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# Employee insight towards growing Importance of technology in management of logistics and supply chain management with special reference to Coimbatore

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### Abstract

The word logistics has its origin from Greek word “logistic” which means the art of calculating. However, the modern interpretation of the term logistics has its origin in the military, where it was used to describe the activities related to the procurement of ammunitions, and essential supplies for troops located at the front. Logistics not only includes activities related to the physical movements of the goods but also manages relationship with suppliers and customers. However Logistic management is a means whereby the needs of customers are satisfied through integration and coordination of the supply chain. The main objective of the paper is to determine the of various technology used in logistics and supply chain management including information technology, communication technology and automatic identification technology. The paper also discusses the impact of the technology on logistics and supply chain management and how it affected the work and personal life of the workers. The author mainly focuses on the primary data for collecting data relating to various technology used in logistics and supply chain management. The author draws conclusion that Technology is a vehicle to enhance supply chain competitiveness and performance by enhancing the overall effectiveness and efficiency of logistics system. Moreover, these technological advancements have changed the way professionals work, resulting in a shift in their work-life balance towards a greater focus on personal lives without compromising work commitments.

**Keywords:** Logistike, Ammunitions, logistic management

### Introduction

The council of logistic management defines logistics as “that part of supply chain process that plans, implements, and controls the efficient, effective, forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customer requirement”. In ordinary language the same can be defined as right product, at the right place, in right time, and in right condition. However supply chain consists of all stages that are required to satisfy the customer request. It starts from supplier passes through manufacturer, distribution, retailer and finally reaches the customer. The supply chain management is the oversight of materials, information and finances as they move in the process from supplier to manufacturer to wholesaler to retailer to customer. The emerging new technologies are creating strategic opportunities for the organizations to build competitive advantages in various functional areas of management including logistics and supply chain management. However, the degree of success depends on the selection of the right technology for the application, availability of proper organizational infrastructure, culture and management policies. In logistics, information, communication and automation technologies has substantially increased speed of identification, data gathering, processing, analysis and transmission, with high level of accuracy and reliability. Technology is a means to enhance business competitiveness and performance. It plays a major role in success of supply chain by enhancing the overall effectiveness and efficiency of the logistics system. In logistics many new technologies are used in developed country while in India adoption process is very slow. However due to liberalization of the Indian economy the competitive pressure is building up and the only option to face the competition in to go in for technology enabled operations.

Technology has brought a paradigm shift in Supply Chain management and logistics. The new business processes and great innovations have changed the flow of goods from the

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manufacturers, retailers or wholesalers until it gets to the customers. The face of logistics and supply chain management have been hugely impacted by innovations in communication technology, information technology and the transformation of identification technology from manual to an automatic one. The improvement in efficiency, reduction of costs, increased competitiveness and changes in strategies have changed in today's business.

### Statement of the problem

The statement of the problem can be summarized by the following question

- How dose technology impact on the logistics and supply chain management?
- The impact on technology in the work life as well as on personal life of the employee?

### Objectives of the study

- To determine the various technology used in logistics and supply chain management.
- To discusses the impact of technology on logistics and supply chain management.

### Research Methodology

The research design used for this study is Descriptive

Research, as the employees in various industries are been chosen and collect information and analyse thereafter to arrive at solutions. The survey research was done in the form of Google forms with the help of questionnaire. Convenience sampling method is chosen to collect data form the employees. A total of 150 respondents has been taken for the study.

- **Statistical tools used:** Percentage Analysis, Annova test and Weighted Average Method.

### Research Gap

This study has examined many national and international research articles, research studies, research journals. It is been explained about how technology affect the logistics and supply chain management, how to improve those function and also compared with the abroad system and technologies adopted.

Thus an attempt is made to find out how technology had impact the work and real life of an employee in their point of view.

### Data Analysis

#### Annova Test

Factors		Sum of Squares	DF	Mean Square	F	Significant value
My company offers adequate opportunities for promotions and career development	Between Groups	.282	2	.141	.168	.846
	Within Groups	123.718	147	.842		
	Total	124.000	149			
I feel valued for my contributions	Between Groups	1.402	2	.701	1.036	.357
	Within Groups	99.432	147	.676		
	Total	100.833	149			
Management seems invested in success of the team	Between Groups	1.905	3	.635	.803	.494
	Within Groups	115.429	146	.791		
	Total	117.333	149			
Use of technology has left a positive impact on my job satisfaction (job training, reward system, etc.)	Between Groups	1.740	1	1.740	5.711	.018
	Within Groups	45.093	148	.305		
	Total	46.833	149			
Use of technology has reduced my workload and has enabled to complete my work much quicker	Between Groups	.009	1	.009	.010	.919
	Within Groups	131.491	148	.888		
	Total	131.500	149			
Use of technology has helped to avoid or reduced overtime	Between Groups	.026	1	.026	.029	.864
	Within Groups	130.807	148	.884		
	Total	130.833	149			
Technology introduction has helped with work life balance	Between Groups	.017	1	.017	.031	.861
	Within Groups	79.317	148	.536		
	Total	79.333	149			
Technology made reach consumer door step	Between Groups	.004	1	.004	.007	.933
	Within Groups	87.329	148	.590		
	Total	87.333	149			
Technology helps to track the work on process	Between Groups	3.727	1	3.727	6.393	.013
	Within Groups	86.273	148	.583		
	Total	90.000	149			

### Weighted Average Method

Factors	Weight (Rank)					Weighted Average
	1	2	3	4	5	
Automated goods delivery (Self-driving vehicles, drones to delivery, etc.)	48	36	16	20	30	2.65
Robotics	25	40	25	30	30	3.00
RFID (Radio Frequency Identification)	15	15	55	27	38	3.38
Improved GPS	10	35	35	45	25	3.27
Internet of Things	50	24	20	27	29	2.74

## Findings

### Annova Test

- There exists a significant relationship between employee satisfaction and the opportunity for promotion and career development.
- There exists a relationship between working experience and value for contributions.
- There exists a significant relationship between age of the concern and management seems invested in success of the team.
- There exists a relationship between age of the employee and technology provided reduction in workload and had enabled to complete work much quicker.
- There exists a relationship between age of the employee and technology provided reduction in overtime.
- There exists a relationship between age of the employee and the technology in work life balance.
- There exists a relationship between employee age and the technology in reaching the consumer door step.

### Weighted Average Method

- Automated goods delivery (Self-driving vehicles, drones to delivery, etc) is been basically preferred technology that the company should adopt.

### Suggestions

- From the analysis it can be observed that employees are much satisfied with the growing of IT in their working place as it would make their work much simpler and in the evolving lifestyles they do not want to spend much time over a single work.
- From the result stating that more number of employee prefer companies to adopt automated goods delivery (Self-driving vehicles, drones to delivery, etc). That would reach the customer on time without any delay and the employees could easily track their process and most importantly it would be cost efficient.
- As the IT is being evolved and entering each and everyone's palm it is to be adopted by each and every industries.
- As logistics and the supply chain are the heats of any industry it is to be perfectly assigned. The arrangement of these would decide the success of any company.
- In today's competitive world it is very important to fight with perfection with the competitor if it slips in any stage there is huge number of players outside. So the growth of IT would tremendously help in fighting with the competitor preferably with perfection.
- These technological advancements have changed the way professionals work, resulting in a shift in their work-life balance towards a greater focus on personal lives without compromising work commitments.
- With the IT enabled, real time information sharing, manufacturers can increase the collaboration with their key partners. Manufacturers can also track activities through the whole supply chain, with visibility into supplier end and distributor processes.
- Timely delivery of product is an important factor in ensuring customer satisfaction. Higher customer satisfaction levels lead to higher customer retention and repeat business.
- Use of information technology in supply chain management provides improved visibility and

accountability.

### Conclusion

As "Technology" is vehicle to enhance supply chain competitiveness and performance by enhancing the overall effectiveness and efficiency of logistics system. Hence choosing the right technology for various logistics activities or sub-processes is very crucial to any business to gain competitive advantage in today's competitive market.

Supply chains and logistics do not only involve flows of products or services, but also flows of knowledge. Firms can access complementary knowledge resources from their supply chain and logistics partners. As supply chains and logistics become the unit of competition in today's global markets, strategies to help supply chain firms adapt and create competitive advantage at the supply chain level are imperative.

Thus technology is a vehicle to enhance supply chain competitiveness and performance by enhancing the overall effectiveness and efficiency of logistics system. Moreover, these technological advancements have changed the way professionals work, resulting in a shift in their work-life balance towards a greater focus on personal lives without compromising work commitments.

### Scope for further research

- ❖ A similar kind of study can be conducted in rural parts of the country to get more insight into the subject.
- ❖ A study on employee insight on IT would help from the employee point of view it could be conducted with respect to the customer's and business men side.
- ❖ On the lines of the present study, a similar and in depth study on other sectors like (production sector, planning sector, quality check sector and so on) may be attempted.

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