Impact of EDI in FMCG Industry – Company Demographic Perspective

B.Nagarjuna

Research Scholar, Dept of Management Studies, Sri Venkateswara University, Tirupati (A.P.)

B Sudhir, Professor, Dept of Management Studies, Sri Venkateswara University , Tirupati

Introduction

There seems to be an universal agreement on what a supply chain is. Jayashankar et al. defines a supply chain to be a network of autonomous or semi-autonomous business entities collectively responsible for procurement, manufacturing, and distribution activities associated with one or more families of related products.

Lee and Billington, A supply chain is a network of facilities that procure raw materials, transform them into intermediate goods and then final products, and deliver the products to customers through a distribution system.

The supply chains that add the most value for customers with the lowest cost in the chain make up the winning network of individual companies. As companies are now seeking how to integrate decisions across supply chain functions, across geographically dispersed facilities and across time, the fact is supply chain management is crucial.

Research Methodology

Data Sources:

The data sources required for the study include both primary and secondary. The primary data sources were the respondents in FMCG industry in Bangalore city. The secondary data sources were: relevant websites, journals, business magazines, books, dissertations and data bases for theoretical support.

Research Design:

Descriptive research design is adopted where in the objectives are clearly established followed by design of questionnaire and analysis.

Research Instrument:

Structured Questionnaire was used to collect the information from respondents in Bangalore city. Questionnaire used in this study was open ended, closed ended, multiple choice and dichotomous, scale ranging from strongly disagree to strongly agree using nominal, interval and likert five point scale.

Sampling Frame:

Sampling frame comprised of suppliers, manufacturers, distributors in FMCG industry in Bangalore city. Bangalore is the fastest growing city in Karnataka where the population is heterogeneous with diverse, cultural, religious and economic background. It has been a very good marketing centre for targeting various groups of customers. So the existence of FMCG industry is also more.

Analysis

Impact of Number of employees on EDI-Company experience with customers

EDI-Company experience with customers						
Number of employees	Low	Medium	High	Total	P value	Significance
25 employees or less	15	16	1	32	36.558**	.000
26-50 employees	23	10	10	43		
51-75 employees	20	21	19	60		
76-100 employees	10	10	10	30		
more than 100 employees	29	3	3	35		
Total	97	60	43	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between number of employees and EDI company experience with customers. According to this, number of employees is classified in to 25 employees or less, 26-50 employees, 51-75 employees, 76-100 employees, and more than 100 employees. The result showed that, industry experience has a significant association with EDI company experience with customers.

Impact of Using EDI (customer or supplier) on EDI-Company experience with customers

EDI-Company experience with customers						
Using EDI(customer or supplier)	Low	medium	High	Total	P value	Significance
yes	75	60	40	175	22.587**	.000
No	15	0	0	15		
Do not know	7	0	3	10		
Total	97	60	43	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between using EDI and EDI company experience with customers. According to this, using EDI is classified in to yes and no. The result showed that, using EDI has a significant association with EDI company experience with customers.

Impact of frequency of using EDI or IT on EDI customers

EDI Customers						
Frequency of using EDI or IT	**low**	**medium**	**High**	**Total**	**P value**	**Significance**
routinely	15	10	0	25	17.001**	.009
daily	3	9	3	15		
weekly	20	7	8	35		
on an exception basis	59	34	32	125		
Total	97	60	43	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between frequency of using EDI or IT and EDI customers. . According to this, frequency of using EDI or IT is classified in to routinely, daily, weekly, and on an exception basis. The result showed that, frequency of using EDI or IT has a significant association with EDI customers.

Impact of EDI experience on EDI-Company experience with customers

Company experience with customers						
EDI experience	**Low**	**medium**	**High**	**Total**	**P value**	**Significance**
1-5 years	40	29	14	83	21.685**	.000
6-10 years	28	28	24	80		
more than 10 years	29	3	5	37		
Total	97	60	43	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between EDI experience and EDI company experience with customers. According to this, EDI experience is classified in to 1-5, 6-10, and more than 10.The result showed that, EDI experience have a significant association with EDI company experience with customers.

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Impact of Functional responsibility on EDI-Company experience with suppliers

Company experience with customers						
Functional responsibility	low	Medium	High	Total	P value	Significance
sales	9	6	0	15	30.946**	.001
distribution	17	11	12	40		
purchase	16	12	14	42		
sales admin	21	13	11	45		
IT admin	15	13	10	38		
logistics	20	0	0	20		
Total	98	55	47	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between functional responsibility and EDI company experience with customers. According to this, functional responsibility is classified in to sales, distribution, purchase, sales administration, IT administration, and logistics. The result showed that, functional responsibility have a significant association with EDI company experience with customers.

Impact of Years of attachment-institution on EDI-Company experience with suppliers

Company experience with customers						
Years of attachment-institution	Low	medium	High	Total	P value	Significance
less than 5	40	23	17	80	23.968**	.000
5-10	29	29	27	85		
more than 10	29	3	3	35		
Total	98	55	47	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between year s of attachment and EDI company experience with customers. According to this, years of attachment with institution is classified in to less than 5, 5-10, and more than 10.The result showed that, industry experience have a significant association with EDI company experience with customers.

Impact of Industry experience on EDI-Company experience with suppliers

Company experience with customers						
Industry experience	Low	medium	High	Total	P value	Significance
less than 5	42	25	18	85	12.045*	.017
5-10	27	25	21	73		
more than 10	29	5	8	42		
Total	98	55	47	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between industry experience and company experience with customers. According to this, Annual Sales volume is classified in to industry experience is classified in to less than 5, 5-10, and more than 10.The result showed that, industry experience has a significant association with company experience with customers.

Impact of Company category on EDI-Company experience with suppliers

Company experience with customers						
company category	low	Medium	High	Total	P value	Significance
a manufacturer of FMCG products	37	19	13	69	7.820	.098
a distributor of FMCG products	27	25	21	73		
A manufacturer of raw materials	34	11	13	58		
Total	98	55	47	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between company category and company experience with customers. According to this, company category is classified in to a manufacturer of FMCG products, a distributor of FMCG products and a manufacturer of raw materials .The result showed that, company experience has no significant association with company experience with customers.

Impact of Annual sales volume on EDI-Company experience with suppliers

Company experience with customers						
annual sales volume	low	Medium	High	Total	P value	Significance
below 25 lakhs	24	7	1	32	39.309**	.000
25-50 lakhs	18	18	17	53		
51-75 lakhs	17	17	16	50		
76-100 lakhs	13	12	10	35		
over 1 crore	26	1	3	30		
Total	98	55	47	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between annual sales volume on EDI and company experience with customers. According to this, below 25 lakhs, 25-50 lakhs, 51-75 lakhs, 76-100 lakhs, and over one crore .The result showed that, annual sales volume has a significant association with company experience with customers.

Impact of Number of employees on EDI-Company experience with suppliers

Company experience with customers						
Number of employees	Low	Medium	High	Total	P value	Significance
25 employees or less	24	7	1	32	39.197**	.000
26-50 employees	15	14	14	43		
51-75 employees	20	21	19	60		
76-100 employees	10	10	10	30		
more than 100 employees	29	3	3	35		
Total	98	55	47	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between number of employees and company experience with customers. According to this, number of employees is classified in to 25 employees or less, 26-50 employees, 51-75 employees, 76-100 employees, and more than 100 employees. The result showed that, number of employees has a significant association with company experience with customers.

Impact of Using EDI (customer or supplier) on EDI-Company experience with suppliers

Company experience with customers						
Using EDI(customer or supplier)	Low	Medium	High	Total	P value	Significance
yes	76	55	44	175	21.734**	.000
No	15	0	0	15		
Donot know	7	0	3	10		
Total	98	55	47	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between using EDI and company experience with customers. According to this, using EDI is classified in to yes and no. The result showed that, using EDI has a significant association with company experience with customers.

Impact of Frequency of using EDI or IT on EDI-Company experience with suppliers

Company experience with customers						
Frequency of using EDI or IT	low	medium	High	Total	P value	Significance
Routinely	23	2	0	25	27.808**	.000
Daily	4	8	3	15		
Weekly	12	11	12	35		
on an exception basis	59	34	32	125		
Total	98	55	47	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between frequency of using EDI and IT and company experience with suppliers. According to this, frequency of using EDI or IT is classified in to routinely, daily, weekly, and on an exception basis. The result showed that, frequency of using EDI or IT has a significant association with EDI links between customers and suppliers.

Impact of EDI Experience on Company experience with suppliers

Company experience with customers						
EDI experience	low	medium	High	Total	P value	Significance
1-5 years	41	24	18	83	19.601**	.001
6-10 years	28	28	24	80		
more than 10 years	29	3	5	37		
Total	98	55	47	200		

*P<.05, **P<.01

Chi square test was applied to find the association that exists between EDI experience and EDI-company experience with suppliers. According to this, EDI experience is classified in to 1-5 years, 6-10 years, and more than 10 years. The results showed that, EDI experience have a significant association with EDI-company experience with suppliers.

Conclusion

Based on the result obtained from his study, we conclude that IT is affecting the supply chain management. Based on company demographics, influence of IT on supply chain management differs. Company demographic factors like functional responsibility, years of attachment institution, industry experience, company category, annual sales volume, number of employees, company using EDI, frequency of using EDI, EDI experience are affecting the EDI implementation factors like EDI links with customers and suppliers, priority for redesigning IT, priority for simplifying existing process-before EDI implementation, use of EDI with customers, EDI with suppliers, EDI business impact, EDI-company experience with customers, and EDI company experience with suppliers.

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