source – self interpreted and developed by the researcher)

II. RESEARCH OBJECTIVES:

1. To compare how OEMs and Suppliers agree that E-commerce expedites the discussions on techno-commercial points.
2. To evaluate frequency of E-commerce usage in stimulating a necessity of Web bases interactive portal professionally.

3. To determine how 'expedition of decision making' impacts on the successful closure of business dealings.

III. RESEARCH QUESTION:

Does E-commerce expedite the techno-commercial discussions that lead to successful closure of business in B2B working in the Automobile Industry ?

IV. LITERATURE REVIEW:

Research work done on E-commerce and the B2B working in the general manufacturing industry is directed towards assessing and analysing various elements of business practices in the relevant fields.

One study on decision making goes to explain why some new ventures make strategic decisions more quickly than others. It tries to correlate why life course followed by individuals and whatever experience they gather along the way have some linkage with the type of decisions they. It speaks about how entrepreneurs' individual characteristics impact the new venture's decision speed (Forbes. Daniel P, 2005)[3].

A comparison based experimental study was conducted in which two distinct groups were assigned the task to arrive at their version of proper business decision making under time pressure. One group consisted of college students who had some experience of computers was supported with a group support system (GSS) called the Electronic Discussion System; the other half had no computer support. Pre-decided parameters as Decision quality, speed, and leadership emergence were measured. Under time pressure the decision quality of computer supported group was measured to be much better and significantly leadership oriented (Smith C.A, Hayne S.C, 1997).

Another study inspects the subsequent effect of strategic decision speed upon the firm's performance and identifies organisational and environmental attributes that relate to decision speed. It is observed that strategic decision speed is centred between the environmental plus organizational characteristics and performance. The use of structural equation modeling derived

that swift and strategic decision-making contributes to enhance the firm's growth and profitability (Baum J.R & Wally S, 2003).[1].

An exhaustive analysis of the decision support systems (DSS) technology and applications based on the technological and organizational developments and its evolution for businesses has found out that the advent of the Web has enabled inter-organizational decision support systems, and has broadened the horizons of new applications of existing technology as well. It predicts with substantiation that mobile tools, mobile e-services, and wireless Internet protocols will drive mark the further levels of developments in DSS. The paper also discusses about decision support tools, as data warehouses, data mining, and Web-based systems (Shim, J., Warkentin, M., Courtney, J. F., Power, D. J., Sharda, R., & Carlsson, C., 2002)[7]

Some empirical investigation about the relationship between supply chain, B2B, e-commerce, uncertainty in the environmental factors, structure of the organisation, and time-based delivery performance. Results there indicate that B2B e-commerce improves time-based delivery performance. Any element of process turbulence about environmental uncertainty directly influences the B2B e-commerce implementation and also indirectly influences the dimension of organizational structure. Dynamism in process changes have a positive effect on timely delivery performance but on other hand the unpredictability in demand remains unaffected (Karthik Iyer N.S, Germain R., Frankwick G.L.,2004)[6]

E-commerce is described as a strategy for quicker growth, particularly by small and medium sized businesses (SMEs). Structural equation modeling is used to do a comparison between the theory of planned behavior (TPB) and the theory of reasoned action (TRA) for predicting objectives of e-commerce adoption among SME managers/owners.(Elizabeth E.Grandón, Suzanne A.Nasco, Peter P.Mykytyn, 2011)[4]

Although few researchers had in the previous past argued that the Top management has comparatively can hardly make a little impact on the outcomes of the Organisations outcomes, another research has led to development of a complex model with regard to the behaviour of the Top Management and it suggests that the results are otherwise and that there is another

dimension that embeds the vitality of communications at all levels that can change the scenario (Smith, K. G., Smith, K. A., Olian, J. D., Sims, H. P., Obannon, D. P., & Scully, J. A. 1994).

A five-dimensional model of communication described in another research study represents substantial and significant advancement for developing a comprehensive framework to analyse and understand one important factor identified as the “managerial dimension” of the work. The amount of creative contribution increases with adoption of overall strategic management by the organizations. The study was limited to a single country but with the data collected from the survey there was ample of room to expect replication of similar trends should it be done globally (Moss, D., Newman, A., & Desanto, B., 2005) [7].

Results of a qualitative study assessing communication challenges by decision makers during the response stage of crisis management are discussed in another study. Response is perhaps the most critical aspect of any and every communication and the study discusses about response at the point when managers make decisions that have multiple dimensions and angles in the work environment. Though the study is focused mainly on crisis manager and crisis management, the basics of communication and response and its implications remains virtually unchanged in all corporate scenarios as practically all managers have to manage every situation as a temporary crisis at many times. The study provides insights about the complexities of the response stage through primary and secondary data and discusses in detail about the major elements of response slabs as interpretation, choice, and dissemination (Hale J.E, 2005). [5]

Across industries there is a serious intensification on all competition fronts as product introduction time and product life cycle both are squeezing. Competition compels organisations to manage the speed of product supply process and to avoid early obsolescence and ensure reduction in competition. The study elaborates couple of time-saving techniques and proposes a framework to manage the proper and desired speed of product supply process to attain the objective of the firm. Measures as choosing faster product strategies, ensuring for the speedy implementation of these strategies, and managing human resources appropriately for the best possible speed are few of these. Agreeing that speeding up the supply process needs certain changes in the traditional management, still trying to attain such speed can bring benefits like

faster response to market needs, reduction in product costs, and improving the supply process chain. (Cordero, R. .1991)[2]

V. RESEARCH METHODOLOGY:

The research is converged around few distinctive aspects of the Automobile Industry. It revolves around few independent variables (as given in Table No. 3) that accelerate towards successful closure of business deal.

The Primary data was collected by administering a survey questionnaire to respondents from Auto OEMs and the Ancillary suppliers. The secondary data was obtained from SIAM and ACMA websites (<http://www.siamindia.com/> , <https://www.acma.in>).

The survey was designed to examine:

1. The expanse of E-Commerce usage in the B2B area in the Auto Industry
2. Increase in dependence on electronic exchange of data in techno-commercial discussions.
3. The impact of 'speed of response' and subsequent acceleration in decision making on the closure of business deals
4. The sellers and buyers opinions about necessity of web-based interactive portals.

The questionnaire was designed to:

1. Interview all levels of people in the organisational hierarchy
2. Gather opinions of respondents from distinct functional areas
3. Delve into the thought process of individuals on critical factors of linkages between E-commerce and business finalisation

Based on the objectives, the following Hypotheses were initiated.

H1: OEMs and Suppliers consistently agree that usage of E-commerce speeds up the discussions on techno-commercial points

H2: Habitual and frequent professional use of E-commerce triggers the necessity for Web-based Interactive portals in the B2B space.

H3: The ‘speed of decision making’ has a definite impact on the successful conclusion of business deals

A) Research Design and Contributing Variables:

The Research Design for this study is centralised around the role of E-commerce in squeezing the response time, thereby increasing the speed of response and finally leading to successful conclusion of business dealings, swiftly. In the B2B space of the Automobile Industry, decision making is truly very complex and heavily dependent on distinctively different factors.

Numerous small to big, short term to long term, microscopic to herculean decisions need to be taken regularly. As such in the research design, the speed of response to the communications, the swiftness of decisions based on these responses and the frequency of such interactions in limited time have to be studied on the opinions of the agencies involved.

Each timely decision conserves all the resources spent in the steps of decision making and makes the process flawless. Some contributing factors involved in this exercise of decision making are the focused variables in this study.

Table No. 3: Independent & Dependent Variables

<u>Type</u>	<u>Variable</u>	<u>Reasoning</u>
Independent (1)	Usage of E-commerce	It is person centric quality
Independent (2)	Speed of response	It is an individual’s perception
Independent (3)	Necessity of Web-portal	Varies as per individual’s opinion
Dependent (1)	Conclusion of business deal	It is an outcome of various factors

B) Sample Size

The questionnaire was administered on some 200 respondents, 100 from the OEMs and 100 from the Ancillary suppliers. Though the population in the Auto Industry comprising of the 48 OEMS

and over 780 numbers of registered Ancillaries (registered with the ACMA body) is significant, this questionnaire was tested in the Western and Southern part of India. The sample size chosen is mainly from the Commercial vehicle segment and suppliers to the said OEM.

A self-developed Likert scale is used for scaling the responses in the survey and respondents were asked to rate their opinions on a five point agreement scale. For example as for a question on individual's opinions on whether E-commerce helps to speed up the discussions on the techno-commercial points, the scale levels used are: Very much agreed, Agreed, Not much, Not at all and cannot comment..

C) **Data Analysis & Results - Statistical Tools Used**

a) **F-Test – Two samples for variance** : F-test is used to measure the value of f of the F-static. The Single positive (Alternative) Hypothesis is accepted when the p value is lesser than the pre-set alpha level. This also is true if the critical f value is smaller than the F Value as the F value has to be always used along with the p value in deciding the significance of the results. Large f value indicates something is significant, while a small p value suggests that all the results are significant.

In this study, the similarity in the pattern of 'consistency in agreeing' that E-commerce speeds up business discussions by both the OEMs and the Ancillary suppliers is tested. On a likert scale numbered from 1 to 5 for options as 'very much agreed', 'agreed' to 'cannot comment', the OEMs and Ancillary suppliers respondents were questioned for their opinions on the ability of E-commerce tools to speed up the business discussions.

Table No. 4: F-Test Statistics

	consistency in agreeing that E-commerce speeds up business discussions - OEMs	consistency in agreeing that E-commerce speeds up business discussions – Ancillary Suppliers
Mean	1.55	1.78
Variance	0.25	0.1733

Observations	100	100
df	99	99
F	1.4423	
P(F<=f) one-tail	0.0350	
F Critical one-tail	1.3941	
Alpha set @ 0.05		

Test Results The singular affirmative hypothesis that there is a similarity in patterns between the Auto OEMs and Ancillary suppliers in agreeing that the business discussions can be more speedy by use of E-commerce tools is very much validated.

b) Correlation Analysis Test: A correlation coefficient between two variables shows whether and how they are related to each other. A correlation coefficient of '1' implies a perfect and positive correlation between the two variables. It means that as variable X increases, the other variable Y increases proportionately. In this study one of the variable(X) is the users frequency of using E-commerce and the other variable is the necessity of having Web based interactive portal(Y) as opined by the user. Test was conducted to examine whether frequent use of E-commerce triggers the necessity of having a Web based interactive portal for professional working. The test was conducted on both the OEMs and the Ancillary suppliers

Table No. 5: Correlation Statistics

OEM Respondents (N100)

	Frequency of using E-commerce	Opinion on necessity for portal
Frequency of using E-commerce	1	
Opinion on necessity for portal	0.8093	1

Ancillary Supplier Respondents (N100)

	Frequency of using E-	Opinion on necessity for
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	commerce	portal
Frequency of using E-commerce	1	
Opinion on necessity for portal	0.7745	1

Test Results: Results derived from the tests indicate that respondents using E-commerce frequently feel that it's necessary that both, the OEMs and the Ancillary suppliers, should have Web based Interactive portals for better professional working.

c) **Analysis of 'Impact of speed of decision making on successful business closure'.** This test is based on arranging the responses from the OEMs and Ancillary suppliers in a categorised manner and converted into the respective percentages to understand their relevance. The responses from OEMs and Ancillaries are as tabulated :

Table No. 6: Opinion Classification in Percentages

OEMs responses - on - Impact of speed of decision making on successful business closure				
Impacts highly	Impacts partially	Impacts selectively	Does not impact	Does not matter
62%	21%	17%	0%	0%

Ancillaries responses - on - Impact of speed of decision making on successful business closure				
Impacts highly	Impacts partially	Impacts selectively	Does not impact	Does not matter
48%	44%	4%	4%	0%

Inference: In both cases of OEMs and ancillary suppliers the trends indicate that speed of decision making has a considerable and visible impact on successful closure of business deals

VI. RESULTS & ANALYSIS:

1. Analysis of Hypothesis 1 :

There is lot of transition of individuals in the B2B space of the Automobile Industry like by way of moving from OEMs to Ancillaries, and vice versa, and within the OEMs and Ancillaries bandwidth. However they need to adapt to the work culture of the Organisation quickly. With advent of the electronic medium of transacting, these individuals have their own methods to assess the benefits of communicating for a purpose and consequently expecting a desired outcome. The F-test conducted in this study was to examine the consistency in the level of agreement about the capacity of E-commerce to speed up the business discussions at all stages between the Auto OEMs and the Ancillary suppliers. The results are positive indicating that there is definite similarity observed. This implies that there is a consensus in agreeing that usage of E-commerce accelerates the speed of discussions in all techno-commercial points. The results derived from the tests indicate that P value (0.0350) is less than the Alpha (0.05) and also F-critical value (1.3941) is less than the F value(1.4423) meaning the null hypothesis that there is no similarity in patterns stands rejected. This validates the Hypothesis 1

2. Analysis of Hypothesis 2

The use of E-commerce becomes a way of life and individuals get habituated to use it more often. The increased frequency of usage triggers the need to have suitable platforms to exchange and transact and this need is also felt in the professional working. Individuals in the B2B space in the Auto Industry from both the OEMs and Ancillary suppliers agreed that working facilitated with Web-based interactive portal makes commercial communication easy. Increase in frequency of usage of E-commerce tools amplifies the necessity of having a Web-based interactive portal at both the OEMs and Ancillary suppliers end. The correlation coefficient in case of Ancillary suppliers is 0.7745 and in OEMS it is 0.8093. As it is tending towards '1', in both cases, it implies that both the OEMs and suppliers equally feel that they should have Web-based interactive portals. This validates the Hypothesis 2

3. Analysis of Hypothesis 3

On questioning about the impact of the 'speed of decision making' on successful business closure, 83% respondents from OEMs agree that it definitely impacts fully or partially and 17%

agree it impacts selectively. Total 92% respondents from Ancillary suppliers agree that it definitely impacts fully or partially. 4% agree it impacts selectively and only 4% opine that it does not matter. This indicates that throughout the B2B space there is an overall similarity in agreeing that quick response to any communication has a major positive impact on the decision making process and it expedites the process of business conclusion. This validates the Hypothesis 3.

VII. CONCLUSION:

Awareness and knowledge on E-commerce tools and its components categorised is seen across all segments of OEMs and Ancillaries. Responses from all working areas in different functional zones from planning to quality control purchase and sales to finance and executive to top management levels depict the importance of E-commerce usage in all spheres of operations. Sales and Purchase between the Auto OEMs and Tier-1 to Tier-3 Ancillaries is driven by usage of E-commerce tools. Accessing much needed data or information for regular working has been a basic need across all divisions. Ease of accessing E-data in variable forms and its utility value with respect to time and availability at point of requirement facilitates the closure of deals. Thorough comparison of best techno-commercial proposals is possible and makes decision making more apt with ease and convenience. Results from the study survey indicate that more than 80% of respondents agree that their business decision making is definitely dependent on the usage of E-Commerce tools. The habitual and frequent use of E-commerce is becoming a compelling factor that drives the need to have Web-based interactive portals. Though for smaller Ancillary suppliers it may not be easy to shift to such working immediately, their participation to work on such platforms with their OEM partners will force them to have such aide in future and possibly even on some shared basis to start with

VIII. LIMITATIONS OF THE STUDY:

1. The study is confined to some three auto OEMs and seven Ancillary units in the Western and Southern parts of India. There is a further scope to conduct it on a bigger population Pan India.
2. There can be some variation in responses from the OEM's groups and Ancillaries group as their levels of professional knowledge may not be the same. Respondents from OEMs have

more opportunities to learn from trainings and workshops where as respondents from ancillaries, many a time learn more from practical working.

3. OEMs and Ancillaries may have their own of code of conducts for protecting their data and intellectual property and so they have guidelines set for their employees. As such reaching many of them becomes difficult.

4. Study is based on individuals responses received on their own perceptions. Conversion of these perceptions to measurable values is difficult.

IX. MANAGERIAL IMPLICATIONS:

This research is quite important to professionals throughout the Auto Industry as they need to accept that this way of business calls for all of them be equipped and geared up for carrying out their functions remembering that as they value the swift response from others, they too are in turn obliged to reciprocate alike. Professionals from the Computer, IT an ITES segments also can use this as basis to understand as exactly what is expected by the end users and how more and more individuals are depending on e-commerce heavily. Companies and start-ups intending to launch any service or product in the B2B space can take a cue to gauge the mood of the end users from both the supplier and the purchasers end about their expectations on all related fronts. The survey is equally important for the upcoming Electric vehicles and high end artificial intelligence equipped vehicles domain as it will be a futuristic and to stay here for next couple of decades

X. FURTHER RESEARCH:

This study can be extended to other Auto OEMs in different vehicle segments and to the other ACMA registered suppliers and even to the unorganised manufacturing segment of the Automobile components suppliers..Surveying exclusively with the ARAI (Automotive Research Association of India) which is the certifying body for Automobile vehicles and parts can give a better insight on the role of E-commerce in expediting the business decisions as they work closely with virtually every OEM and aggregate and assembly suppliers.

With transition of vehicles from the conventional fuels to the alternate fuels and particularly to Electric vehicles in coming decades, the working in the Industry can also be expected to undergo some radical changes. Needless to say any change will be based on the E-

platform and exploring the needs of such advanced business scenario is also a further area of research based on the current findings

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