

THE EFFECTIVENESS OF FOMO-BASED ADVERTISING ON INDIAN CONSUMERS IN INTERNET MARKETING: ANALYSING BEHAVIOURAL RESPONSES AND PURCHASE INTENT

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Abstract

The integration of Artificial Intelligence (AI) in supply chains is transforming operations, necessitating workforce reskilling and upskilling. This paper explores the impact of AI on supply chain jobs, the skills required for AI-driven environments, and strategies to equip employees for the evolving landscape. Using qualitative and quantitative analysis, this study identifies key competencies, training methods, and industry best practices for workforce transformation. The findings emphasize the necessity of a proactive approach to workforce development to ensure competitiveness and job security in the AI-powered supply chain sector.

Keywords: *AI-Driven Supply Chain, Workforce Reskilling, Upskilling, Kerala, Supply Chain Management, Automation, Skill Development.*

1. Introduction

The rapid adoption of Artificial Intelligence (AI) in supply chain management is transforming traditional processes, increasing efficiency and automation. AI-powered solutions like machine learning, predictive analytics, robotics, and IoT optimize logistics, inventory management, demand forecasting, and transportation. However, this transformation also presents challenges, particularly in workforce readiness. As AI takes over repetitive tasks, human roles are shifting to strategic decision-making and problem-solving. Workforce transformation requires training in data analytics, AI system management, digital literacy, and critical thinking. Organizations can enhance employee productivity and maintain a competitive edge by implementing structured learning programs, industry collaborations, and AI-driven training platforms.

2. Objectives of the Study

1. To examine the skills required for AI-driven supply chain management.
2. To explore effective reskilling and upskilling strategies for employees.
3. To analyse Challenges in Reskilling and Upskilling AI-integrated supply chains.
4. **Research Methodology:** This research follows a mixed-method approach, combining qualitative and quantitative data collection techniques.

3.1 Data Collection Methods

1. **Primary Data:** Questionnaires and surveys
2. **Secondary Data:** Analysis of existing literature, case studies, and neuromarketing reports related to India.

3.2 Sampling Techniques: Sample Population: This study conducted a survey among 200 supply chain professionals across various industries to assess AI adoption and workforce preparedness, Random sampling method.

3.3 Data Analysis Methods: Descriptive Statistics and Inferential Statistics.

Theoretical Framework: The theoretical framework for this study is based on two key theories: the **Technology Acceptance Model (TAM)** and **Human Capital Theory (HCT)**.

Technology Acceptance Model (TAM): Developed by Davis (1989), TAM explains how individuals adopt and use new technologies. In the context of AI-integrated supply chains, this model highlights the factors influencing employees' acceptance of AI-driven tools and processes. Key variables such as perceived usefulness and ease of use determine whether workers are willing to engage in reskilling programs. Understanding these factors helps organizations design effective training strategies that encourage employees to embrace AI-driven supply chain innovations.

Human Capital Theory (HCT): Proposed by Becker (1964), HCT emphasizes the role of education, training, and experience in improving workforce productivity. This theory supports the argument that investing in employee skills enhances organizational efficiency and economic performance. By applying HCT, this research underscores the need for continuous learning and development to ensure a workforce capable of leveraging AI in supply chain operations.

Application of AI on Reskilling and Upskilling Workforce for AI-Integrated Supply Chains

AI is playing a crucial role in the transformation of workforce skills and capabilities in AI-driven supply chains. The following are key applications of AI in reskilling and upskilling employees:

1. **AI-Powered Learning Platforms:** AI-driven platforms, such as adaptive learning systems, personalize training based on an employee's skill level and learning pace. AI recommends tailored courses, tracks progress, and provides real-time feedback to enhance learning outcomes. Companies like Coursera, Udacity, and LinkedIn Learning use AI to offer customized training solutions for supply chain professionals.
2. **AI-Enabled Virtual Training and Simulations:** AI-powered Virtual Reality (VR) and Augmented Reality (AR) simulations help employees gain hands-on experience in AI-integrated supply chains. Employees can practice complex logistics, warehouse management, and automated inventory handling in a risk-free virtual environment. Companies like Siemens and DHL use AI-driven simulations to train their workforce in real-world supply chain scenarios.
3. **Intelligent Chatbots and AI Assistants:** AI-driven chatbots provide instant responses to employee queries regarding AI-based supply chain operations. AI assistants offer guided support for employees adapting to new AI-driven workflows, ensuring smooth onboarding. Organizations integrate AI-powered virtual assistants, such as IBM Watson and Google AI, to enhance learning and problem-solving in supply chain tasks.
4. **Predictive Analytics for Workforce Skill Gaps:** AI-driven predictive analytics assess employee skill levels and forecast future training needs. Organizations use AI to identify workforce competency gaps and recommend reskilling programs. AI helps companies design proactive training strategies by analyzing job performance and industry trends.
5. **Automated Performance Tracking and Feedback:** AI automates performance assessments, providing real-time feedback on employee progress. Machine learning models analyze work efficiency and recommend personalized improvement plans. AI helps organizations track the effectiveness of training programs and adjust learning strategies accordingly.
6. **AI-Driven Robotics and Hands-On Training:** Employees receive training on AI-powered robotics and automation tools used in supply chains. AI guides workers in operating automated warehouse systems, self-driving forklifts, and drone deliveries. Companies like Amazon and Maersk use AI-powered robotic training modules to upskill employees in warehouse automation.

7. **Collaborative AI and Human-Augmented Decision-Making:** AI enhances decision-making by providing data-driven insights while employees oversee final decisions. AI tools such as IBM Watson and SAP Leonardo support employees in making strategic supply chain choices. Organizations train their workforce in AI-augmented decision-making to improve efficiency and reduce errors.
8. **AI in Employee Engagement and Motivation:** AI monitors employee engagement levels and suggests strategies to enhance motivation. AI-based career development programs recommend personalized career paths and growth opportunities. AI-enabled HR tools analyze employee sentiments and offer reskilling opportunities based on their career goals.

Key Skills for AI-Driven supply chain management

1. Technical Skills

1. **Artificial Intelligence & Machine Learning (ML):** Understanding AI algorithms, deep learning, and predictive analytics.
2. **Data Analytics & Business Intelligence:** Proficiency in handling big data, data visualization tools (Tableau, Power BI), and analytics platforms.
3. **Programming Skills:** Knowledge of Python, R, SQL, or Java for AI and data processing.
4. **Automation & Robotics:** Familiarity with robotic process automation (RPA), IoT, and smart warehousing.
5. **Cloud Computing & Edge Computing:** Experience with cloud platforms (AWS, Google Cloud, Azure) for scalable supply chain solutions.
6. **Blockchain Technology:** Understanding of distributed ledger systems for secure and transparent transactions.

2. Analytical & Decision-Making Skills

1. **Predictive & Prescriptive Analytics:** Ability to interpret data trends and optimize supply chain operations.
2. **Risk Management:** Identifying and mitigating supply chain disruptions using AI-driven forecasting.
3. **Optimization Techniques:** Knowledge of operations research, linear programming, and simulation models.

3. Supply Chain Management Expertise

1. **Demand Forecasting & Inventory Management:** Using AI for accurate demand prediction and stock control.
2. **Logistics & Transportation Management:** Implementing AI for route optimization, fleet management, and last-mile delivery efficiency.
3. **Procurement & Supplier Relationship Management:** AI-powered supplier evaluation and contract optimization.

4. Soft Skills

1. **Problem-Solving & Critical Thinking:** Ability to address supply chain inefficiencies using AI-driven insights.
2. **Collaboration & Communication:** Effective teamwork with cross-functional departments and technology teams.
3. **Adaptability & Continuous Learning:** Keeping up with evolving AI trends and technologies.

5. Ethical & Regulatory Knowledge

1. **AI Ethics & Compliance:** Awareness of AI regulations, data privacy (GDPR, CCPA), and ethical AI principles.
2. **Sustainability & Green Supply Chain Initiatives:** Leveraging AI for eco-friendly logistics and waste reduction.

Effective Reskilling and Upskilling Strategies for Employees in AI-Driven Supply Chain Management

1. Identifying Skill Gaps and Workforce Readiness

1. **Conduct Skills Gap Analysis:** Assess employees' current capabilities versus AI-driven job requirements.
2. **Categorize Workforce Segments:** Classify employees based on roles, tech proficiency, and adaptability.
3. **Set Clear Learning Objectives:** Define the skills needed (e.g., AI analytics, automation, data-driven decision-making).

2. Personalized Learning & Training Programs

1. **AI-Powered Learning Platforms:** Use adaptive learning platforms like Coursera, Udemy, or LinkedIn Learning to tailor courses.
2. **Microlearning Modules:** Provide bite-sized, on-demand lessons for continuous learning.
3. **Role-Specific Training:** Design programs for different job roles, such as warehouse managers, logistics analysts, and procurement specialists.

3. Hands-On Training & Practical Experience

1. **Simulations & AI Sandboxes:** Create real-world AI-driven supply chain scenarios for employees to practice.
2. **On-the-Job Training:** Encourage learning by integrating AI tools in daily tasks.
3. **Live Projects & Case Studies:** Assign employees AI-focused projects to apply new skills in solving business challenges.

4. Cross-Functional Training & Collaboration

1. **Interdepartmental Rotations:** Expose employees to different functions (e.g., procurement, logistics, data analytics) to foster AI adoption across teams.
2. **Collaboration with Data Science & IT Teams:** Encourage supply chain professionals to work with AI engineers and data analysts.
3. **Peer Learning & Knowledge Sharing:** Implement mentorship programs and internal workshops.

5. Encouraging Continuous Learning & Certification Programs

1. **Industry Certifications:** Offer certifications in AI, machine learning, blockchain, and data analytics (e.g., APICS, MIT's AI in Supply Chain, Six Sigma).
2. **Partnerships with Universities & AI Institutes:** Collaborate with academic institutions to provide structured learning programs.
3. **Hackathons & Competitions:** Encourage innovation through AI-driven problem-solving events.

6. AI Adoption & Change Management

1. **Leadership Commitment:** Ensure leadership actively promotes AI adoption and upskilling.

2. **Cultural Shift Towards AI:** Foster a mindset of innovation and continuous learning.
3. **Feedback Mechanisms:** Collect employee feedback to refine training programs.

7. Leveraging AI for Reskilling

1. **AI-Based Career Pathways:** Use AI to suggest personalized career growth opportunities for employees.
2. **Chatbots & Virtual Coaches:** Provide AI-driven learning assistance and career guidance.
3. **Performance Analytics:** Use AI to track employee progress and recommend further learning areas.

Challenges in Reskilling and Upskilling

The rapid integration of Artificial Intelligence (AI) in supply chain management has significantly transformed operations, requiring a skilled workforce capable of adapting to AI-driven processes. However, reskilling and upskilling employees to meet these new demands present several challenges. One of the primary challenges is lack of awareness and resistance to change. Many employees, particularly those in traditional supply chain roles, may fear job displacement and hesitate to embrace AI-related training programs. This mindset can hinder workforce transformation efforts. Another major challenge is the limited availability of AI-specific training programs. While many institutions offer generic AI courses, industry-specific training tailored for supply chain management remains scarce. This gap makes it difficult for workers to gain relevant, practical AI skills. Mismatch between industry needs and educational curricula is another significant hurdle. Most academic programs have not yet evolved to incorporate AI-driven supply chain methodologies, leaving graduates ill-prepared for the changing job market. To address this, institutions must collaborate with industry leaders to develop updated curricula that reflect current technological advancements. Financial constraints also pose a barrier. Small and medium-sized enterprises (SMEs) often struggle to invest in comprehensive AI training programs due to limited budgets. Government support and industry collaborations can help alleviate this issue by providing subsidized or free training initiatives. Furthermore, rapid technological advancements require continuous learning and adaptation. AI technologies evolve quickly, making it essential for employees to engage in lifelong learning to stay relevant. Companies must implement ongoing training programs to ensure their workforce remains competitive. Lastly, workforce apprehension about job displacement due to AI automation is a major concern. Employees must be reassured that AI integration aims to enhance human capabilities rather than replace them. Addressing these challenges through strategic planning, industry-academia partnerships, and government intervention is crucial for ensuring a seamless transition to AI-integrated supply chains.

5. Data Analysis and Interpretation

5.1 Key skills for AI-driven supply chain management

Particulars	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total	Rank
Technical Skills	50	62	29	32	27	676	I
Analytical Skills	47	50	45	30	28	658	II
Decision-Making Skills	55	46	30	34	35	652	III
Supply Chain Management Expertise	52	48	32	28	40	644	V
Soft Skills	42	40	44	37	37	613	VI
Ethical & Regulatory Knowledge	41	60	36	31	32	647	IV

According to this study, the top-ranked skills influencing supply chain professionals in AI-driven supply chain management are technical skills and analytical skills, followed by decision-making skills.

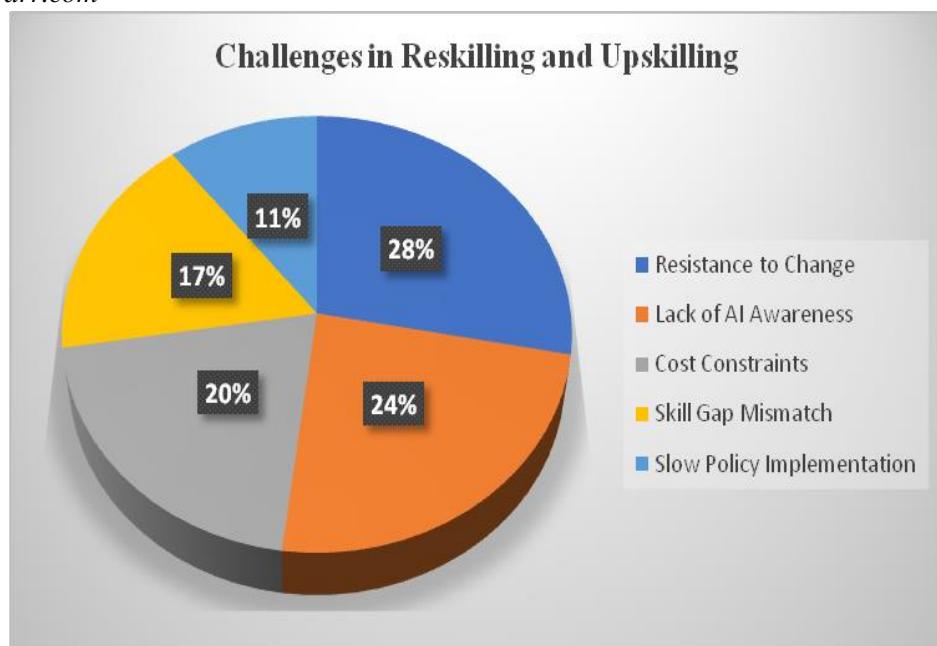
5.2Reskilling and Upskilling Strategies for Employees in AI-Driven Supply Chain Management

Particulars	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total	Rank
Identifying Skill Gaps and Workforce Readiness	47	53	31	30	39	639	V
Personalized Learning & Training Programs	59	42	35	31	33	663	III
Hands-On Training & Practical Experience	62	40	36	28	34	668	I
Cross-Functional Training & Collaboration	50	55	37	26	32	665	II
Encouraging Continuous Learning & Certification Programs	46	51	40	21	42	638	VI
AI Adoption , Change Management and Leveraging AI for Reskilling	48	50	39	23	40	643	IV

According to this study, the most effective strategies for reskilling and upskilling employees in AI-driven supply chain management, influencing supply chain professionals, are Hands-On Training & Practical Experience, followed by Cross-Functional Training & Collaboration.

5.3Challenges in Reskilling and Upskilling

Particulars	Respondents	Percentage
Resistance to Change	56	28
Lack of AI Awareness	48	24
Cost Constraints	41	20
Skill Gap Mismatch	34	17
Slow Policy Implementation	21	11
Total	200	100



According to this study, the challenges influencing supply chain professionals in reskilling and upskilling for AI-driven supply chain management include Resistance to Change and Lack of AI Awareness, followed by Cost Constraints.

Recommendations

1. Integrate AI education into company policies.
2. Promote continuous education for employees.
3. Foster a culture of innovation and adaptability.
4. Involve industry experts and government bodies for workforce development.
5. Organizations should develop structured plans for integrating AI into training initiatives.

Conclusion

The rapid integration of AI in supply chains necessitates a workforce that is agile, tech-savvy, and adaptable. Companies must proactively invest in reskilling and upskilling programs to bridge skill gaps and ensure smooth AI adoption. A strategic approach to workforce transformation will enhance competitiveness and job sustainability in AI-driven supply chains. By leveraging targeted training programs, government initiatives, and industry collaborations, organizations can prepare employees for the future of supply chain management.

Conflicts of Interest Declaration

I, hereby declare that there are no known financial, professional, or personal conflicts of interest that could have influenced the research, authorship, or publication of this manuscript titled "The Effectiveness of FOMO-Based Advertising on Indian Consumers in Internet Marketing: Analysing Behavioural Responses and Purchase Intent."

Sincerely,

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